COMPENDIUM OF LAWS

ON

DISASTER MANAGEMENT

January 2015

National Disaster Management Authority
Government of India

Compiled by National Disaster Management Authority in association with West Bengal National University of Juridical Sciences

CONTENTS

PART A

I. INTRODUCTION ……PGs. 10-20

PART B

CHAPTER ONE-GENERAL ACTS (CENTRAL LEVEL): ……PGs21-136

1. **THE INDIAN PENAL CODE, 1860**
2. **THE INDIAN EVIDENCE ACT, 1872**
3. **THE CIVIL DEFENSE ACT, 1968.**
4. **THE WILD LIFE (PROTECTION) ACT, 1972**
5. **THE CODE OF CRIMINAL PROCEDURE, 1973**
6. **THE WATER (PREVENTION AND CONTROL OF POLLUTION) ACT, 1974**
7. **THE WATER (PREVENTION AND CONTROL OF POLLUTION) RULES, 1975**
8. **FOREST (CONSERVATION) ACT, 1980**
9. **THE AIR (PREVENTION AND CONTROL OF POLLUTION) ACT, 1981**
10. **THE AIR (PREVENTION AND CONTROL OF POLLUTION) RULES, 1982**
11. **ENVIRONMENT (PROTECTION) ACT, 1986**
12. **THE ENVIROMENT (PROTECTION) RULES, 1986**
13. **THE FACTORIES ACT, 1948 AS AMENDED BY THE FACTORIES (AMENDMENT) ACT, 1987.**
14. **PUBLIC LIABILITY INSURANCE ACT, 1991**
15. **THE PUBLIC LIABILITY INSURANCE RULES, 1991**
16. **THE PROTECTION OF PLANT VARIETIES AND FARMERS'RIGHTS ACT, 2001**
17. **THE BIOLOGICAL DIVERSITY ACT, 2002**
18. **FOREST (CONSERVATION) RULES, 2003**
19. **DISASTER MANAGEMENT ACT, 2005.**
20. **FOOD SAFETY AND STANDARDS ACT 2006**

21. **THE DISASTER MANAGEMENT (NATIONAL DISASTER RESPONSE FORCE) RULES, 2008**
22. **CULTURAL HERITAGE CONSERVATION BILL, 2010**
23. **NATIONAL GREEN TRIBUNAL ACT 2010**
24. **WETLANDS (CONSERVATION AND MANAGEMENT) RULES, 2010**

CHAPTER TWO-FIRE…….PGs 137-213

1. **THE BOILERS ACT, 1923**
2. **THE CINEMATOGRAPH FILM RULE 1948**
3. **OILFIELDS (REGULATION AND DEVELOPMENT) ACT, 1948**
4. **THE CINEMATOGRAPH ACT, 1952**
5. **THE INFLAMMABLE SUBSTANCES ACT, 1952**
6. **THE MINES ACT, 1952**
7. **INDIA ELECTRICITY RULES, 1956**
8. **THE COAL MINES REGULATIONS, 1957**
9. **THE COAL MINES (CONSERVATION AND DEVELOPMENT) ACT, 1974**
10. **THE MINES RESCUE RULES, 1985**
11. **INDIAN ELECTRICITY ACT 2003**
12. **THE MINES AND MINERALS (DEVELOPMENT & REGULATION) ACT, 2010**
13. **THE OIL MINES REGULATIONS, 2011**

CHAPTER THREE-EXPLOSIVE…….PGs214-281

1. **THE EXPLOSIVES ACT, 1884**
2. **THE EXPLOSIVE SUBSTANCES ACT, 1908(AS AMENDED BY THE AMENDMENT ACT OF 2001)**
3. **PETROLEUM ACT, 1934**
4. **THE ATOMIC ENERGY ACT 1962**
5. **THE STATIC AND MOBILE PRESSURE VESSELS (UNFIRED) RULES 1981**

6. **ATOMIC ENERGY (WORKING OF THE MINES, MINERALS AND HANDLING OF PRESCRIBED SUBSTANCES) RULES, 1984**
7. **HAZARDOUS WASTES (MANAGEMENT AND HANDLING) RULES, 1989**
8. **THE GAS CYLINDER RULES 2004**
9. **THE PETROLEUM AND NATURAL GAS REGULATORY BOARD ACT, 2006**
10. **THE EXPLOSIVES RULES, 2008**
11. **HAZARDOUS WASTES (MANAGEMENT, HANDLING AND TRANSBOUNDARY MOVEMENT) RULES, 2008.**

CHAPTER FOUR -FLOOD, DAM BURST, TSUNAMI AND CYCLONE ..PGs 282-288

1. **DAM SAFETY BILL 2010**
2. **COASTAL REGULATION ZONE NOTIFICATION 2011**

CHAPTER FIVE-LIGHTNING……PGs 289-290

INDIAN STANDARD PROTECTION OF BUILDINGS AND ALLIED STRUCTURES AGAINST LIGHTNING CODE OF PRACTICE 1991

CHAPTER SIX-EARTHQUAKE, SNOW AVALANCHES/ LANDSLIDE PGs 291-300

1. **INDIAN STANDARDS ON EARTHQUAKE ENGINEERING**
2. **MODEL TOWN AND COUNTRY PLANNING ACT 1960**
3. **MODEL BUILDING BY- LAWS 2004**
4. **NATIONAL BUILDING CODE OF INDIA 2005**

CHAPTER SEVEN-CHEMICAL/ INDUSTRIAL/ NUCLEAR…….PGs 301-355

1. **ATOMIC ENERGY (SAFE DISPOSAL OF RADIOACTIVE WASTES) RULES, 1987.**
2. **THE BHOPAL GAS LEAK DISASTER (PROCESSING OF CLAIMS) ACT, 1985**

3. CALCIUM CARBIDE RULES, 1987
4. THE MANUFACTURE, STORAGE AND IMPORT OF HAZARDOUS CHEMICAL RULES, 1989
5. CHEMICAL ACCIDENTS (EMERGENCY PLANNING, PREPAREDNESS, AND RESPONSE) RULES, 1996
6. THE MAJOR ACCIDENT HAZARD CONTROL RULES, 1997
7. DUMPING AND DISPOSAL OF FLY ASH DISCHARGED FROM COAL OR LIGNITE BASED THERMAL POWER PLANS ON LAND RULES 1999
8. THE CHEMICAL WEAPONS CONVENTION ACT, 2000
9. ATOMIC ENERGY (RADIATION PROTECTION) RULES 2004
10. WEAPONS OF MASS DESTRUCTION AND THEIR DELIVERY SYSTEMS (PROHIBITION OF UNLAWFUL ACTIVITIES) ACT, 2005
11. THE CIVIL LIABILITY FOR NUCLEAR DAMAGE ACT, 2010

CHAPTER EIGHT-BIOLOGICAL DISASTER…….PGs 356-370

1. BIO- MEDICAL WASTE (MANAGEMENT AND HANDLING) RULES 1998
2. THE MUNICIPAL SOLID WASTES (MANAGEMENT & HANDLING) RULES, 2000
3. RULES FOR THE MANUFACTURE, USE, IMPORT, EXPORT AND STORAGE OF HAZARDOUS MICRO ORGANISMS GENETICALLY ENGINEERED ORGANISMS OR CELLS 1989

CHAPTER NINE-POISONING……PGS 371- 416

1. THE DESTRUCTIVE INSECTS AND PESTS ACT, 1914
2. THE POISONS ACT, 1919
3. THE DRUGS AND COSMETICS ACT, 1940
4. THE PREVENTION OF FOOD ADULTERATION ACT, 1954
5. THE INSECTICIDES ACT, 1968
6. THE INSECTICIDES RULES, 1971
7. THE NARCOTIC DRUGS AND PSYCHOTROPIC SUBSTANCES ACT, 1985

8. **THE CONSUMER PROTECTION ACT, 1986**
9. **THE BATTERIES (MANAGEMENT AND HANDLING) RULES, 2001.**
10. **BATTERIES (MANAGEMENT & HANDLING) AMENDMENT RULES, 2010**
11. **E-WASTE (MANAGEMENT AND HANDLING) RULES, 2011**
12. **PLASTICS (MANUFACTURE, USAGE AND WASTE MANAGEMENT) RULES, 2011**

CHAPTER TEN-ACCIDENT……PGs 417- 518

1. **THE INLAND VESSELS ACT, 1917**
2. **THE INDIAN CARRIAGE OF GOODS BY SEA ACT, 1925**
3. **THE AIRCRAFT ACT, 1934**
4. **AIRCRAFT RULES, 1937.**
5. **NATIONAL HIGHWAYS ACT, 1956**
6. **THE MERCHANT SHIPPING ACT, 1958**
7. **CARRIAGE BY AIR ACT 1972**
8. **THE INLAND WATERWAYS AUTHORITY OF INDIA ACT, 1985**
9. **MOTOR VEHICLES ACT 1988**
10. **THE RAILWAYS ACT, 1989**
11. **CENTRAL MOTOR VEHICLES RULES, 1989**
12. **THE RAILWAY ACCIDENTS AND UNTOWARD INCIDENTS (COMPENSATION) RULES, 1990**
13. **RAILWAY (NOTICES OF AND INQUIRIES INTO ACCIDENTS) RULES, 1998**
14. **STATUTORY INVESTIGATION INTO RAILWAY ACCIDENTS RULES 1998**
15. **CARRIAGE BY ROAD ACT, 2007**
16. **CARRIAGE BY ROAD RULES 2011**

CHAPTER ELEVEN-STAMPEDE: DISASTER FROM MANAGEMENT……PGS 519- 523

1. **A GUIDE FOR ADMINISTRATORS AND ORGANIZERS OF EVENTS AND VENUES OF MASS GATHERING- A GUIDE FOR STATE GOVERNMENT, LOCAL AUTHORITES, ADMINISTRATORS AND ORGANISERS, NDMA**
2. **POLICE ACT 1861**

CHAPTER TWELVE-EPIDEMIC DISEASES……PGs 524- 526

i. **EPIDEMIC DISEASE ACT 1897**

CHAPTER THIRTEEN-DROUGHT……PGS 527- 529

i. JUDGEMENTS OF SUPREME COURT RELATING TO DROUGHT

CHAPTER FOURTEEN- CLOUD BURST……PGs 530- 534

1. **DAM SAFETY BILL 2010**

CHAPTER FIFTEEN- PEST ATTACK……PGs 535- 547

1. **DESTRUCTIVE INSECTS AND PESTS ACT 1914**
2. **INSECTICIDES ACT 1968**
3. **INSECTICIDES RULES 1971**

CHAPTER SIXTEEN- FROST AND COLD WAVE……PGs 548- 549

PART C

CHAPTER SEVENTEEN- WEST BENGAL……PGS 549-578

CHAPTER EIGHTEEN- DELHI……PGS 579- 602.

CHAPTER NINETEEN- MAHARASTRA……PGs 603- 616

PART D:

CHAPTER TWENTY-NDMA GUIDELINES AND REPORTS…… PGs 617- 649

1. **NATIONAL DISASTER MANAGEMENT GUIDELINES- MANAGEMENT OF EARTHQUAKES**
2. **NATIONAL DISASTER MANAGEMENT GUIDELINES ON TSUNAMI**
3. **THE NATIONAL GUIDELINES FOR THE MANAGEMENT OF CYCLONES**
4. **NATIONAL GUIDELINES FOR FLOOD MANAGEMENT BY THE NATIONAL DISASTER MANAGEMENT AUTHORITY (NDMA)**
5. **NATIONAL DISASTER MANAGEMENT GUIDELINES- MANAGEMENT OF URBAN FLOODING**
6. **NATIONAL DISASTER MANAGEMENT GUIDELINES: MANAGEMENT OF DROUGHT**
7. **GUIDELINES FOR DIVERSION OF FOREST LANDS FOR NON-FOREST PURPOSE UNDER THE FOREST (CONSERVATION), ACT 1980**
8. **NATIONAL DISASTER MANAGEMENT GUIDELINES—MANAGEMENT OF LANDSLIDES AND SNOW AVALANCHES**
9. **THE GUIDELINES ON MANAGEMENT OF NUCLEAR AND RADIOLOGICAL EMERGENCIES**
10. **NATIONAL GUIDELINES ON CHEMICAL DISASTER MANAGEMENT**
11. **NATIONAL DISASTER MANAGEMENT GUIDELINES: MANAGEMENT OF CHEMICAL (TERRORISM)**
12. **NATIONAL DISASTER MANAGEMENT GUIDELINES—MANAGEMENT OF BIOLOGICAL DISASTER**
13. **NATIONAL DISASTER MANAGEMENT GUIDELINES PSYCHO-SOCIAL SUPPORT AND MENTAL HEALTH SERVICES**
14. **NATIONAL DISASTER MANAGEMENT GUIDELINES PREPARATION OF STATE DISASTER MANAGEMENT PLANS**
15. **NATIONAL DISASTER MANAGEMENT GUIDELINES—INCIDENT RESPONSE SYSTEM**
16. **GUIDELINES ON 'NATIONAL DISASTER MANAGEMENT INFORMATION AND COMMUNICATION SYSTEM'**
17. **NATIONAL DISASTER MANAGEMENT GUIDELINES SCALING, TYPE OF EQUIPMENT AND TRAINING OF FIRE SERVICES**

18. **NATIONAL DISASTER MANAGEMENT GUIDELINES SEISMIC RETROFITTING OF DEFICIENT BUILDINGS AND STRUCTURES**

B. NDMA REPORTS

19. **PILOT PROJECT ON CAPACITY BUILDING FOR ADVANCED TRAUMA LIFE SUPPORT IN INDIA**
20. **PROJECT ON CAPACITY BUILDING IN DISASTER MANAGEMENT FOR GOVERNMENT OFFICIALS AND REPRESENTATIVES OF PANCHAYATI RAJ INSTITUTIONS AND URBAN LOCAL BODIES AT DISTRICT LEVEL**
21. **REVAMPING OF CIVIL DEFENCE IN THE COUNTRY**
22. **GUIDELINES FOR THE NATIONAL INSTITUTE OF DISASTER MANAGEMENT (NIDM)**
23. **NATIONAL DISASTER MANAGEMENT GUIDELINES- STRENGTHENING OF SAFETY AND SECURITY FOR TRANSPORTATION OF POL TANKERS**
24. **NATIONAL DISASTER MANAGEMENT GUIDELINES PLAN TO COUNTER THE THREATS TO MUNICIPAL WATER SUPPLY AND WATER RESERVIORS**
25. **TRAINING REGIME FOR DISASTER RESPONSE**

PART A

I.INTRODUCTION:

'Disaster' can be defined as – 'a catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or man-made causes, or by accident or negligence which results in substantial loss of life or human suffering or damage to, and destruction of, property, or damage to, or degradation of, environment, and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area'[1]. Disaster occurs when the dimension of an emergency situation grows to such an extent that the impact of the hazard is beyond the coping capability of the local community and/or the concerned local authority. India's geographical condition is such that it is vulnerable to a number of natural disasters. 55 per cent of the country's total area is in Seismic Zones III-V and is vulnerable to earthquakes, 68 per cent of net sown area is vulnerable to drought, 4 crore hectare mass is vulnerable to floods, sub-Himalayan/Western Ghat is vulnerable to landslides and the coastal States are vulnerable to cyclones.[2] Even other than natural disasters, the country is also prone to man-made disasters.

The high susceptibility of the country makes it imperative to have thorough disaster management plan in place. "Disaster Management" is not expressly mentioned in any of the entries in Schedule VII of the Constitution (List I). However, the State Governments are provided financial assistance for meeting expenditure on identified natural calamities on the basis of the recommendations of the Finance Commission.

The two entries in the State List that are remotely related to the subject of disaster management are entry 14, which deals with agriculture, including protection against pests and plant diseases, and entry 17 which deals with water, including water supply, drainage and embankments. The High Power Committee appointed by the Government of India, strongly felt that this is grossly inadequate, and that Disaster Management needs to be included in the 7th schedule of the Constitution under which ever list is felt most appropriate. However, the legislation on disaster management has been related to entry 23 (social security and social

[1] Section 2 of Disaster Management Act, 2005
[2] 10TH FIVE YEAR PLAN

insurance) in the Concurrent list of the Constitution and the States would also be able to make their own legislation on the subject[3].

A number of constitutional provisions provide for State's obligation to provide relief and rehabilitation. Article 21 of the Indian Constitution guarantees every person right to life and personal liberty. It casts a positive obligation on the State to take all possible steps for prevention, preparedness and mitigation of disasters. Article 21 has been liberally interpreted by the Supreme Court to expand the scope of 'life' and can be said to be the repository of all important human rights. Besides, this Article 38 directs State to promote the welfare of the people. Article 51 directs State to honour the international treaty obligations. India is a party to a number of international treaties on environment which contain specific provision on disaster management.

Even other than this, State is responsible under the doctrine of ***parens patriae***.[4] Doctrine of *parens patriae* imposes an obligation on the State or sovereign authority to protect persons under disability. This doctrine which was originally applicable to the king has been applied by Courts in a number of cases to make the State responsible for providing relief to victims of disaster.

In ***B.J. Diwan vs. State of Gujarat (2001)*** the Gujarat High Court rejected the government's argument that the court doesn't have jurisdiction to adjudicate upon a case, which claims the enforcement of relief and rehabilitation. The court went on to hold that the right to relief and rehabilitation is a guaranteed right under Article 21 of the Constitution and the state is duty bound to ensure the same. Again in **Kishen Pattnayak and Anr. vs. State of Orissa (**AIR 1989 SC 677), the Hon'ble Supreme Court considered a letter written to the Hon'ble Chief Justice of India, highlighting the miserable condition of the inhabitants of the district of Kalahandi in the State of Orissa on account of extreme poverty, by the petitioners as a writ petition. This writ petition was taken along with another writ petition filed by Indian People's Front alleging starvation deaths, drought diseases and famine in the districts of Koraput and Kalahandi due to utter negligence and

[3] S.L. Goel, *Disaster Administration :Theory and Practice*, Deep & Deep Publications Pvt. Ltd., 2009

[4] This doctrine is not dependent upon any constitutional provisions or presence of any legislative enactment. We find evidence of States obligation to protect its citizens in the Famine Relief Code adopted after the Great Famine of 1876-1878. This famine lead to the constitution of the Famine Commission of 1880 and eventual adoption of **Famine Relief Code**. India probably has the world's oldest disaster relief code which started in1880. This relief code provides details of the relief to be given by the government to the affected people.

callousness of the administration and the Government of Orissa. In order to ascertain the correct state of affairs, the Hon'ble Court was pleased to direct the District Judge of Kalahandi to enquire as to whether the State Government has, in fact, implemented the social welfare measures in the district of Kalahandi and whether such measures were adequate to meet the needs of the people there. The Hon'ble Supreme Court held that a district-level Natural Calamities Committee consisting of the Collector, other officials and the popular representatives like MPs and MLAs of the district, who are required to review the progress of relief work and the measures taken to meet the drought conditions from time to time was sufficient and no new committee was required to be formed. The Committee was to hold at least one meeting every two months and the function of the Committee would not be confined only to the cases of starvation deaths, but it shall be responsible for looking after the welfare of the people of the district. In **M.K. Balakrishnan (2) And Others vs . Union Of India And Others (**2009 5 SCC 511) the Hon'ble Supreme Court while suo motu expanding the scope of writ petition originally filed for protection of wetlands in the country for preservation of the environment and maintaining the ecology underlined the terrible water shortage faced by people in India. Court held that acute shortage of clean drinking water was one of the stark realities today which threaten the guaranteed fundamental right to get water as a part of right to life under Art.21 of the constitution of India.

The Venkatachaliah Committee (The National Commission to Review the Working of the Constitution) was set up by the Central Government to review the working of the Indian Constitution. The Commission submitted its report on 31st March, 2002. As part of areas of concern of the Commission, one of the areas was the state of disaster management preparedness in the country. The Commission noted that mechanisms for adequate and immediate state responses to emergencies and disaster management are wholly inadequate. Commission examined a suggestion made by the Union Ministry of Agriculture that "Management of Disasters and Emergencies, Natural or Man-Made" be included in List III of the Seventh Schedule, and agreed to the suggested inclusion. Commission recommended that disaster mitigation should be linked with development as without disaster preparedness, development itself is at risk. The Commission observed that Food Assistance is a powerful tool in tackling hunger at times of natural disasters and effort should be directed to ensure that distributions is in accord with the demands of development.

The Government of India set up a commission on Centre-State relations on April 27, 2007 to look into the new issues of Centre-State relations. The commission was chaired by Justice Madan Mohan Punchhi, former Chief Justice of India. The commission made number of recommendations in its seven volume report presented to Government on March 30, 2010.
The Commission analyzed the scope of emergency and the concept of "localized emergency" in particular. It noted that it is necessary that a legal framework for exercising the power of "localized emergency" be provided by an independent Statute borrowing the model of the Disaster Management Act, 2005 and the Prevention of Communal Violence and Rehabilitation Bill, 2006. As per the Commission recommendation, only exceptional situations should be considered for the purposes of a separate legislation. Exceptional situations includes amongst others, natural or man-made disasters of such dimensions which are beyond the capacity of the State to cope with and fall within the scope of "external aggression" or "internal disturbance". The Commission has provided a detailed list of specific conditions to be considered for such a framework legislation enabling invocation of "localized emergency". The Commission stressed that it is important that legislation provides for appropriate administrative co-ordination between the Union and the States concerned.

Under Article 51 India is under an obligation to honour its international commitments as discussed earlier. India is a party to a number of international Conventions which highlight its obligation to protect its people from disasters. The United Nations General Assembly designated the 1990s as the **International Decade for Natural Disaster Reduction (IDNDR)**. Its basic objective was to decrease the loss of life, property destruction and social and economic disruption caused by natural disasters, such as earthquakes, tsunamis, floods, landslides, volcanic eruptions, droughts, locust infestations, and other disasters of natural origin. A significant step in this regard was the 1st World Conference held on 23 – 27 May 1994 wherein the **Yokohama Strategy and Plan of Action**was given effect. The plan aims to reduce societal vulnerability and therewith decrease consequences of natural disasters. Stress is laid on devising a global strategy aiming at reducing the impacts of natural hazards. UN-member states were asked to establish National Platforms which would facilitate the adjustment of general disaster risk reduction objectives to national/local conditions, implement the agreed policies and expand the understanding and perception of the importance of disaster risk reduction on national levels. Under the same resolution the second Wednesday of October was designated as the **International Day for Natural Disaster Reduction**. The IDNDR was replaced and continued by the **International Strategy**

for Disaster Reduction (ISDR). The ISDR aims to pursue the initiatives and cooperation agreed on during the IDNDR, and developing new mechanisms as well as pushing for further commitments from policy-makers. The overriding goal is to reduce human, social, economic and environmental losses due to natural hazards (and related technological and environmental disasters). The 2002 **World Summit on Sustainable Development** re-enforced awareness of the need for risk and vulnerability reduction in order to secure sustainable development.

Traditionally the approach towards disaster management was on relief and rehabilitation post disaster and very little effort was concentrated on disaster mitigation and preparedness. This approach has witnessed a sea change now with the Tenth Five Year Plan (2002-07) recognizing disaster management as a development issue for the first time. The Tenth Five Year Plan prescribed a number of policy guidelines at the macro level, operational guidelines for incorporating disaster management practices into development plans and specific schemes for prevention and mitigation of disasters. Post it, the Eleventh Five Year Plan also came up with a number of guidelines and disaster management continuum today comprises of six elements i.e., Prevention, Mitigation and Preparedness in pre-disaster phase, and Response, Rehabilitation and Reconstruction in post-disaster phase.[5]The Eleventh Five Year Plan 2007-2012 (Planning Commission 20008) states, "*The development process needs to be sensitive towards disaster prevention, preparedness and mitigation. Disaster management has therefore emerged as a high priority for the country. Going beyond the historical focus on relief and rehabilitation after the event, there is a need to look ahead and plan for disaster preparedness and mitigation in order to ensure that periodic shocks to our development efforts are minimized."*

Keeping in mind this approach, S. 2 (e) of the Disaster Management Act defines 'disaster management' as 'a continuous and integrated process of planning, organizing, coordinating and implementing measures which are necessary or expedient for- (i) prevention of danger or threat of any disaster; (ii) mitigation or reduction of risk of any disaster or its severity or consequences; (iii) capacity-building; (iv) preparedness to deal with any disaster; (v) prompt response to any threatening disaster situation or disaster; (vi) assessing the severity or

[5]http://ndma.gov.in/ndma/approachdm.html

magnitude of effects of any disaster; (vii) evacuation, rescue and relief; (viii) rehabilitation and reconstruction.[6]

The Tenth Five Year Plan has specified the authorities in charge of disaster management. At the **central level**, it comprises of the Union Cabinet, headed by the Prime Minister, the Empowered Group of Ministers, headed by the Deputy Prime Minister, the National Crisis management Committee (NCMC) under the chairmanship of the Cabinet Secretary, the Crisis Management Group (CMG) under the chairmanship of the Central Relief Commissioner[7], Technical Organizations such as the Indian Meteorological Department (cyclone/earthquake), Central Water Commission (floods), Building and Material Promotion Council (construction laws), Bureau of Indian Standards (norms), Defense Research & Development Organization (nuclear/biological), Directorate General Civil Defense (provide specific technical support to coordination of disaster response) and the National Disaster Management Authority (NDMA)[8].

At the **State level**, a state level committee headed by the Chief Secretary of State overseas the relief operations. Relief Commissioners are in charge of relief and rehabilitation measures, a function overseen in a number of States by the Secretary, Department of Revenue. States will also have a State Crisis Management Group (SCMG) headed by the Chief Secretary/ Relief Commissioner comprising of officers from the departments of revenue/relief, home, civil supplies, power, irrigation, water supply, panchayat (local self-government), agriculture, forests, rural development, health planning, public works and finance.

At the **district level**, the primary responsibility lies upon the Collector/ District Magistrate/ Deputy Commissioner. Usually there will be a district level relief committee. Panchayati Raj Institutions also play a vital role. A district is further sub-divided into sub-divisions and tehsils or talukas. The head of a sub-division, the Sub-Division Officer (SDO) and the head of a tehsil, the tehsildar (talukdar or manlatdar in some states), Village officer or patwari

[6]S. 2, Disaster Management Act, 2005.
[7] CMG is responsible for reviewing the contingency plans and for coordinating the activities of the Central Ministries and State Governments for disaster preparedness response and relief.
[8] The Government of India maintains linkages with a number of international organizations which are active in the field of disaster management. These include the UN Office for Coordination of Humanitarian Affairs (UNOCHA), United Nations Development Program (UNDP) responsible for mitigation and prevention of disaster and UN Disaster Assessment and Coordination (UNDAC) system.

along with the Collector have a key role to play in case of threat or occurrence of any disaster.

A **contingency plan** for the district for different disasters is drawn up by the Collector / Deputy Commissioner and approved by the state government. Relief measures are reviewed by the **district level relief committee.** A **control room** is set up in district for day to day monitoring of rescue and relief operations in case of a threat or occurrence of disaster. Efforts of the district administration are supported and complemented by central government authorities present in the district which includes army, air force, navy etc. Police and Para-military forces, civil defense and home-guards, fire services, ex-servicemen, nongovernment organizations (NGOs), public and private sector enterprises, media and HAM operators are also involved in disaster management.

The Disaster Management Act, 2005 also provides for constitution of a number of institutions at national, state and district levels. At the national level, the Act establishes the **National Disaster Management Authority** headed by the Prime Minister. The model is replicated at the State level with **State Disaster Management Authorities**. National Disaster Management Authority is responsible for laying down policies and guidelines on disaster management. State Disaster Management Authorities also lays down policies and plans for disaster management in their respective states. **District Disaster Management Authorities** are the planning, coordinating and implementing bodies for disaster management in the district. The Act also provides for a **National Institute of Disaster Management** for human resource development in the field of disaster management. Besides these, a **National Disaster Response Force** has been constituted. As part of it, ten battalions of National Disaster Response Force (NDRF) comprising 144 specialized teams trained in various types of natural, man-made and non-natural disasters have been set up. **National Fire Service College** at Nagpur trains personnel of State fire services/brigades in fire engineering. **National Civil Defense College**, Nagpur acts as one of the chief centres for disaster relief and management training. It is also a nodal centre for radiological, nuclear, biological and chemical emergency response. Depending upon the type of disaster, different ministries have been designated as the nodal ministry.

The **Ministry of Home Affairs** is the nodal ministry for natural disasters. Drought relief comes upon the operation of **Ministry of Agriculture**, Air Accidents are looked upon by

Ministry of Civil Aviation while **Ministry of Railways** is responsible for handling railway accidents. Chemical disasters are handled by **Ministry of Environment & Forests**. **Department of Atomic Energy** is responsible for handling nuclear disasters while biological disasters come under the purview of **Ministry of Health**[9].

While depending upon the type of disaster, different departments/ Ministries have been made responsible for handling it, disasters generally can be divided into **natural hazards and unnatural or man- made disasters. Natural disasters** will include **earthquake, cyclone, tsunami, hailstorms, flood, drought, glacial movements** etc. **Man–made disasters** include **chemical, industrial and nuclear disasters.** A brief discussion of the different types of disasters affecting India is provided –

1. **Earthquake:**

An earthquake is a series of vibrations on the earth's surface caused by the generation of elastic (seismic) waves due to sudden rupture within the earth during release of accumulated strain energy.[10] As per figures available almost 59% of India's geographic al area is vulnerable to earthquake. The large number of casualties occurring as a result of earthquake is mainly due to building collapse. Absence of knowledge in earthquake resistant construction and non-compliance of appropriate building and town planning regulation is the root cause behind India's poor response plan to earthquake. National Disaster Management Authority has come up with guidelines for management of earthquakes. The guidelines provide a broad overview of the disaster management plans which are required to be prepared by the Central and State government. As per the present scenario, the State Executive Committees (SECs) of the State Disaster Management Authorities s are responsible for developing their disaster management plans. A techno-legal framework comprising of model Bye-laws to be introduced by respective States has been issued by MHA in 2007. The framework lays stress on compliance of earthquake-resistant design. State governments are required to review, revise and update the town and country planning Acts, land use and zoning regulations, building bye-laws and DCRs at least once every five years.[11]

2. **Flood:**

India is highly vulnerable to floods. 40 million hectares out of a geographical area of 3290 lakh hectares is prone to floods. Flood management being a State subject, the primary onus is

[9] 10 TH FIVE YEAR PLAN
[10] National Disaster Management Guidelines- Management of Earthquakes, April 2007, National Disaster Management Authority.
[11] Ibid.

upon States to take steps to deal with it. The National Disaster Management Authority has come up with model guidelines in this regard.[12] Flood management is intricately linked with transport services making it imperative that construction of roads and rail lines in flood prone areas are done in such a manner that there are less susceptible to flood scenarios.

3. Cyclones:

India has an extensive coast line which is vulnerable to tropical cyclones. To minimize loss effort is required both through environmental legislations and building laws. Coastal Zone Management which involves proper planning of coastal areas while ensuring and continuation and restoration of bio-shields is very vital for checking disastrous impact of cyclones. The primary Act in this regard is the Environment Protection Act, 1986. Moreover, in 1991 Coastal Regulation Zone notification was issued.

4. Tsunami:

The term 'Tsunami' comes from the Japanese term meaning "harbour wave". India's coastal areas are vulnerable to tsunami and India has in past been a witness to massive loss of life and property due to it. The management plan of both cyclone and tsunami are similar with emphasis of coastal zone regulation. States are duty bound to come up with proper techno-legal framework for adopting tsunami-safe zoning, planning and construction practices.[13]

5. Landslides and Avalanches:

Landslides & Avalanches are one of the major hydro-geological hazards affecting India both in magnitude and frequency.[14] Landslides are downward and outward movement of slope materials such as rock debris and earth, under the influence of gravity[15]. Snow avalanche is a slide of snow mass down a mountainside[16]. MHA has prescribed model town and country planning acts, land use and zoning regulations, Development Control Regulations (DCRs) and building bye-laws to be followed by States .The codes and guidelines related to landslides which have been published by the BIS are -

i) IS 14496 (Part 2): 1998 Guidelines for the preparation of LHZ maps in mountainous terrain: Part 2: Macro Zonation.

[12]National Disaster Management Guidelines- Management of Floods.
[13]National Disaster Management Guidelines – Management of Tsunamis.
[14] National Disaster management Guidelines- Management of Landslides and Snow Avalanches
[15] Ibid.
[16]Ibid.

ii) IS 14458: Guidelines for Retaining Walls for Hilly Areas.

a. Part 1: Selection of the Type of Walls.

b. Part 2: Design of Retaining/Breast Walls.

c. Part 3: Construction of Dry Stone Walls.

iii) IS 14680:1999: Guidelines for Landslide Control.

iv) IS 14804:2000: Guidelines for Siting, Design and Selection of Materials for Residential Buildings in Hilly Areas.

v) National Building Code (NBC) 2005[17].

6. Nuclear and Radiological Disasters:

When the impact of a nuclear or radiological emergency, caused by a nuclear attack or large-scale release of radioactivity from nuclear/radiological facilities is very high, it assumes the dimension of a nuclear disaster leading to mass casualties and destruction of large areas and property[18]. Atomic Energy Act, 1962 is the main law dealing with development, control and use of atomic energy.

7. Chemical Disaster:

Chemic disasters are a by- product of industrialization. The Bhopal gas tragedy and is effect is still visible making it clear that though the frequency of chemical disasters may be low, it can have a very negative effect of huge magnitude having both long and short term effects.

Management of chemical disasters is primarily the domain of Ministry of Environment and Forests. Ministry of Home Affairs, Ministry of Health and Family Welfare, Ministry of Labour, Ministry of Surface Transport and Highways, Ministry of Defense, Department of Atomic Energy, Ministry of Chemicals and Fertilizers, Ministry of Petroleum and Gas, Central and State Pollution Control and State Governments.[19] Chemical Disasters can have origin in terrorist activities. The National Disaster Management Authority[20] has come up with model guidelines in this regard to deal with both types of chemical disasters- both being part of terrorist activities and other occurring due to other reasons. A number of legislations exist providing a comprehensive legal framework.

8. Biological Disasters-

[17] Ibid.

[18] National Disaster management Guidelines- Management of Nuclear and Radiological Emergencies.

[19] National Disaster Management Guidelines – Chemical Disasters(Industrial)

[20] National Disaster Management Guidelines – Management of Chemical (Terrorism) Disasters

Biological disasters are scenarios involving disease, disability or death on a large scale among humans, animals and plants due to toxins or disease caused by live organisms or their products.[21] The Acts primarily dealing with it are the Epidemic Diseases Act, provisions under Indian Penal Code (IPC) and Criminal Procedure Code (CrPC), The Water (Prevention and Control of Pollution), Water (Prevention and Control of Pollution) Rules,1975, Air (Prevention and Control of Pollution)Act, 1981, and the Rules (1983), Environmental (Protection) Act, 1986, and the Rules (1986).

9. Fire

Fire tragedy has been a major source of disaster ranging from fire in schools and other public places such as cinema halls to more commercial form of fire explosions in chemical factories, mines, oil fields and industries. Depending upon the nature of fire out-break different regulations have been laid down to deal with the situation. A number of legislations are in place to deal with fire safety provisions in cinema halls and other public places including schools, residential and commercial buildings. Different and more stringent parameters are applicable to deal with fires resulting from commercial origins.

[21]National Disaster Management Guidelines – Management of Biological Disasters.

PART B

CHAPTER ONE

GENERAL ACTS (CENTRAL LEVEL)

Different legislations have been enacted at the State and Central level to deal with different types of disasters. Of these there are certain Acts whose operation spread across different types of disasters and deal with disasters in general. Also there are disaster specific statutes prescribing norms for tackling a particular type of disaster. The first section of the compendium of laws discusses these general Acts which are applicable to disasters in general prior to taking up of discussion of laws pertaining to specific disasters.

1.1.0 THE INDIAN PENAL CODE, 1860

1.1.1 OBJECTIVE AND SCOPE

In the uncivilized society no person was said to be safe from attacks to his person or property by any other person. The person attacked either succumbed or overpowered his opponent. A tooth for a tooth, an eye for an eye, a life for a life was the rule of law. With the advancement of time, the injured person agreed to accept compensation, instead of killing his adversary. For a long time the function of settling the terms remained with the parties themselves, but gradually this function came to be performed by the State.

In India the criminal jurisprudence came into existence from the time of Manu. Manu has recognized assault, theft, robbery, false evidence, and slander, criminal breach of trust, cheating, adultery and rape. The king protected his subjects and the subjects in return owed him allegiance and paid him revenue. The king administered justice himself, if unable due to certain circumstances; the matter was entrusted to a judge. If a criminal was fined, the fine went to the king's treasury and was not given as compensation to the injured party.

Different laws came into existence in the reins of different rulers. When the Britishers came into India they adopted a different set of law which was based on British pattern, but it was not uniform throughout India. Different regulations were passed prescribing practice and procedure to be followed. In 1834 the first Indian Law Commission was constituted to investigate into the jurisdiction, powers and rules of the existing courts as well as police establishments and into the laws in operation in British India. The Indian Penal Code was

drafted by the first Indian Law Commission under the president ship of Macaulay and was submitted to the Governor-General of India in Council in 1837. It was circulated to the Judges and law advisors of the Crown. In 1845, another Commission was appointed to review the Code. This Commission submitted its report in two parts, one in 1846 and the other in 1847. The Code was revised according to the report of the Commission but it never saw the light of the day. Subsequently, it was revised by two Law Members of the Governor-General of India in Council and was presented to the Legislative Council in 1856.

The Indian Penal Code Bill was passed by the Legislative Council and it received the assent of the Governor-General on 6th October, 1860. It came on the Statute Book as THE INDIAN PENAL CODE (45 of 1860). This act was enacted to provide a general penal code for India

1.1.2 RELEVANT PROVISIONS OF THE ACT

Offences Affecting the Public Health, Safety, Convenience, Decency and Morals (Chapter XIV)

1.1.2.1 Offences affecting public health (268-278)

A) Public nuisance (Section 268)

A person is guilty of a public nuisance who does any act or is guilty of an illegal omission to do an act.

The act or omission;

i) Must cause any common injury, danger or annoyance-

- to the public or
- to the people in general who dwell or occupy property in the vicinity, or

ii) Must necessarily cause injury, obstruction, danger or annoyance to persons who may occasion to use any public right.

B) Negligent act likely to spread infection of disease dangerous to life (Section 269)

This section is framed in order to prevent people from doing acts which are likely to spread infectious diseases. Welfare of the society is the primary duty of any civilsed State.

- Punishment—Imprisonment for 6 months, or fine, or both.

In Niadar mal, (1902) P.R. No. 22 the accused resided in a plague-stricken house and was in contact with a plague patient. He was taken to the plague-shed in company with the patient, who died there. The next day he left the shed against orders and travelled by rail to a neighboring town and from there to another village. It was held that he was guilty of an offence under this section as he had sufficient reason to believe that his act was dangerous, and likely to spread infection of disease dangerous to life.

C) Malignant act likely to spread infection of disease dangerous to life (Section 270)

Any person who malignantly does any act which is, likely to spread the infection of any disease dangerous to life, shall be punished with imprisonment for a term which may extend to two years, or with fine, or with both.

D) Adulteration of food or drink intended for sale (Section 272)

The mixing of noxious ingredients in food or drink or otherwise rendering it wholesome by adulteration is punishable with imprisonment for a term which may extend to six months, or with fine which may extend to one thousand rupees, or with both.

E) Sale of noxious food or drink (Section 273)

Any person who sells, or offers or exposes for sale, as food or drink, any article which has been become noxious, or is in a state unfit for food or drink, knowing or having reason to believe that the same is noxious as food or drink, shall be punished with imprisonment for a term which may extend to six months, or with fine which may extend to one thousand rupees, or with both.

F) Adulteration of drugs (Section 274 – 276)

Three offences fall under this head:

i) Adulteration of drug so as to lessen its efficacy, change its operation or render it noxious : Section 274

ii) Knowingly selling or causing to be used for medical purposes any adulterated drug: Section 275.

iii) Selling or offering or exposing for sale or issuing from a dispensary for medical purposes any drug or medical preparation as different drug or medical preparation: Section 276.

G) Fouling water and vitiating atmosphere (Section 277-278)

i) Voluntarily corrupting or fouling the water of a public spring or reservoir so as to render it less fit for the purpose for which it is ordinarily used: (Section 277)
ii) Voluntarily vitiating the atmosphere, so as to make it noxious to public health: (Section 278)

1.1.2.2 Offences affecting public safety and convenience (Section 279-289)

There are seven offences under this head. They are all different kinds of negligence and negligent conduct.

i) Rash driving or riding on a public way (Section 279)
Whoever-

- Drives any vehicle, or rides, on any public way.
- Such driving or riding must be in a so rash or negligent as to endanger human life, or to be likely to cause hurt or injury to any other person,.
- Shall be punished with imprisonment for a term which may extend to six months, or with fine which may extend to one thousand rupees, or with both.

In Mann Prakash v. State of Haryana, 1996 CrLJ 663 (P&h) the accused, truck driver driving a vehicle rashly and negligently at a high- speed climbed the footpath and hit the deceased from behind causing his death. His conviction under section 279 and 304A was held to be proper.
ii) Rash or negligent navigation of vessel: Section 280.
iii) Exposing false light, mark or buoy to mislead navigator: Section 281
iv) Conveying for hire any person by water in an overloaded or unsafe vessel: Section 282
v) Causing danger, obstruction or injury to any person in public way, or public line of navigation by acting or omitting to take order with property: Section 283
vi) Rashly or negligently acting or knowing or negligently omitting to take order with poisonous substance, fire, combustible matter, explosive substances or machinery, so as to endanger life or to be likely to cause hurt or injury: Section 284-287.
vii) Knowing or negligently omitting to take order with building in pulling down or repairing it or animal as to guard against danger of life: Section 288-289.

1.1.2.3 Causing death by negligence (Section 304 A)

Whoever causes the death of any person by doing any rash or negligent act not amounting to culpable homicide, shall be punished with imprisonment for a term which may extend to two years, or with fine, or with both.

In order to impose criminal liability on the accused, it must be found as a fact that collusion was entirely or mainly due to the rashness or negligence; *Munile Sao* v. *State of Bihar* (1997) 3 Crimes 200 (Pat).

1.2.0 THE INDIAN EVIDENCE ACT, 1872

1.2.1 OBJECTIVE AND SCOPE

The word 'evidence' is derived from the Latin term 'evidens' or 'evidere' which means 'to show clearly' or 'to discover clearly', 'to ascertain' or 'to prove'.

The objective of the Evidence Act is to prevent laxity and negligence in the admissibility of evidence and to introduce a full-proof and uniform rule of practice than what was previously used.

The main principles which emphasize the law of evidence are-

- evidence must be confined to the matter in issue
- hearsay evidence is no evidence and hence it must not be admitted
- best evidence must be given in all cases

The Indian Evidence Act has no application to enquiries by Tribunals, even though they may be judicial in nature. The Law only requires that rules of Natural Justice must be maintained at the time of conducting enquiries and in an event when such rules have been adhered to, the decisions of the Tribunals are not liable to be challenged.

The Law of Evidence is an adjective law and therefore has retrospective effect, unless specified.

1.2.2 RELEVANT PROVISIONS OF THE ACT

1.2.2.1 Definition

"Evidence" means and includes—

(1) All statements which the Court permits or requires to be made before it by witnesses, in relation to matters of fact under inquiry, such statements are called oral evidence;

(2) All documents including electronic records produced for the inspection of the Court, such documents are called documentary evidence.

1.2.2.2 Opinions of experts (Section 45)

When the Court has to form an opinion upon a point of foreign law, or of science, or art, or as to identity of handwriting or finger impressions, the opinions upon that point of persons specially skilled in such foreign law, science or art, or in questions as to identity of handwriting or finger impressions are relevant facts. Such persons are called experts.

Illustration

The question is, whether the death of A was caused by poison. The opinions of experts as to the symptoms produced by the poison by which A is supposed to have died, are relevant.

In *Brijpal v. State of Delhi, (1996) 2 SCC 676*, a police personnel having certificate of technical competency and of technical course for armour and long experience of inspection, examination and testing of fire-arms and ammunition, was held to be an expert.

1.2.2.3 Facts bearing upon opinions of experts (section 46)

Facts, not otherwise relevant, are relevant if they support or are inconsistent with the opinions of experts, when such opinions are relevant.

Illustration

The question is, whether A was poisoned by a certain poison. The fact that other persons, who were poisoned by that poison, exhibited certain symptoms which experts affirm or deny being the symptoms of that poison is relevant.

1.2.2.4 Proof of facts by oral evidence (Section 59)

All facts, except the contents of documents, may be proved by oral evidence.

1.2.2.5 Oral evidence must be direct (Section 60)

Only a direct evidence of a fact which can be perceived by the senses can be given.

1.2.2.6 Proof of contents of documents (Section 61)

The contents of documents may be proved either by primary or by secondary evidence.

1.2.2.7 Primary evidence (Section 62)

Primary evidence means the document itself produced for the inspection of the Court

Secondary evidence (Section 63)

Secondary evidence means and includes--

(1) Certified copies given under the provisions hereinafter contained;

(2) Copies made from the original by mechanical processes which in themselves insure the accuracy of the copy, and copies compared with such copies;

(3) Copies made from or compared with the original;

(4) Counterparts of documents as against the parties who did not execute them;

(5) Oral accounts of the contents of a document given by some person who has himself seen it

1.2.2.8 Cases in which secondary evidence relating to documents may be given (Section 65)

Secondary evidence may be given of the existence, condition or contents of a document in the following cases:--

(a) when the original is shown or appears to be in the possession or power of the person against whom the document is sought to be proved, or of any person out of reach of, or not subject to, the process of the Court, or of any person legally bound to produce it, and when, after the notice mentioned in section 66, such person does not produce it;

(b) When the existence, condition or contents of the original have been proved to be admitted in writing by the person against whom it is proved or by his representative in interest;

(c) when the original has been destroyed or lost, or when the party offering evidence of its contents cannot, for any other reason not arising from his own default or neglect, produce it in reasonable time;

(d) When the original is of such a nature as not to be easily movable;

(e) When the original is a public document within the meaning of section 74;

(f) When the original is a document of which a certified copy is permitted by this Act or by any other law in force in India to be given in evidence;

(g) When the originals consist of numerous accounts or other documents which cannot conveniently be examined in Court and the fact to be proved is the general result of the whole collection.

1.3.0 THE CIVIL DEFENSE ACT, 1968.

1.3.1 OBJECTIVE AND SCOPE

The Act makes provision for civil defense and for matters connected therewith. Civil defense is defined as any measure, not amounting to actual combat that protects persons, property and places in India from hostile attack. It includes measures that deprive such attack of its effect. The measures may be taken before, after or during such attack. The Civil Defense Amendment Bill, 2009 expands the definition of civil defense to include "any measure taken for the purpose of disaster management before, during, at or after any disaster". The Bill defines "disaster" and "disaster management" as defined in the Disaster Management Act, 2005.

1.3.2 RELEVANT PROVISIONS OF THE ACT:

1.3.2.1 Definitions (Section 2):

1. "Civil defense" include any measures, not amounting to actual combat, for affording protection to any person, property, place or thing in India or any part of the territory thereof against any hostile attack, whether from air, land, sea or other places, or for depriving any such attack of the whole or part of its effect, whether such measures are taken before, during, at or at the time of such attack;

2. "Civil Defense Corps" means the Corps formed wholly or mainly to meet the needs of civil defense.

3. "Hostile attack" means any attack by any person or body of persons, whether during any war, external aggression, and internal disturbances or otherwise which endangers the security of any life, property, place or thing in India or any part of the territory thereof.

1.3.2.2 Power of the Central Government to Make Rules for Civil Defense (Section 3):

The Central Government may, for securing civil defense make rules providing for the following matters, namely:-

(a) preventing the prosecution of any work likely to prejudice civil defense;

(b) Instruction of members of the public regarding civil defense and their equipment for the purpose of such defense,

(c) Provision, storage and maintenance of commodities and things required for civil defense;

(d) Prohibiting or regulating traffic, and the use of vessels, buoys, lights and signals in ports and territorial, tidal and inland waters;

(e) Control of lights and sounds,

(f) Protection of life and property by taking fire prevention and other measures;

(g) Securing of any buildings, premises or other structures from being readily recognizable in the event of a hostile attack;

(h) for the prevention of danger to life or property, the demolition, destruction or rendering useless, of any building, premises or other structures or any other property;

(i) Prohibiting or regulating the possession, use of disposal of-

(i) Explosives, inflammable substances, corrosive and other dangerous substances or articles, arms and ammunition;

(ii) Vessels;

(iii) Wireless telegraphic apparatus

(iv) Aircraft and

(v) Photographic and signaling apparatus and any means of recording information;

(j) Evacuation of areas and the removal of property or animals there from;

(k) Accommodation in any area of persons evacuated from another area and the regulation of the conduct of evacuated persons accommodated in such area;

(l) Billeting of evacuated person or persons authorized to perform functions under this Act;

(m) Salvage of damaged buildings, structures and property and disposal of the dead;

(n) Seizure and custody of destruction of injured, unclaimed or dangerous animals;

(o) Ensuring the safety of- (i) ports, dockyards, lighthouses, lightships, aerodromes and facilities associated with aerial navigation;

(ii) Railways, tramways, roads, bridges, canals and all other means of transport by land or water;

(iii) Telegraphs, post offices, signaling apparatus and all other means of communications;

(iv)Sources and systems of water supply, works for the supply of water, gas or electricity and all other works for public purposes;

(v) Vessels, aircraft, transport vehicles as defined in the Motor Vehicles Act, 1939, and rolling stocks of railways and tramways;

(vi)Warehouses and all other places used or intended to be used for storage purposes;

(vii) Mines, oilfields, factories, or industrial or commercial undertakings generally, or any mine, oilfields, factory or industrial or commercial undertaking in particular;

(viii) Laboratories and institutions where scientific and technological research or training is conducted or imparted;

(ix) All works and structures being part of , or connected with anything earlier mentioned in this clause; and

(x) Any other place or thing used or intended to be used for the purposes of Government or a local authority or a semi-Government or autonomous organization, the protection of which is considered necessary or expedient for securing civil defense;

(p) Control of any road or pathway, waterway, ferry or bridge, river, canal or others source of water supply;

(q) precautionary measures, which the Government or any department thereof or any local authority, members of police force, fire brigade and members of any other service or authority employed primarily for purposes s other than civil defense purposes should be required to take within their respective jurisdictions or with respect to any personnel employed by them;

(r) Preventing or controlling any use of uniforms, whether official or otherwise, or flags or official decorations like medals, badges or other insignia or anything similar thereto, the wearing of which is calculated to deceive or to prejudice civil defense

(s) precautions to be preventing or controlling any use of uniforms, whether official or otherwise, or flags or official decorations like medals, badges or other insignia or anything similar thereto, the wearing of which is calculated to deceive or to prejudice civil defense; taken or action to be taken by persons or authorities with a view to protecting or acquainting the general public or any members thereof against the dangers involved in any apprehended hostile attack;

(t) requiring the owner or occupier of any building , structure or premises to make or carry out such arrangements as may be necessary for the purposes of detection and prevention of fire;

(u) Taking specified measures for dealing with outbreaks of fire;

(v) directing that, subject to any specified exemption, no person present in any specified area shall, between such hours as may be specified, be out of doors except under the authority of a written permit granted by a specified authority or person;

(w) (i) prohibition the printing and publication of any newspaper, news-sheet, book or other document containing matters prejudicial to civil defense;

(ii)demanding security from any press used for the purpose of printing or publishing, and forfeiting the copies of, any newspaper, newssheet book or other document containing any of the matters referred to it sub clause(i);

1.3.2.3 Civil Defense Corps (Section 4):

The State Government may constitute, for any area within the State, a body of persons to be called the Civil Defense Corps and may appoint a person, not being, in its opinion, below the rank of a District Magistrate (to be known as the "Controller") to command such Corps.

1.3.2.4 Appointment of members and officers (Section 5)

State Government may appoint as members of the Corps persons who are fit and willing to serve as such.

1.3.2.5 Provision of the personal Injuries (Emergency provisions) Act to apply to injuries sustained by the Member of the Corps (Section 10)

Provision of the Personal Injuries (Emergency Provision) Act, 1962, shall apply to every personal service injury sustained by any person appointed to be member of the Corps as they apply to personal service injury sustained by a civil defense volunteer.

1.3.2.6 Public Safety and Civil Defense (Section 13):

Any authority or person acting in pursuance of this Act shall interfere with the ordinary avocations of life and the enjoyment of property as little as may be consonant with the purpose of ensuring the public safety and civil defense.

1.3.2.7 Prosecution (Section 16):

No prosecution for any offence punishable under this Act shall be instituted against any person except by, or with the consent of, the Controller or any person authorized by the Controller in this behalf.

1.3.2.8 Provisions for State Government (Section 17):

The State Government may, by notification direct that-

(a) all or any of the powers which may be exercised by it under this Act shall be exercised also by such officer, not being in the opinion of the State Government, inferior in rank to that of a District Magistrate, as may be specified in the said notification.

(b) All or any of the power which may be exercised by the Controller under this Act shall, in such circumstances and under such conditions, as may be specified in that notification, be exercised also by such officer, not being, in the opinion of the State Government, inferior in rank to that of a Sub-Divisional Magistrate, as may be specified in the said notification.

1.4.0 THE WILD LIFE (PROTECTION) ACT, 1972

1.4.1 OBJECTIVE AND SCOPE

The wild life laws have a long history and are the culminate result of an increasing awareness of the compelling need to restore the catastrophic ecological imbalances introduced by the depredations inflicted on nature by human being. The earliest codified law can be traced to 3rd Century B.C. when Ashoka, the King of Maghadha, enacted a law in the matter of preservation of wild life and environment. But, the first codified law in India which heralded the era of laws for the wild life and protection was enacted in the year 1887 by the British and was titled as the Wild Birds Protection Act, 1887 (10 of 1887). This Act enabled the then Government to frame rules prohibiting the possession or sale of any kinds of specified wild birds, which have been killed or taken during the breeding season. Again the British Government in the year 1912 passed the Wild Birds and Animals Protection Act, 1912 (8 of 1912) as the Act of 1887 proved to be inadequate for the protection of wild birds and animals.

The Act of 1912 was amended in the year 1935 by the Wild Birds and Animals Protection (Amendment) Act, 1935 (27 of 1935).

After the Second World War the freedom struggle for India started taking its shape and wild life was relegated to the background. But after independence, the Constituent Assembly in the Draft Constitution placed "Protection of Wild Birds and Wild Animals" at entry No.20 in the State List and the State Legislature has been given power to legislate.

It was not till late 1960's that the concern for the depleting wild finally aroused. The first comprehensive legislation relating to protection of wild life was passed by the Parliament and it was assented by the President on 9th September, 1972 and came to be known as The Wild Life (Protection) Act, 1972 (53 of 1972). This Act was further amended in the year 1976, 1982, 1986, 1991, 1993, 2003 and 2006.

This Act was enacted to provide for the protection of wild animals, birds and plants.

1.4.2 RELEVANT PROVISIONS OF THE ACT

1.4.2.1Definitions

a) "Animal" includes amphibians, birds, mammals and reptiles and their young, and also includes, in the cases of birds and reptiles, their eggs.
b) "Animal article" means an article made from any captive animal or wild animal, other than vermin, and includes an article or object in which the whole or any part of such animal 5[has been used, and ivory imported into India and article made there from.
c) "Board" means the Wild Life Advisory Board constituted under sub-section (1) of section 6.
d) "Circus" means an establishment, whether stationary or mobile, where animals are kept or used wholly or mainly for the purpose of performing tricks or man oeuvres.
e) "Closed area" means the area which is declared under sub-section (1) of section 37 to be closed to hunting.
f) "Collector" means the chief officer in charge of the revenue administration of a district.
g) "Dealer" means any person who carries on the business of buying and selling any captive animal article, trophy, uncured trophy 1[meat or specified plant].

h) "Director" means the person appointed as Director of Wild Life Preservation under clause (a) sub-section (1) of section 3.

i) "Forest Officer" means the Forest Officer appointed under clause (2) of section 2 of the Indian Forest Act, 1927.

j) "Habitat" includes land, water or vegetation which is the natural home of any wild animal;

k) "Hunting", with its grammatical variations and cognate expressions, includes,-

(i) capturing, killing, poisoning, snaring and trapping of any wild animal and every attempt to do so,

(ii) Driving any wild animal for any of the purposes specified in sub-clause (a),

(iii) Injuring or destroying or taking any part of the body of any such animal or, in the case of wild birds or reptiles, damaging the eggs of such birds or reptiles or disturbing the eggs or nests of such birds of reptiles;

l) "Land" includes canals, creeks and other water channels, reservoirs, rivers, streams and lakes, whether artificial or natural, marshes and wetlands and also includes boulders and rocks.

m) "License" means a license granted under this Act.

n) "Manufacturer" means a manufacturer of animal articles.

o) "Meat" includes blood, bones, sinew, eggs, fat and flesh, whether raw or cooked, of any wild animal, other than vermin.

p) "National Park" means an area declared, whether under section 35 of section 38, or deemed, under sub-section (3) of section 66, to be declared, as a National Park.

q) "Recognized zoo" means a zoo recognized under section 38H.

r) "Reserve forest" means the forest declared to reserved by the State Government under section 20 of the Indian Forest Act,1927 (16 of 1927).

s) "Sanctuary" means an area declared, whether under section 2[26A] or section 66, to be declared as wild life sanctuary.

t) "Specified plant" means any plant specified in Schedule VI.

u) "State Government", in relation to a Union territory, means the Administrator of the Union territory appointed by the President under article 239 of the Constitution;

v) "Trophy" means the whole or any part of any captive animal or wild animal, other than vermin, which has been kept or preserved by any means, whether artificial or natural, and includes-

(a) rugs, skins and specimens of such animal mounted in whole or in part through a process of taxidermy, and
(b) antler, horn, rhinoceros horn, hair, feather, nail, tooth, musk, eggs and nests;

w) "Uncured trophy" means the whole or any captive animal or wild animal, killed wild animal, ambergris, musk and other animal products];

x) "Vehicle" means any conveyance used for movement on land, water or air and includes buffalo, bull, bullock, camel, donkey, elephant, horse and mule.

y) "Vermin" means any wild animal specified in Schedule V.

z) "Weapon" includes ammunition, bows and arrows, explosives, firearms, hooks, knives, nets, poison, snares and traps and any instrument or apparatus capable of anaesthetizing, decoying, destroying, injuring or killing an animal.

aa) "Wild animal" means any animal found wild in nature and includes any animal specified in Schedule I, Schedule II, Schedule III, Schedule IV, Schedule V, wherever found.

bb) "Zoo" means an establishment, whether stationary or mobile, where captive animals are kept for exhibition to the public but does not include a circus and an establishment of a licensed dealer in captive animal.

1.4.2.2 Authorities to Be Appointed or Constituted Under the Act

At the Central Government level:

• A Director of Wild Life Preservation and other officers (Section 3).
• National Board for Wild Life with the Prime Minister as the Chairperson, with the following important functions (Section 5A and 5C).

-Framing policies and advising Central and State Government on promotion of wildlife conservation and controlling poaching and illegal trade of wildlife and its products.
- Making recommendations for setting up and managing national parks, sanctuaries and other protected areas.

-Suggesting measures for improvement of wildlife conservation.

-Preparing and publishing a statement report, at least once in 2 years on wildlife.
• A National Tiger Conservation Authority.

• A Tiger and Other Endangered Species Crime Control Bureau (Section 38Y & Z), with the following functions

- To collect intelligence related to organized wildlife crime activities and to disseminate the same to other enforcement agencies for action.

- Coordinate actions of various officers, State Governments and other relevant authorities.
-Implement obligations under various international agreements which are in force in India.

At the State Government level:

• A Chief Wildlife Warden (CWLW), Wildlife Wardens, Honorary Wild Life Wardens and other officers (Section 4).

• A State Board for Wildlife, with the Chief Minister as the Chairperson, with the following key functions (Section 6 and 8):

-Selection and management of protected areas.

-Formulation of policy in granting license and permits.

-Advice on measures to be taken for harmonizing the needs of the tribal's and other forest dwellers, with the protection and conservation of wildlife.

• Tiger Steering Committee and Tiger Conservation Foundation.

1.4.2.3 Provisions regarding hunting of wild animals

a) Various species of wild animals are listed in 5 Schedules annexed to the Act. No hunting is permitted for any animal in Schedules I to IV, those in Schedule I and Part 2 of Schedule II (considered especially threatened) are given stronger provisions relating to trade and penalties. Schedule V is that of 'vermin', and hunting of animals listed therein is allowed under specified conditions.

b) Hunting of an animal in Schedules I, II, III & IV is allowed only when the CWLW is satisfied that such an animal has become dangerous to human life, or is disabled or diseased

to an extent as to be beyond recovery (Section 9 and 11).
c) The Act does not affect hunting rights of Scheduled Tribes of Nicobar Islands (Section 65).

1.4.2.4 Provisions for protection of wild plants

a) The Act provides for protection of 'specified' plants (listed in Schedule VI). No person is allowed to willfully pick, uproot, damage, acquire or collect any specified plant from forest land and area specified by the Central Government (Section 17A).

b)A person may however do so on being granted a permit by the CWLW for educational and scientific purposes (Section 17B).

c) No-one is allowed to possess, sell, transfer or transport any specified plant, dead or alive. A member of a schedule tribe may however pick, collect or possess any specified plant in the district he resides, for his bona fide personal use (Section 17A).
c) No person will be allowed to cultivate a specified plant, or do business in it, except under a license (Section 17C & D).

1.4.2.5 Provisions regarding protected areas, and rights within these area

Five kinds of protected areas can be notified in the Act.

A) Sanctuary

a) The State Government may by notification declare its intention to constitute any area as a sanctuary for protecting wildlife and the environment (Section 18).

b) The State Government will then appoint an Officer to act as the Collector within 30 days of issue of the notification, to determine the nature and extent of rights of persons in or over the land within the sanctuary (Section 18B).

c) The process of settlement of rights involves the following:

• An enquiry into the existence, nature and extent of the rights of any person in or over the land, comprised within the limits of the sanctuary (Section 19).
• No right can be acquired after this notification in or over the land within the limits specified, except by ordinary procedures of succession and will (Section 20).
• After the notification, the Collector shall, within a period of 60 days, publish in the regional

language, in every town or village, or in the neighborhood of the sanctuary a proclamation which specifies (Section 21):

1. The situation and the limits of the sanctuary.

2. The requirement of any person claiming a right, to prefer before the collector within 2 months from the date of such proclamation, with a written claim specifying the nature and extent of such a right with details, and the amount and particulars of compensation claimed.
• The Collector shall inquire into any claim referred before him or existence of any right not claimed, on the basis of records of the State Government and the evidence of any person acquainted with the same (Section 22).

• The Collector then shall pass an order admitting or rejecting the claim. If the claim is admitted the collector may (Section 24):

1. Exclude such land from the limits of the proposed sanctuary.
2. Acquire such land or rights except where the owner has agreed to surrender his rights to the Government on payment of such compensation as is provided for in the Land Acquisition Act, 1984.

3. Allow the continuance of any right in consultation with the Chief Wild Life Warden (CWLW).
d) The sanctuary may be finally notified once the above process is finished. All provisions of the Act including restrictions and prohibitions of various activities, will then apply.

Till the settlement process is finished, the State Government is to make alternative arrangements for fuel, fodder and other forest produce to the people affected (Section 18A).
e) The Act provides exemption from the settlement of rights process, to two kinds of areas: reserve forest and territorial waters. In the former, the assumption is that the process of declaring reserved forest under the Forest Act 1927 would have gone through a similar settlement process. In the latter, the State Government has to take adequate measures to protect the occupational interests of local fisherman; also the right of innocent passage of any vessel is not affected (Section 26A).

f) Prior concurrence of the Central Government has to be obtained by the State Government when any part of territorial waters is to be included in a protected area, and their limits are to

be decided in consultation with the Chief Naval Hydrographer of the Central Government (Section 26A).

g) No person can enter or reside in a sanctuary, other than (i) a public servant on duty, (ii) a person permitted by the CWLW, (iii) a person who has right over immovable property within the sanctuary and the dependents of such persons, or (iv) a person passing through the sanctuary along a public highway (Section 27).

h) The CWLW can permit entry and residence in a sanctuary for investigation or study of wildlife, photography, scientific research, tourism, transaction of business with any person residing in the sanctuary (Section 28).

i) No person can enter a sanctuary with any weapon except with the previous permission of the CWLW (section 31). No person can set fire in a sanctuary or use any chemicals, explosives or other substances which may cause any injury to wildlife (Section 30 & 32).
j) No person shall destroy or remove any wildlife or produce or damage the habitat of any wild animal or divert stock or enhance the flow of water into or outside the sanctuary except with a permit granted by the CWLW. The State Government, in consultation with the State Wildlife Advisory Board has to determine that such a permit is necessary for the better management of wildlife. If any forest produce is removed for this purpose, it will go to local communities for their bonafide use and provided it is not for commercial purposes (Section 29).

k) The State Government is to set up an Advisory Committee for each sanctuary, which can render advice to the State Government for better conservation and management of the sanctuary. This will consist of the CWLW or his nominee (not below the rank of Conservator of Forests) as its head, a member of the State Legislature within whose constituency the sanctuary is located, 3 representative from Panchayati Raj Institutions, 2 representatives of NGOs, 3 individuals acting in the field of wildlife conservation, one representative each from Departments dealing with Home and Veterinary matters, the Honorary Wildlife Warden, and the officer in charge of the sanctuary as a member secretary (Section 33B).

B) National Parks

a) The State Government may declare an area, whether inside a sanctuary or not, as a national park for the purpose of protecting and developing wildlife and its environment (Section 35).

b) With regard to settlement of rights, the same procedure as a sanctuary will be followed, except in such a case where a claim is admitted, the collector cannot allow the continuance of any right and will necessarily have to extinguish all rights {Section 35(3)}.
c) The State Government cannot alter the boundaries of a national park except on the recommendation of the National Board for Wildlife {Section 35(5)}.

d) No grazing is allowed inside a national park {Section 35(7)}.

e) All provisions applicable to a sanctuary are also applicable to a national park {Section 35(8)}.

C) Conservation Reserves

a) The State Government after consultations with local communities can declare any area owned by the Government, particularly areas adjacent to national parks or sanctuaries, as conservation reserves (Section 36A).

b) The State Government then has to constitute a Conservation Reserve Management Committee to advise the CWLW to manage and conserve the conservation reserve. It will consist of a representative of the Forest or Wildlife Department, 1 representative of each Village Panchayat in whose jurisdiction the reserve is located, 3 representatives of NGOs working in the field of wildlife conservation, and 1 representative each from the Department of Agriculture and Animal Husbandry (Section 36B).

D) Community Reserves

a) The State Government can, where the community or an individual has volunteered to conserve wildlife, declare any private or community land2 as community reserve. A Community Reserve Management Committee shall be constituted by State Government for conserving and managing the reserve. It will have the power to prepare and implement management plans. The committee will consist of 5 representatives nominated by the Village Panchayat and where a Panchayat does not exist, by the members of the Gram Sabha. It will also include one representative of the State Forests or Wildlife Department under whose jurisdiction the community reserve falls (Section 36D).
b) There shall be no change in the land use pattern within a community reserve except in

accordance with a resolution passed by the Management Committee with the approval of the State Government (Section 36C).

E) Tiger Reserve

a) A National Tiger Conservation Authority (NTCA) has come about due to The Wildlife (Protection) Amendment Act, 2006. The Central Government shall constitute this body with the Minister for Environment and Forests as the Chairperson (Section38L).
b) The powers and functions of the NTCA are to (Section 38O):
• Approve Tiger Conservation Plans prepared by the State Governments.
• Disallow ecologically unstable land use within tiger reserves.
• Provide for measures to address conflicts of humans and wild animals, and to emphasize on coexistence in forest areas.

• Provide information on protection measures including future conservation plans in tiger reserves.
• Coordinate research and monitoring on tiger and its habitat.
• Ensure that tiger reserves and areas linking one reserve with another are not diverted for ecologically unsustainable use except in public interest and with the approval of the National Board for Wildlife.

c) The Tiger Conservation Authority can issue directions for the protection of tigers and reserves, but such directions should not interfere with the rights of local people, particularly Scheduled Tribes {Section 38O (2)}.

d) Each State Government will constitute a Steering Committee with the Chief Minister as the Chairperson for ensuring conservation of tigers (Section 38U). It will also establish a Tiger Conservation Foundation for tiger reserves to facilitate the conservation of tigers (Section38X).
e) The State Government on the recommendation of the Tiger Conservation Authority may notify an area as a tiger reserve, for which it has to prepare a Tiger Conservation Plan. In this Plan it has to ensure the agricultural, developmental, livelihood and other interests of the people living in tiger bearing forests or reserves (Section 38V).

f) In a tiger reserve the Scheduled Tribes and other forest dwellers can be relocated or their rights can be curtailed only on mutually agreed terms and only when a set of stringent conditions have been satisfied. The conditions are ({38V(5)}:

1. The process of recognition and determination of rights is completed.
2. It is established that the presence or activity of the Scheduled tribes or other forest dwellers living in the area cause irreversible damage and threatens the existence of the tiger and its habitat.

3. It is established that other reasonable options of coexistence are not available.
4. A resettlement or alternative package has been prepared which fulfills the requirements of the National Relief and Rehabilitation Policy and has the informed consent of the concerned gram sabha and of the affected persons.

g) The Act also says that the existing rights of the concerned Scheduled Tribes and other forest dwellers cannot be interfered with till the facilities and the land allocation at the resettlement location are provided (Section 38V (5)).

h) The State Government cannot de-notify a tiger reserve except in public interest and with the approval of the Tiger Conservation Authority and National Board for Wildlife (Section 38W).

1.4.2.7 Provision to regulate tourism

a)The CWLW can permit entry and residence in a sanctuary for tourism (Section 28).

b) No construction of commercial tourist lodges, hotels, zoos and safari parks will be undertaken inside a sanctuary or national park except with the approval of National Board for Wildlife (Section 33).

c) The CWLW has the powers to regulate tourism in ways that are appropriate for protection of wildlife.

1.4.2.8 Provisions to regulate trade or commerce in wild animals and animal articles
a)Every wild animal other than vermin killed in contravention of this Act, or any animal article or trophy found in contravention of this Act, or ivory imported or article made from ivory in contravention of this Act, shall be the property of the State Government and if the said contravention to the Act occurs in a sanctuary or a national park declared by the Central

Government, then the killed animal/article or trophy under discussion shall be the property of Central Government (Section 39).

b) Every person having control or custody of any captive animal specified in Schedule I or Part II of Schedule II or animal trophy or article derived from such animal or the musk of deer or the horn of rhinoceros has to declare this to the CWLW, and sell or transfer it only with written permission of the CWLW (Section 40). A Certificate of Ownership is needed for any such possession (Section 42).

c) A license is needed for any business in animal articles (other than for peacock tail feathers) (Section 44).

d) No such business is allowed for animals in Schedule I or Part 2 of Schedule II (Section 48).

1.4.2.9 Provisions for prevention and detention for offences

a) Any authorized official has the power to inspect, require persons to show plants or animals, stop vehicles/vessels and issue search warrants if he has reasonable ground to believe that the persons concerned have committed an offence against this Act (Section 50).

b) Fisherpersons who inadvertently enter a protected area are exempt from this.

c) Penalties for violating the Act range from imprisonment up to a period of seven years, and/or fines up to Rs. 25,000 (Section 51).

d) When an offence is committed by a company, every person who at the time of the offence was in charge and responsible for the conduct of the company, as well as the company, will be liable for the offence (Section 58).

e) The State Government may give the CWLW the power to reward informant's with up to Rs. 10,000 (Section 60B).

1.5.0 THE CODE OF CRIMINAL PROCEDURE, 1973

1.5.1 OBJECTIVE AND SCOPE

The Code of Criminal Procedure is the main legislation on procedure for administration of substantive criminal law in India. It was enacted in 1973 and came into force on 1 April

1974. It provides the machinery for the investigation of crime, apprehension of suspected criminals, collection of evidence, determination of guilt or innocence of the accused person and the determination of punishment of the guilty. Additionally, it also deals with public nuisance, prevention of offences and maintenance of wife, child and parents.

1.5.2 RELEVANT LEGAL PROVOSION OF THE ACT

Maintenance of Public Order and Tranquility (Section 129- 148)

1.5.2.1 Unlawful Assemblies (Section 129-132)

i) Dispersal of assembly by use of civil force (Section 129)

Any Executive Magistrate or office in charge of a police station or, in the absence of such officer in charge, any police officer, not below the rank of a sub-inspector, may command-

- any unlawful assembly, or
- any assembly of five or more persons
- Likely to cause a disturbance of the public peace, to disperse; and it shall be the duty of the members of assembly to disperse accordingly.

If command as given above is disobeyed the assembly may be dispersed by force and members of the said assembly may be arrested and confined.

ii) Use of armed forces to disperse assembly (Section 130)

If any such assembly cannot be otherwise dispersed, and if it is necessary for the public security that it should be dispersed, the Executive Magistrate of the highest rank who is present may cause it to be dispersed by the armed forces.

iii) Power of certain armed force officers to disperse assembly (Section 131)

When the public security is manifestly endangered by any such assembly and no Executive Magistrate can be communicated with, any commissioned or gazette officer of the armed forces may disperse such assembly with the help of the armed forces under his command., hence forward obey the instructions of the Magistrate, as to whether he shall or shall not continue such action.

1.5.2.2 Public Nuisance (section 133-143)

i) Conditional order for removal of nuisance (Section 133)

Whenever a District Magistrate or a Sub-divisional Magistrate or any other Executive Magistrate specially empowered in this behalf by the State Government on receiving the report of a police officer or other information and on taking such evidence (if any) as he thinks fit, considers.- that any unlawful obstruction or nuisance should be removed from

- that any unlawful obstruction or nuisance should be removed from any public place or from any way, river or channel which is or may be lawfully used by the public; or
- that the conduct of any trade or occupation or the keeping of any goods or merchandise; is injurious to the health or physical comfort of the community
- that the construction of any building, or the disposal of any substance, as is likely to occasion conflagration or explosion
- any building, tent or structure, or any tree is likely to fall and cause injury to persons
- that any tank, well or excavation adjacent to any such way or public place should be fenced in such manner as to prevent danger arising to the public; or
- any dangerous animal should be destroyed, confined or otherwise disposed of- Such Magistrate may make a conditional order requiring the person concerned, within a time to be fixed in the order,-
- To remove obstruction or nuisance, or
- To desist from carrying on such trade or occupation, or to remove such goods or merchandise, or to regulate the keeping thereof in such manner as may be directed; or
- to prevent or stop the construction of such building, or to alter the disposal of such substance; or
- to remove, repair or support such building, tent or structure, or to remove or support such trees; or
- to fence such tank, well or excavation; or
- to destroy, confine or dispose of such dangerous animal in the manner provided in the said order;

If such person objects to do so, he may call upon, to appear before the Magistrate or some other Executive Magistrate subordinate to him at a time and place to be fixed by the order, and show cause, why the order should not be made absolute.

No order duly made by a Magistrate under this section shall be called in question in any civil Court.

1.5.2.3Injunction pending inquiry (Section 142)

If a Magistrate making an order under section 133 considers-

- that immediate measures should be taken to prevent imminent danger or injury of a serious kind to the public,
- He may issue an injunction to the person against whom the order was made, as is required to obviate or prevent such danger or injury pending the determination of the matter.

1.5.2.4 Power to issue order in urgent cases of nuisance or apprehended danger (Section 144)

District Magistrate, a Sub-divisional Magistrate or any other Executive Magistrate specially empowered by the State Government may direct any person either to abstain from a certain act or to take certain order with respect to certain property in his possession or under his management.

Such directions may be given to prevent

a) Obstruction, annoyance or injury to any person lawfully employed, or

b) Danger to human life, health or safety, or

c) A disturbance of the public tranquility, or a riot, or an affray vide section 144 of Cr.P.C

1.5.2.5 Power to prohibit carrying arms in procession or mass drill or mass training with arms (Section144A)

The District Magistrate may, whenever he considers it necessary so to do for the preservation of public peace or public safety or for the maintenance of public order, by public notice or by order, prohibit in any area within the local limits of his jurisdiction, the carrying of arms in any procession or the organizing or holding of, or taking part in, any mass drill or mass training with arms in any public place.

1.6.0 THE WATER (PREVENTION AND CONTROL OF POLLUTION) ACT, 1974

1.6.1 OBJECTIVE AND SCOPE

The problem of pollution of rivers and streams has assumed considerable importance urgency in recent years as a result of the growth of industries and the increasing tendency to urbanization. It had become essential to ensure that the domestic and industrial effluents are not allowed to be discharged into the water courses without adequate treatment. To draw a draft enactment for the prevention of water pollution a committee was set up in 1962. The report of the committee was circulated to the State Governments and was also considered by the Central Council of Local self-Government. This council resolved that single law regarding measures to deal with water pollution control, both at the central and the state levels may be enacted by the Union Parliament. A draft bill was accordingly prepared and put for consideration at joint session of the central Council of the Local Self- Government and the Fifth conference of the State Ministers of the town and country planning held in 1965. In pursuance of the decision of the joint session, the draft Bill was considered subsequently in detail by a Committee of Ministers of Local- Self Government from the States of Bihar, Madras, Maharashtra, Rajasthan, Haryana an West Bengal. Having Considered the recommendations of the aforesaid committee the Central government came to the conclusion that the existing local provision are neither adequate nor satisfactory and, therefore, there is an urgent need for introducing a comprehensive legislation. The subject matter being relatable to entry 17 read with entry 6 of List II in The Seventh schedule to the Constitution and parliament having no power to make a law in the states (apart from the provisions of article 249 and 250 of the constitution) the Legislature of two or more states has to pass a resolution in pursuance of article 252 0f the constitution empowering the Parliament to pass the necessary legislation on the subject. Such resolutions were passed by the Legislatives of the States of Gujarat, Jammu and Kashmir, Kerala, Haryana and Mysore. To give effect to the resolution passed by the Legislatures of the aforesaid States the Water (Prevention and Control of Pollution) Bill was introduced in the Parliament. This Bill has been passed by both the Houses of Parliament received the assent of the President on 23rd March 1974. It came on the Statute Book as The Water (Prevention and Control of Pollution) Act, 1974.

The Act was enacted to prevent and control water pollution, maintain or restore the wholesomeness of water establish boards for the prevention and control of water pollution and to confer on and assign to the boards, the power and functions relating to the above mentioned.

1.6.2 RELEVANT PROVISIONS OF THE ACT

1.6.2.1 Definitions (Section 2)

a) "Board" means the Central Board or a State Board.

b) "Central Board" means the Central Pollution Control Board Constituted under section 3.

c) "Occupier", in relation to any factory or premises, means the person who has control over the affairs of the factory or the premises, and includes, in relation to any substance, the person in possession of the substance.

d) "Outlet" includes any conduit pipe or channel, open or closed carrying sewage or trade effluent or any other holding arrangement which causes or is likely to cause, pollution.

e) "pollution" means such contamination of water or such alteration of the physical, chemical or biological properties of water or such discharge of any sewage or trade effluent or of any other liquid, gaseous or solid substance into water (whether directly or indirectly) as may, or is likely to, create a nuisance or render such water harmful or injurious to public health or safety, or to domestic, commercial, industrial, agricultural or other legitimate uses, or to the life and health of animals or plants or of aquatic organisms.

f) "Sewage effluent" means affluent from any sewerage system or sewage disposal works and includes sullage from open drains.

g) "Sewer" means any conduit pipe or channel, open or closed, carrying sewage or trade effluent.

h) "State Board" means a State Pollution Control Board constituted under section 4];

i) "State Government" in relation to a Union territory means the Administrator thereof appointed under article 239 of the Constitution;

j) "stream" includes-

   (i) river;

   (ii) water course (whether flowing or for the time being dry);

   (iii) inland water (whether natural or artificial);

   (iv) sub-terranean waters;

(v) Sea or tidal waters to such extent or, as the case may be, to such point as the State Government may, by notification in the Official Gazette, specify in this behalf.

(k) "Trade effluent" includes any liquid, gaseous or solid substance which is discharged from any premises used for carrying on any [Industry, operation or process, or treatment and disposal system], other than domestic sewage.

1.6.2.2 Constitution of Central Board (Section 3)

The Central Government shall, constitute a Central Board to be called the [Central Pollution Control Board] to exercise the powers conferred on and perform the functions assigned to that Board under this Act.

1.6.2.3 Constitution of State Boards (section 4)

The State Government shall, constitute a State Board to be called the [State Pollution Control Board] to exercise the powers conferred on and perform the functions assigned to that Board under this Act.

1.6.2.4 Constitution of Joint Board (Section 13)

A joint Board may be constituted by an agreement to be entered into:-

(a) either by two or more Governments of contiguous States, or
(b) By the Central Government (in respect of one or more Union territories) and one or more Government of State Government contiguous to such Union territory or Union territories.

An agreement may contain such terms and conditions as specified in clauses (a) to (d) of subsection 2.

1.6.2.5 Functions of Central Board (Section 16)

Main functions of the Central board shall be to promote cleanliness of streams and wells in different areas of states. Some of the other functions performed by Central Board are:-

a) Advise the Central Government on any matter concerning the prevention and control of water pollution.
b) Co-ordinate the activities of the State Boards and resolve dispute among them.
c) Provide technical assistance and guidance to the State Boards, carry out and sponsor investigations and research relating to problems of water pollution and prevention, control or abatement of water pollution.
d) Lay down, modify or annul, in consultation with the State Government concerned, the standards for a stream or well.
e) Perform such other functions as may be prescribed.

1.6.2.6 Functions of State Board (Section 17)

The functions of the State Board shall be-

a) To plan a comprehensive programme for the prevention, control or abatement of pollution of streams and wells in the State and to secure the execution thereof.
b) To advise the State Government on any matter concerning the prevention, control or abatement of water pollution.
c) To collect and disseminate information relating to water pollution and the prevention, control or abatement thereof.
d) To inspect sewage or trade effluents, works and plants for the treatment of sewage and trade effluents and to review plans, specifications or other data relating to plants set up for the treatment of water, works for the purification thereof and the system for the disposal of sewage or trade effluents or in connection with the grant of any consent as required by this Act.
e) To evolve efficient methods of disposal of sewage and trade effluents on land, as are necessary on account of the predominant conditions of scant stream flows that do not provide for major part of the year the minimum degree of dilution.
f) To lay down standards of treatment of sewage and trade effluents to be discharged into any particular stream taking into account the minimum fair weather dilution available in that stream and the tolerance limits of pollution permissible in the water of the stream, after the discharge of such effluents.
g) To make, vary or revoke any order --

(i) For the prevention, control or abatement of discharge of waste into streams or wells.

(ii) Requiring any person concerned to construct new systems for the disposal of sewage and trade effluents or to modify, alter or extend any such existing system or to adopt such remedial measures as are necessary to prevent control or abate water pollution.

h) To lay down effluent standards to be complied with by persons while causing discharge of sewage or sullage or both and to lay down, modify or annul effluent standards for the sewage and trade effluents.

i) To advice the State Government with respect to the location of any industry the carrying on of which is likely to pollute a stream or well;

j) To perform such other functions as may be prescribed or as may, from time to time be entrusted to it by the Central Board or the State Government.

1.6.2.7 Powers to Give Directions (Section 18)

In the performance of its functions under this Act --

a) The Central Board shall be bound by directions Central Government.

b) A State Board shall be bound by direction of State Government.

1.6.2.8 Power of State Government to Restrict the Application of the Act to Certain Areas (Section 19)

If the State Government is of the opinion that the provisions of this Act need not apply to the entire State, it may restrict application of this Act to such areas as may be declared as water pollution, prevention and control area or areas. The state Government has power to any area or defines a new area.

1.6.2.9 Power to Obtain Information (Section 20)

Empowers the State Board to obtain information and give direction to furnish information regarding construction, installation or operation of such establishment or of any disposal system and such other particulars as may be prescribed.

1.6.2.10 Power to Take Samples of Effluents and Procedure to be followed In Connection Therewith (Section 21)

This section empowers the Board to collect samples of sewage / trade effluent from any industry.

1.6.2.11 Prohibition on Use of Stream or Well For Disposal of Polluting Matter, etc (Section 24)

This Act strictly prohibit discharge of any poisonous, noxious or polluting matter i.e., discharge of any domestic or industrial wastes into the water beyond the permissible limit laid down by the Act. It also prohibits knowingly causing any matter to flow into any stream to impede the proper flow of water leading to substantial aggravation of pollution. This section illustrates the exceptions which have no effects on the water of the stream or flow of the water therein and thus are not subject to the prohibition. These are:-

(a) Constructing, improving or maintaining in or across or on the bank or bed of any stream any building, bridge, weir, dam, sluice, dock, pier, drain or sewer or other permanent works which he has a right to construct, improve or maintain

(b) Depositing any materials on the bank or in the bed of any stream for the purpose of reclaiming land or for supporting, repairing or protecting the bank or bed of such stream provided such materials are not capable of polluting such stream.

(c) Putting into an stream any sand or gravel or other natural deposit which has flowed from or been deposited by the current of such stream.

1.6.2.12 Restrictions on New Outlets and New Discharges (Section 25)

This section puts restrictions on new outlets and new discharges. The restriction is monitored by State Pollution Control Board.

The section forbids any person from establishing or taking any steps to establish any industry, operation or process, or any treatment and disposal system or an extension or addition thereto, which is likely to discharge sewage or trade effluent into a stream or well or sewer or on land, without the previous consent of the State Board.

Persons are also prohibited from bringing into use any new or altered outlets for the discharge of sewage or beginning to make any new discharge of sewage without the previous consent of the State Board.

Steps which did not require any prior consent prior to the commencement of the Water (Prevention and Control of Pollution) Amendment Act, 1988 could be continued for a limited period of three months subject to an application being tendered for such consent within the period or till its final disposal, whichever was earlier.

1.6.2.13 Provision Regarding Existing Discharge of Sewage or Trade Effluent (Section 26)

It states as where immediately before the commencement of this Act any person was discharging any sewage or trade effluent the provisions of section 25 shall apply to such person as well. However the application for consent to be made on or before such date as may be specified by the State Government.

1.6.2.14 Furnishing of Information to State Board and Other Agencies in Certain Cases (Section 31)

This Section requires furnishing of information to the Board about accidental discharge of poisonous, noxious or polluting matter.

1.6.2.15 Emergency Measures In Case Of Pollution of Stream or Well (Section 32)

Empowers the State Board to take action on the presence of noxious or polluting matter in any stream or well or sewer or land and issuing orders restraining or prohibiting the discharge of any such matter into any stream or well or sewer or on land or into marine coastal areas.

1.6.2.16 Power of Board to Make Application to Courts for Restraining Apprehended Pollution of Water in Streams or Wells (Section 33)

In case of an apprehension of the Board that the water in any stream or well is likely to be polluted by reason of the disposal or likely disposal of any matter in such stream or well or in any sewer, or on any land, or otherwise, the Board may make an application to a court for restraining the persons who is likely to cause such pollution from so causing. It may be noted that such application should be to a Court not inferior to that of a Metropolitan Magistrate or a Judicial Magistrate of the first class.

1.6.2.17 Power to Give Directions (Section 33A)

This Section empowers the Board to issue direction for closure of the industry or for stoppage of electricity, water supply or any other service.

1.6.2.18 Failure to Comply With Directions Under Sub-Section (2) or Sub-Section (3) of Section 20, or Orders Issued Under Clause (C) of Sub-Section (1) of 32 or Directions Issued Under Sub-Section (2) of Section 33 or Section 33A. (Section 41)

Whoever fails to comply with-

a) any direction given under Section 20(2) or (3) be punishable with imprisonment for a term which may extend to three months or with fine which may extend to ten thousand rupees or with both and in case the failure continues, with an additional fine which may extend to five thousand rupees for every day during which such failure continues after the conviction for the first such failure.
b) any order issued under Section 32 (1) (c) or any direction issued under section 33 or 33A punishable with imprisonment for a term which shall not be less than one year and six months but which may extend to six years and with fine, and case the failure continues, with an additional fine which may extend to five thousand rupees for every day during which such failure continues after the conviction for the first such failure. If the failure continues beyond a period of one year after the date of conviction, the offender shall, on conviction, be punishable with imprisonment for a term which shall not be less than two years but which may extend to seven years and with fine

1.6.2.19 Penalty for Contravention of Provisions of Section 24 (Section 43)

Contravention of section 24 is punishable with imprisonment for a term not less than one year and six months but which may extend to six years and with fine.

1.6.2.20 Penalty for Contravention of Section 25 or Section 26(Section 44)

Contravention of Section 25 or Section 26 is punishable with imprisonment for a term not less than one year and six months but which may extend to six years and with fine.

1.6.2.21 Enhanced Penalty after Previous Conviction (Section 45)

If any person who has been convicted of any offence under section 24 or 25 or section 26 is again found guilty of an offence involving a contravention of the same provision, he shall, be punishable with imprisonment for a term which shall not be less than two years but which may extend to seven years and with fine.

1.6.2.22 Offences by Companies (Section 47)

Where an offence under this Act has been committed by a company, every person who at the time the offence was committed was in charge of, and was responsible to the company for the conduct of, the business of the company, as well as the company, shall be deemed to the guilty of the offence and shall be liable to be proceeded against and punished accordingly.

1.6.2.23 Offences by Government Departments (Section 48)

Where an offence under this Act has been committed by any Department of Government, the Head of the Department shall be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly.

1.6.2.24 Members, Officers and Servants of Board to be Public Servants (Section 50)

All members, officers and servants of a Board when acting in pursuance of any of the provisions of this Act (45 of 1860) and the rules shall be deemed to be public servants within the meaning of section 21 of the Indian Penal Code.

1.6.2.25 Local Authorities to Assist (Section 55)

All local authorities shall render help and assistance and furnish information to the Board as it may require for the discharge of its functions, and make available to the Board for inspection and examination such records, maps, plans and other documents necessary for the discharge of its functions.

1.7.0THE WATER (PREVENTION AND CONTROL OF POLLUTION) RULES, 1975

1.7.1 OBJECTIVE AND SCOPE

In exercise of the powers conferred by section 63 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) the central government after consultation with central board for the prevention and control of water pollution, the Water (Prevention and Control of Pollution) Rules, 1975 were made. These rules provide for:-

a) Terms and conditions of service of the members of the central board and of committees of central board,

b) Powers and duties of the chairman and member secretary, appointments of officers and employees temporary association of persons with central board to assist or advice central board for performing any function.
c) Appointment of consulting engineer to assist central board for performance of its function.
d) The central water laboratory shall be made to analyze samples of water, sewage or trade effluent received by it from any officer authorized by the central board for the purpose and finding.

1.8.0 FOREST (CONSERVATION) ACT, 1980

1.8.1 OBJECTIVE AND SCOPE

The Act provides for the conservation of forests and for matters connected therewith or ancillary or incidental thereto. The Act extends to the whole of India except the State of Jammu and Kashmir.

1.8.2 RELEVANT PROVISIONS OF THE ACT

1.8.2.1 Restriction on the de-reservation of forests or use of forest land for non-forest purpose (Section 2)

No State Government or other authority shall make, except with the prior approval of the Central Government, any order directing that any reserved forest, shall cease to be reserved; that any forest land or any portion thereof may be used for any non-forest purpose; that any forest land or any portion thereof may be assigned by way of lease or otherwise to any private person or to any authority, corporation, agency or any other organization not owned, managed or controlled by Government; that any forest land or any portion thereof may be cleared of trees which have grown naturally in that land or portion, for the purpose of using it for re-forestation.

1.8.2.2 Constitution of Advisory Committee (Section 3)

The Central Government may constitute a Committee to advise that Government with regard to the grant of approval and any other matter connected with the conservation of forests which may be referred by the Central Government.

1.8.2.3 Penalty for contravention of the provisions of the Act (Section 3A)

Whoever contravenes or abets the contravention of any of the provisions of Section 2, shall be punishable with simple imprisonment for a period which may extend to fifteen days.

1.8.2.4 Offences by the Authorities and Government Departments (Section 3B)

Where any offence under this Act has been committed by any department of Government, the head of the department; or by any authority, every person who, at the time the offence was committed, was directly in charge of, and was responsible to, the authority for the conduct of the business of the authority as well as the authority; shall be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly.

1.9.0 THE AIR (PREVENTION AND CONTROL OF POLLUTION) ACT, 1981

1.9.1 OBJECTIVE AND SCOPE

With the increasing industrialization and the tendency of the majority of industries to congregate in the areas which are already heavily industrialized, the problem of air pollution had begun to be felt in the country. The various pollutants discharged from certain human activities connected with the traffic, heating, use of domestic fuel, refuse, incinerations, etc., also have detrimental effects on the health of the people as also on animal life, vegetation and property. In June, 1972, at the United Nations Conference on the human environment held in Stockholm wherein India also participated, decisions were taken to take appropriate steps for the preservation of natural resources of the earth, which among other things, include the preservation of the quality of air and control of air pollution. Keeping in view the decisions taken at the said Conference the Government decided to implement those decisions in so far as they related to the preservation of the quality of air and control of air pollution. Accordingly the AIR (PREVENTION AND CONTROL OF POLLUTION) Bill was introduced in the Parliament. This Bill has been passed by both the Houses of Parliament received the assent of the President on 29th March, 1981. It came into force on the 16th day of May, 1981 as THE AIR (PREVENTION AND CONTROL OF POLLUTION) ACT, 1981.

The Act was enacted to provide for the prevention, control an abetment of air pollution. To provide for the establishment of central and State Boards, with a view to carry out the aforesaid purpose, for conferring on and assigning to such Boards, powers, functions and matters relating to air pollution.

Decisions were taken at the United Nations Conference on the Human Environment held in Stockholm in June, 1972, in which India participated, to take appropriate steps for the preservation of the natural resources of the earth which, among other things, include the preservation of the quality of air and control of pollution.

1.9.2RELEVANT PROVISIONS OF THE ACT:

1.9.2.1 Definitions:

a) "Air pollutant" means any solid, liquid or gaseous substance (including noise) present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment.
b) "Air pollution" means the presence in the atmosphere of any air pollutant.
c) "Approved appliances" means any equipment or gadget used for the bringing of any combustible material or for generating or consuming any fume, gas of particulate matter and approved by the State Board for the purpose of this Act.
d) "Approved fuel" means any fuel approved by the State Board for the purposes of this Act.
e) "Board" means the Central Board or State Board.
f) "Central Board- means the Central Board for the Prevention and Control of Water Pollution constituted under section 3 of the Water (Prevention and Control of Pollution) Act, 1974.
g) "Control equipment" means any apparatus, device, equipment or system to control the quality and manner of emission of any air pollutant and includes any device used for securing the efficient operation of any industrial plant.
h) "Emission" means any solid or liquid or gaseous substance coming out of any chimney, duct or flue or any other outlet.
i) "Industrial plant" means any plant used for any industrial or trade purposes and emitting any air pollutant into the atmosphere.

j) "Member" means a member of the Central Board or a State Board, as the case may be, and includes the Chairman thereof.

k) "Occupier", in relation to any factory or premises, means the person who has control over the affairs of the factory or the premises, and includes, in relation to any substance, the person in possession of the substance.

l) (n) "Prescribed" means prescribed by rules made under this Act by the Central Government or as the case may be, the State government.

m) "State Board" means,-

(i) in relation to a State in which the Water (Prevention and Control of Pollution) Act, 1974, is in force and the State Government has constituted for that State a State Board for the Prevention and Control of Water Pollution under section 4 of that Act, the said State Board; and

(ii) in relation to any other State, the State Board for the Prevention and Control of Air Pollution constituted by the State Government under section 5 of this Act.

1.9.2.2 Central Board for the Prevention and Control of Air Pollution (Section 3)

The Act provides that the Central Board established under section 3 of the Water (Prevention and Control of Pollution) Act, 1974 will also exercise and perform powers and functions respectively under the Air (Prevention and Control of Pollution) Act, 1981.

1.9.2.3 State Boards for the Prevention and Control of Water Pollution to be, State Boards for the Prevention and Control of Air Pollution (Section 4)

The Air Act, 1981 provides that the State Board for prevention, control and abatement of water pollution shall exercise the powers and perform the functions of the State Board for the prevention, control and abatement of air pollution.

1.9.2.4 Constitution of State Boards (Section 5)

In any State in which the Water (Prevention and Control of Pollution), Act 1974 (6 of 1974), is not in force in that case the State Government shall, constitute a State Board for the Prevention and Control of Air Pollution .

1.9.2.5 Central Board to exercise the powers and perform the functions of a State Board in the Union territories (Section 6)

This Section puts the restriction on constitution of the State Board in a Union Territory.

1.9.2.6 Powers and Functions of Boards (Section 16 and 17)

Powers and functions of the Central board and State Board are:-

a) To improve the quality of air and to prevent, control or abate air pollution in the country.
b) To advise the Central and State Government on any matter concerning the prevention, control or abatement of air pollution.
c) To collect and disseminate information relating to air pollution.
d) Organize the training of persons engaged or to be engaged in programmes relating to prevention, control or abatement of air pollution and to organize mass-education programme relating to it.
e) To inspect, at all reasonable times, any control equipment, industrial plant or manufacturing process and to give, by order, such directions to such persons as it may consider necessary to take steps for the prevention, control or abatement of air pollution.
f) To inspect air pollution control areas to such intervals as it may think necessary, assess the quality of air therein and take steps for the prevention, control or abatement of air pollution in such areas.
g) To lay down, in consultation with the Central Board and having regard to the standards for the quality of air laid down by the Central Board, standards for emission of air pollutants into the atmosphere from industrial plants and automobiles or for the discharge of any air pollutant into the atmosphere from any other source. Different standards for emission may be laid down under this clause for different industrial plants having regard to the quality and composition of emission of air pollutions into the atmosphere from such industrial plants.
h) To advise the Central and State Government with respect to the suitability of any premises or location for carrying or any industry this is likely to cause air pollution.
i) To perform such other functions as may be prescribed, from time to time, be entrusted to it by the Central Board or the State Board.

The Supreme Court in *Rural Litigation and Entitlement Kendra Dehradoon v. state of U.P., air 1985 SC 651* ordered the closure of limestone quarries which were causing imbalance to ecology and hazard to public health and environment. However in order to mitigate the hardship caused by such closure to the lessee, Government of India and State of U.P. were directed to give priority and send intimation whenever any other area was allotted for grant of limestone or dolomite quarrying the displaced lessees.

1.9.2.7 Power to declare air pollution control areas (Section 19)

As per this section in consultation with the State Pollution Control Board, the State Government may declare an area within the state as "air pollution control area" and can prohibit the use of any fuel other than approved fuel in that area causing air pollution. No person shall, without prior consent of State Board operate or establish any industrial unit in the "air pollution control area".

1.9.2.8 Restrictions on use of certain industrial plants (Section 21)

Requires the industries to obtain the consent from the Board to establish/ operate the unit in the Air Pollution control area.

In *M.C. Mehta V. Union of India (1986) 2 SCC 176* where a notification was issued under section 19(1) of the Air (Prevention and Control of Pollution) Act, 1981 by the Central Government in consultation with the Central Board placing the Union Territory of Delhi within the control area of air pollution, any plant if established has to take permission from the Central Board. In the present case the Shriram Plants of Delhi fell under the Schedule of the industries specified in the Act, and had to obtain consent order under section 21 thereof. Accordingly if the Central Board at any stage found that conditions in the consent order relating to the power plant were not complied with and the particular matter emitted by the stacks of the boiler was more than 150 mg/Nm^3 it could take whatever action was warranted by law.

1.9.2.9 Persons carrying on industry, etc., and to allow emission of air pollutants in excess of the standard laid down by State Board (Section 22)

This section prohibits the emission of pollutants in excess of the standards laid down by the Board.

In *Krishna Gopal v. State of U.P*., 1986 Cr LR 11 (MP) it has been held that manufacturing of medicines by installing a boiler in a residential area which cause emission of smoke is detrimental to the physical comfort of the public at large. In such a case removal of factory ordered by SDM was valid.

In M.C. Mehta v. Union of India, Air 1987 SC 965 the Supreme Court held that since Chlorine gas is dangerous to the life and health of the general public after any leakage from a storage tank, cylinder or any other point during its production, the health and welfare of the workers and and public large living in the surrounding areas may be put to risk. Accordingly the Foods & fertilizers Industries were imposed stringent conditions to carry on such production so that such an eventuality may be prevented.

1.9.2.10 Power of Board to make application to court for restraining person from causing air pollution (Section 22A)

This section empowers the Board to seek intervention of Court to restrain emissions exceeding the standards. The Board may make an application to a court, not inferior to that of a Metropolitan Magistrate or a Judicial Magistrate of the first class for restraining such person from emitting such air pollutant.

1.9.2.11 Furnishing, of information to State Board and other agencies in certain cases (Section 23)

This section requires the industries to furnish information on the emissions in excess of the standards laid down by the Board.

1.9.2.12 Power of entry and inspection (Section 24)

Any person authorized in this behalf by the State Board shall have the right to enter any place at any time for the purpose of any functions entrusted by the Board.

1.9.2.13 Power to obtain information (Section 25)

For the purpose of carrying out the functions entrusted to it, the State Board or any officer empowered by it in its behalf may call for any information (including information regarding the types of atmosphere and the level of the emission of such air pollutants) from the occupier or any other person carrying oil, any industry or operating any control equipment or industrial plant and for the purpose of verifying the correctness of such information, the State Board shall have the right to inspect the premises where such industry, control equipment or industrial plant is being carried on or operated.

1.9.2.14 Power to give directions (Section 31A)

This section empowers the Board to issue direction for closure, prohibition or regulation of any industry, operation or process or the stoppage or regulation or supply of electricity, water or any other service.

1.9.2.15 Failure to comply with the provisions of section 21 or section 22 or with the directions issued under section 31A (Section 37)

Failure to comply with the provisions of section 21 (or) section 22 or directions issued under section 31A is punishable with imprisonment for a term which shall not be less than one year and six months, but which may extend to six years and with fine. Continued offence is punishable with an additional fine which may extend to five thousand rupees for every day during which such failure continues. If the offence continues beyond one year after the date of conviction, the offender is punishable with imprisonment which shall not be less than two years but which may extend to seven years and with fine.

1.10.0THE AIR (PREVENTION AND CONTROL OF POLLUTION) RULES, 1982

1.10.1 OBJECTIVE AND SCOPE

In exercise of the powers conferred by section 53 of Air Prevention and Control of Pollution) Act, 1981 (14 of 1981) the Central Government in consultation with the Central Board for the Prevention and Control of Water Pollution, The Air (Prevention And Control of Pollution) Rules, 1982 were made. These rules provide for:-

a) Procedure for transaction of business of the board and its committees

b) Temporary association of persons with the central board to assist central board in performing any of its functions, to participate in the deliberations of any of its meetings or the meetings of a committee formed by it.

1.11.0 ENVIRONMENT (PROTECTION) ACT, 1986

1.11.1 OBJECTIVE AND SCOPE:

The Environment (Protection) Act, 1986, has important constitutional implications, with an international background. Concern over the State of environment has grown the world over since the sixties. The decline in environmental quality has been evidenced by increasing pollution, loss of vegetal cover and biological diversity, excessive concentrations of harmful chemicals in the ambient atmosphere and in food chains, growing risks of environmental accidents and threats to life support systems. The world community's resolve to protect and enhance the environmental quality found expression in the decisions taken at the United Nations Conference on the Human Environment held in Stockholm in June, 1972. Government of India Participated in the Conference and strongly voiced the environmental concerns. While several measures have been taken for environmental protection both before and after the Conference, the need for a general legislation further to implement the decisions of the Conference has been increasingly evident.

Although there are existing laws dealing directly or indirectly, with several environmental matters, it is necessary to have a general legislation for environmental protection. Existing laws generally focus on specific types of pollution or on specific categories of hazardous substances. Some major areas of major environmental hazards are not covered. There are inadequate linkages in handling matters of industrial and environmental safety. Control mechanisms to guard against slow, insidious build up of hazardous substances, especially new chemicals, in the environment al are weak. Because of a multiply of regulatory agencies, there is need for an authority which can assume the lead role for studying, planning and implementing long-term requirements of environmental safety and to give direction to, and co-ordinate a system of speedy and adequate response to emergency situations threatening environment.

In view of what has been stated above, there is urgent need for the enactment of a general legislation on environmental protection which, inter alia, should enable co-ordination of

activities of the various regulatory agencies, creation of an authority or authorities with adequate powers for environmental protection, regulation of discharge of environmental pollutants and handling of hazardous substances, speedy response in the event of accidents, threatening environment and deterrent punishment to those who endanger human environment, safety and health.

The Bill seeks to achieve the above objects. The Bill received the assent of the President of India on 23rd May, 1986, and came into force on 19th November, 1986 as The Environment (Protection) Act, 1986

The Act was enacted to provide for the protection and improvement of, environment human environment, prevention of hazards to human beings, other living creatures, plants and property. It extends to the whole of India.

1.11.2 RELEVANT LEGAL PROVISION OF THE ACT

1.11.2.1 Definition (Section 2)

a) "environment" includes water, air and land and the inter-relationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property;
b) "environmental pollutant" means any solid, liquid or gaseous substance present in such concentration as may be, or tend to be, injurious to environment;
c) "environmental pollution" means the presence in the environment of any environmental pollutant;
d) "hazardous substance" means any substance or preparation which, by reason of its chemical or physico-chemical properties or handling, is liable to cause harm to human beings, other living creatures, plant, micro-organism, property or the environment;
e) "occupier", in relation to any factory or premises, means a person who has control over the affairs of the factory or the premises and includes in relation to any substance, the person in possession of the substance;

1.11.2.2 Power of Central Government to Take Measures to Protect and Improve Environment (section 3)

a) The Central Government has power to take measures necessary for the purpose of protecting and improving the quality of the environment and preventing controlling and abating environmental pollution.

b) Such measures may include-

(i) Co-ordination of actions by the State Governments, officers and other authorities;

(ii) Planning and execution of a nation-wide programme for the prevention, control and abatement of environmental pollution;

iii) Laying down standards for the quality of environment in its various aspects;

(iv) Laying down standards for emission or discharge of environmental pollutants from various sources.

(v) restriction of areas in which any industries, operations or processes or class of industries, operations or processes shall not be carried out or shall be carried out subject to certain safeguards;

(vi) Laying down procedures and safeguards for the prevention of accidents which may cause environmental pollution and remedial measures for such accidents;

(vii) Laying down procedures and safeguards for the handling of hazardous substances;

(viii) Examination of such manufacturing processes, materials and substances as are likely to cause environmental pollution;

(ix) Carrying out and sponsoring investigations and research relating to problems of environmental pollution;

(x) Inspection of any premises, plant, equipment, machinery, manufacturing or other processes, materials or substances and giving, by order, of such directions to such authorities, officers or persons as it may consider necessary to take steps for the prevention, control and abatement of environmental pollution

(xi) Establishment or recognition of environmental laboratories and institutes to carry out the functions entrusted to such environmental laboratories and institutes under this Act;

(xii) Collection and dissemination of information in respect of matters relating to environmental pollution;

(xiii) Preparation of manuals, codes or guides relating to the prevention, control and abatement of environmental pollution;

In *Indian Council for Enviro-Legal Action v. Union of India (AIR 1996 SC 1446)* the court observed that Bichhri is a small village in Udaipur District of Rajasthan. To its north is a major industrial establishment, Hindustan Zinc ltd., a public sector concern had established a chemical plant to produce Oleum. The real calamity occurred when a sister concern, Silver chemicals commenced production of 'H' acid in a plant located within the same complex. 'H' acid was meant for export exclusively. Its manufacture gives rise to enormous quantities of highly toxic effluents-in particular, iron based and gypsum based sludge-which if not properly treated, pose threat to Mother Earth. It poisons the earth, the water and everything that comes in contact with it. The water in the wells and streams has turned dark and dirty rendering it unfit for human consumption. It has become unfit for cattle to drink and for irrigating land/ the soil has become polluted rendering it unfit for cultivation, the mainstay of the villagers. It spread disease, death and disaster in the village.

The villager rose in revolt leading to the imposition of sec. 144 CrPC by the District Magistrate in the area and the closure of the Silver Chemicals in Jan 1989. It is averred by the respondents that both the units, Sliver Chemicals and Jyoti Chemicals have stopped manufacturing 'H' acid since Jan. 1989 and are closed, yet the consequence of their action remain--the sludge, the long-lasting damage to earth, to underground water, to human being, to cattle and the village economy. It was with this contention that this writ petition was addressed.

The Court held that the Company was absolutely liable for the environmental degradation caused by the production of 'H' acid. It was up to the company to pay for the pollution and redo the environmental damage and wrong caused by its industrial activity. Sec. 3 and 4 of the Environment Protection Act, 1986 empowers the government to recovery cost of the pollution and sue the same for redoing the harm caused to the environment.

In Fertilizers and Chemical Travancore Ltd. Emp. Assoc. & Ors. v. Law Society of India & Ors. (2004 2SCC 420) The community at risk was the population of Willingdon Island and Cochin. Manufacturing chemicals and fertilizers, the company imported ammonia in special

refrigerated ships and stored it in a storage tank located in Willingdon Island. This was then moved by rail to Cochin where it was stored in a bigger ammonia storage tank before it was pumped into consuming plant. The PIL petitioner who went to the court anticipated "devastating catastrophe" in the event of major leak in the ammonia tank. An air crash, an act of sabotage, or an earthquake could lead to loss of life on a tragic scale. The Petitioner contended that an effective environmental protection and improvement was a matter of legal rights and duties. The high court agreed with the petitioner and ordered the closing down of the tank.

The Supreme Court held a different position. Pragmatism and perception of risk and hazard as inherent in the ways of the modern world, led the courts to draw calculus between "utilities which exist in public interest and human safety". "In modern times", the court said, "we have nuclear plants which generate electricity. Their structural integrity and their operations are vulnerable to certain risks. However, generation of electricity is equally important and within the prescribe limits Society will have to tolerate existence of such plants. If the arguments of the petitioner are accepted then no such utility can exist, no power plant can exist, no reservoir can exist, no nuclear reactor can exist. We do not discount such risks but we have to live with such risks which is counterbalanced by services and amenities provided by these utilities.

1.11.2.3 Power to give directions (Section 5)

The Central Government is empowered to issue orders to any person, officer or any authority and such person, officer or authority directing –

(a) The closure, prohibition or regulation of any industry, operation or process; or

(b) Stoppage or regulation of the supply of electricity or water or any other service

In M.c. Mehta and Others v. Union Of India (AIR 1987 SC 965) The Petitioner, in the Supreme Court, sought the closure of a chlorine plant of Shriram Foods and Fertilizers Industries situated in a densely populated area, following the disastrous consequences of a leakage of oleum gas from the plant in December 1985, as a result of which one person died and several suffered serious harm. Following the gas leak, the District Magistrate acting under Section 133 of the Criminal Procedure Code, granted the management of the company 7 days to remove the dangerous substance from the company's premises. Subsequently, the

Inspector of Factories ordered the closure of the chlorine and sulphuric acid plants. The closure of the plant affected 4000 employees and was firmly opposed by the management and the labour unions. The question before the court was whether the chlorine plant should be allowed to re-start operations.

The Supreme Court was of the view that, considering the large scale unemployment and industrial dislocation that the shortage of products like chlorine would create, the plant should be permitted to re-start subject to detailed conditions. These conditions would pertain to weekly inspection, periodic health checks for the workers, setting up of safety committees comprising workers' representatives, training of workers in safety measures, etc. The Court made observations regarding the importance of zoning of industries and providing green belts around hazardous industries. The Court also recommended the setting up of an Environmental Court.

1.11.2.4 Rules to regulate environmental pollution (section 6)

The Central Government has power to make rules for the following matters:-

a) standards of quality of air, water or soil for various areas and purposes;
b) maximum allowable limits of concentration of various environmental pollutants including the procedures and safeguards for the handling of hazardous substances;
c) prohibition and restrictions on the handling of hazardous substances in different areas;
d) prohibition and restriction on the location of industries and the carrying on process and operations in different areas;
e) procedures and safeguards for the prevention of accidents which may cause environmental pollution and for providing for remedial measures for such accidents;
f) noise for different areas;

1.11.2.5 Persons carrying on industry operation, etc., not to allow emission or discharge of environmental pollutants in excess of the standards (Section 7)

No person carrying on any industry, operation or process shall discharge any environmental pollutants in excess of standards prescribed.

1.11.2.6 Persons handling hazardous substances to comply with procedural safeguards (Section 8)

Every person who handles or causes to be handled any hazardous substance (defined under section 2(e) shall be bound to follow the procedure and observe the safeguards.

It has been held by the Supreme Court in *M.C. Mehta v. Union of India, AIR 1988 SC 1307* that a tannery which cannot setup a primary treatment plant cannot be permitted to continued to be in existence

In M.C. Mehata v. Union of India, AIR1987 SC 965 upon leakage of Oleum gas from Caustic Chlorine Plant affecting several persons the Supreme Court allowed it to be restarted subject to certain stringent conditions that were specified.

1.11.2.7 Penalty for contravention of the provisions of the act and the rules, orders and directions (section 15)

The penalty for contravention of the provisions of the act, the rules and orders issued under the Act is imprisonment for a term which may extend to five years with fine which may extend to one lakh rupees, or both.

In case of continued violation or contravention, an additional fine extending to five thousand rupees per day is payable.

If the failure or contravention continues beyond a period of one year after the date of conviction, the offender shall be punishable with imprisonment for a term which may extend to seven years.

1.11.2.8 Offences by companies (section 16)

Every person who, at the time the offence was committed, was directly in charge of, and was responsible to, the company for the conduct of the business of the company, deemed to be guilty of the offence and liable to be proceeded against and punished.

1.11.2.9 Offences by Government departments (Section 17)

a) The Head of the Department deemed to be guilty and punished accordingly subject to the proviso that Head of the Department is not liable to punishment if he proves that the

offence was committed without his knowledge or he exercise all due diligence to prevent the commission of such offence.

b) If the offence is proved to have been committed with the consent or connivance or by reason of neglect on part of any officer other than HOD, such officer shall also be deemed to be guilty of that offence.

1.11.2.10 Members, officers and employees of the authority constituted under section 3 to be public servants (section 21)

All the members of the authority, constituted, under section 3 and all officers and other employees of such authority when acting in pursuance of any provisions of this Act deemed to be public servants within the meaning of section 21 of the Indian Penal Code (45 of 1860).

1.12.0 THE ENVIROMENT (PROTECTION) RULES, 1986

1.12.1 OBJECTIVE AND SCOPE:

In exercise of powers conferred by Sec. 6 and 25 of the Environment (Protection) Act, 1986, the Central Government has made the ENVIROMENT (PROTECTION) RULES, 1986. These rules set out the standards for emission or discharge of environmental pollutants from the industries for the discharge of effluents, for emission of smoke, vapour and the standards of ambient air quality.

1.12.2 RELEVANT PROVISIONS OF THE RULE:

1.12.2.1 Definitions (Rule 2)

a) Act" means the Environment (Protection) Act, 1986 (29 of 1986).
b) "Areas" means all areas where the hazardous substances are handled
c) "Central Board" means the Central Pollution Control Board constituted under section 3 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974).
d) "Person" in relation to any factory or premises means a person or occupier or his agent who has control over the affairs of the factory or premises and includes in relation to any substance, the person in possession of the substance.
e) "Prohibited substance" means the substance prohibited for handling.

f) "Recipient system" means the part of the environment such as soil, water, air or other which receives the pollutants.
g) "Restricted substance" means the substance restricted for handling
h) "Section" means a section of the Act.
i) "Schedule" means a Schedule appended to these rules.
j) "Standards' means standards prescribed under these rules.
k) "State Board" means a State Pollution Control Board constituted under section 4 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) or a State Pollution Control Board constituted under section 5 of the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981).

1.12.2.2 Standards for Emissions or Discharge of Environmental Pollutants (Rule 3)

a) For the purpose of protecting and improving the quality of the environment and preventing and abating environmental pollution, the standards for emission or discharge of environmental pollutants from the industries, operations or processes is specified in Schedule I to IV.
b) The Central Board or a State Board may specify more stringent standards in respect of any specific industry, operation or process depending upon the quality of the recipient system and after recording reasons in writing. All these standards should be complied within period of one year when specified.

1.12.2.3 Prohibitions and Restrictions on the Location of Industries and the Carrying on Processes and Operations in Different areas (Rule 5)

The Central government will take into consideration the following factors while prohibiting or restricting the location of industries and carrying on of processes and operations in different areas-

a) Standards for quality of environment in its various aspects laid down for an area.
b) The maximum allowable limits of concentration of various environmental pollutants (including noise) or an area.
c) The likely emission or discharge of environmental pollutants from an industry, process or operation proposed to be prohibited or restricted.
d) The topographic and climatic features of an area.

e) The biological diversity of the area which, in the opinion of the Central Government needs to be preserved.
f) Environmentally compatible land use.
g) Net adverse environmental impact likely to be caused by an industry, process or operation proposed to be prohibited or restricted.
h) Proximity to a protected area under the Ancient Monuments and Archaeological Sites and Remains Act, 1958 or a sanctuary, National Park, game reserve or closed area notified as such under the Wild Life (Protection) Act, 1972 or places protected under any treaty, agreement or convention with any other country or countries or in pursuance of any decision made in any international confcrcnce1 association or other body.
i) Proximity to human settlements.
j) Any other factor as may be considered by the Central Government to be relevant to the protection of the environment in an area.

1.12.2.4 Furnishing of Information to Authorities and Agencies in Certain Cases (Rule 12)

Where the discharge of environmental pollutant in excess of the prescribed standards occurs due to any accident or other unforeseen act or event, the person in charge of the place at which such discharge occur will intimate the fact of such occurrence to all the following authorities or agencies, namely:-

a. The officer-in-charge of emergency or disaster relief operation in a district or other region of a state or Union territory specified by whatever designation by the Government of the said State or Union territory, and in whose jurisdiction the industry, process or operation is located.
b. Central Board or a State Board as the case may be and its regional officer having local jurisdiction who have been delegated powers under section 20, 21, 23 of the Water (Prevention and Control of Pollution) Act 1974 (6 of l974)- and section 24 of the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981).
c. The statutory authorities or agencies specified in column 3 in relation to places mentioned in column 2 against thereof of the (Schedule V)

1.12.2.5 Prohibition and Restriction on the Handling of Hazardous Substances in Different Areas (Rule 13)

The Central Government may take into consideration the following factors while prohibiting or restricting the handling of hazardous substances in different areas-

a) The hazardous nature of the substance (either in qualitative or quantitative terms as far as may be) in terms of its damage causing potential to the environment, human beings, other living creatures, plants and property.
b) The substances that may be or likely to be readily available as substitutes for the substances proposed to be prohibited or restricted.
c) The indigenous availability of the substitute, or the state of technology available in the country for developing a safe substitute.
d) The gestation period that may be necessary for gradual introduction of a new substitute with a view to bringing about a total prohibition of the hazardous substance in question and
e) Any other factor as may be considered by the Central Government to be relevant to the protection of environment.

Central government shall follow the procedure while prohibiting or restricting the handling of hazardous substances in an area including their imports and exports.

1.13.0 THE FACTORIES ACT, 1948 AS AMENDED BY THE FACTORIES (AMENDMENT) ACT, 1987.

1.13.1 OBJECTIVE AND SCOPE:

The Factories Act is the principal legislation, which governs the health, safety, and welfare of workers in factories. The Act extends to the whole of India. Mines and Railways workers are not included as they are covered by separate Acts. The new Act addressed the issues of safety, health, and welfare. Many amendments were aimed to keep the Act in tune with the developments in the field of health and safety. However, it was not until 1987 that the elements of occupational health and safety, and prevention and protection of workers employed in hazardous process, got truly incorporated in the Act. A factory under the Act is defined as a place using power, employs 10 or more workers or 20 or more workers without power or was working any day of the preceding 12 months. However, under section 85, the state governments are empowered to extend the provisions of the Act to factories employing

fewer workers also. This section has been used to extend the coverage of the Act to workplaces like power looms, rice mills, flour mills, oil mills, saw mills, pesticide formulating units and other chemical units where hazards to health are considered to put workers at risk. The Act does not permit the employment of women and young in a dangerous process or operation. Children are defined, "who have not attained an age of 15 years", are not permitted to be hired (Sec. 2, 67) and need to have medical fitness certificates if he/she is has to work and age is not confirmed (Sec 69).Section 11 to 20 deal with provision of environmental sanitation that protect the worker from hazardous environment. Safety measures like fencing of machines, protection of eyes by use of goggles, precautions against fire, dangerous fumes, etc. are defined (Secs 21-40).Facilities for washing, and sitting, canteens, creche (one for more than 30 women) and first aid appliances are provided (Secs. 42-48).

1.13.2 RELEVANT PROVISIONS OF THE ACT:-

1.13.2.1Definitions (Section 2)

1. "adult" means a person who has completed his fifteenth year of age;
2. "adolescent" means a person who has completed his fifteen year of age but has not completed his eighteenth year;
3. "child" means a person who has not completed his fifteenth year of age;
4. "hazardous process" means any process or activity in relation to an industry specified in the First Schedule where, unless special care is taken, raw materials used therein or the intermediate or finished products, bye- products, wastes or effluents thereof would cause material impairment to the health of the persons engaged in or connected therewith, or result in the pollution of the general environment.
5. "manufacturing process" means any process for making, altering, repairing, ornamenting, finishing, packing, oiling, washing, cleaning, breaking up, demolishing, or otherwise treating or adapting any article or substance with a view to its use sale, transport, delivery or disposal, or pumping oil, water, sewage or any other substance; or generating, transforming or transmitting power; or composing types for printing, printing by letter press, lithography, photogravure or other similar process or book

binding; or constructing, reconstructing, repairing, refitting, finishing or breaking up ships or vessels;

6. "factory" means any premises including the precincts thereof whereon ten or more workers are working, or were working on any day of the preceding twelve months, and in any part of which a manufacturing process is being carried on with the aid of power or whereon twenty or more workers are working, or were working on any day of the preceding twelve months, and in any part of which a manufacturing process is being carried on without the aid of power.
7. "occupier" of a factory means the person who has ultimate control over the affairs of the factory

1.13.2.2 Approval, licensing and registration of factories (Section 6)

State Government may make rules requiring the previous permission in writing of the State Government or the Chief Inspector to be obtained for the site on which the factory is to be situated and for the construction or extension of any factory or class or description of factories.

1.13.2.3 Notice by occupier (Section 7)

The occupier shall at least fifteen days before he begins to occupy or use any premises as a factory, sent to the Chief Inspector a written notice containing the name and situation of the factory; the name and address of the occupier; the name and address of the owner of the premises or building and other relevant information as prescribed.

1.13.2.4General duties of the occupier (Section 7A)

Every occupier shall ensure the health, safety and welfare of all workers while they are at work in the factory. Every occupier shall prepare a written statement of his general policy with respect to the health and safety of the workers at work and the organization and arrangements for the time being in force for carrying out that policy.

1.13.2.5 General duties of manufactures, etc., as regards articles and substances for use in factories (Section 7B)

Every person who designs, manufactures, imports or supplies any article for use in any factory shall ensure that the article is so designed and constructed as to be safe and without risks to the health of the workers when properly used.

1.13.2.6 Powers of Inspectors (Section 9)

An Inspector may, within the local limits for which he is appointed, enter any place which is used as a factory; make examination of the premises, plant, machinery, article or substance; inquire into any accident or dangerous occurrence, require the production of any prescribed register; seize, or take copies of, any register, record or other document; direct occupier that any premises shall be left disturbed etc.

1.13.2.7 Cleanliness (Section 11)

Every factory shall be kept clean and free from effluvia arising from any drain, privy or other nuisance.

1.13.2.8 Disposal of wastes and effluents (Section 12)

Effective arrangements shall be made in every factory for the treatment of wastes and effluents due to the manufacturing process carried on therein, so as to render them innocuous.

1.13.2.9 Ventilation and temperature (Section 13)

Effective and suitable provision shall be made in every factory for securing in very workroom adequate ventilation by the circulation of fresh air.

1.13.2.10 Overcrowding (Section 16)

No room in any factory shall be overcrowded to an extent injurious to the health of the workers employed therein.

1.13.2.11 Lighting (Section 17)

In every part of a factory where workers are working or passing sufficient and suitable lighting, natural or artificial, or both shall be maintained.

1.13.2.12 Drinking water (Section 18)

In every factory effective arrangements shall be made to provide and maintain at suitable points conveniently situated for all workers employed therein a sufficient supply of wholesome drinking water.

1.13.2.13 Fencing of machinery (Section 21)

In every factory every moving part of a prime mover and every flywheel connected to a prime mover; headrace and tailrace of every water-wheel and water turbine; any part of a stock-bar which projects beyond the head stock of a lathe; and every dangerous part of any other machinery, shall be securely fenced.

In Whitehead v. James Scott Ltd., (1949) 1 KB 358 A man was operating an electrical hoist when owing to a defect in winding mechanism, the electrical hoist fell and hit the man, held that it was not sufficient that the lift should be of material which reasonably appeared sound for its purpose.

1.13.2.14 Employment of young persons on dangerous machines (Section 23)

No young person shall be required or allowed to work at any machine unless he has been fully instructed as to the dangers arising in connection with the machine and the precautions to be observed and is under adequate supervision by a person who has a thorough knowledge and experience of the machine.

1.13.2.15 Prohibition of employment of women and children near cotton- openers (Section 27)

No woman or child shall be employed in any part of a factory for pressing cotton in which a cotton-opener is at work.

1.13.2.16 Floors, stairs and means of access (Section 32)

In every factory all floors, steps, stairs, passages and gangways shall be of sound construction and properly maintained and shall be kept free from obstructions and substances likely to cause persons to slip.

1.13.2.17 Excessive weights (Section 34)

No person shall be employed in any factory to lift, carry or move any load so heavy as to be likely to cause him injury.

1.13.2.18 Precautions against dangerous fumes, gases, etc. (Section 36)

No person shall be required or allowed to enter any chamber, tank, vat, pit, pipe, flue or other confined space in any factory in which any gas, fume, vapour or dust is likely to be present to such an extent as to involve risk to persons being overcome thereby, unless it is provided with a manhole of adequate size or other effective means of egress.

In *State of Bombay V. Chinubhai haridas, (1958) 1LLJ 221* it was observed by the Court that there is an obligation cast by the legislature upon the manager or occupier of a factory to keep ready at all times, beside a confined space, the suitable breathing apparatus, belt and ropes for instant use, whether any person has entered the said space or not, whether the entry has been made with the permission or not and whether any need for the use of these appliances arises in fact or not.

1.13.2.19 Explosive or inflammable dust, gas, etc. (Section 37)

Where in any factory any manufacturing process produces dust, gas, fume or vapour of such character and to such extent as to be likely to explode on ignition, all practicable measures shall be taken to prevent any such explosion.

1.13.2.20 Precautions in case of fire (Section 38)

In every factory, all practicable measures shall be taken to prevent outbreak of fire and its spread, both internally and externally.

1.13.2.21 Safety of buildings and machinery (Section 40)

If it appears to the Inspector that any building or part of a building or any part of the ways, machinery or plant in a factory is in such a condition that it is dangerous to human life or safety, he may serve on the occupier or manager of the factory an order in writing specifying the measures which should be adopted and require them to be carried out before a specified date.

1.13.2.22 Safety Officers (Section 40B)

In every factory wherein one thousand or more workers are ordinarily employed, or where in the opinion of the State Government, any manufacturing process or operation is carried on, which involves any risk of bodily injury, poisoning or disease, or any other hazard to health, to the persons employed in the factory, the occupier shall, if so required by the State Government employ Safety Officers.

1.13.2.23 Constitution of Site Appraisal Committees (Section 41A)

The State Government may for advising it to consider applications for grant of permission for the initial location of a factory involving a hazardous process or for the expansion of any such factory, appoint a Site Appraisal Committee. The Site Appraisal Committee shall examine an application for the establishment of a factory involving hazardous process and make its recommendation to the State Government within a period of ninety days of the receipt of such applications.

1.13.2.24 Compulsory disclosure of information by the occupier (Section 41B)

The occupier of every factory involving a hazardous process shall disclose all information regarding dangers, including health hazards and the measures to overcome such hazards arising from the exposure to or handling of the materials or substances in the manufacture, transportation, storage and other processes, to the workers employed in the factory, the Chief Inspector, the local authority within whose jurisdiction the factory is situate and the general public in the vicinity.

1.13.2.25 Specific responsibility of the occupier in relation to hazardous processes (Section 41C)

Every occupier of a factory involving any hazardous process shall maintain accurate and up-to-date health records of the workers in the factory who are exposed to any chemical, toxic or any other harmful substances which are manufactured, stored, handled or transported and such records shall be accessible to the workers.

1.13.2.26 Permissible limits of exposure of chemical and toxic sub- stances (Section 41F)

The maximum permissible threshold limits of exposure of chemical and toxic substances in manufacturing processes in any factory shall be of the value indicated in the Second Schedule.

1.13.2.27 Workers' participation in safety management (Section 41G)

The occupier shall, in every factory where a hazardous process takes place, or where hazardous substances are used or handled, set up a Safety Committee consisting of equal number of representatives of workers and management to promote cooperation between the workers and the management in maintaining proper safety and health at work and to review periodically the measures taken in that behalf.

1.13.2.28 Prohibition of employment of young children (Section 67)

No child who has not completed his fourteenth year shall be required or allowed to work in any factory.

It was observed by the Court in *M.C. Mehta v. State of Tamil Naidu AIR 1991 SC 417* Employment of children within match factory directly connected with manufacturing of process up to final production of match sticks or fireworks should not be permitted. They can be employed in packing process at an area away from place of manufacture.

1.13.2.29 Power to prohibit employment on account of serious hazard (Section 87A)

Where it appears to the Inspector that conditions in a factory or part thereof are such that they may cause serious hazard by way of injury or death to the persons employed therein or to the general public in the vicinity, he may state the particulars in respect of which he considers the factory or part thereof to be the cause of such serious hazard and prohibit such occupier from employing any person in the factory or any part thereof other than the minimum number of persons necessary to attend to the minimum tasks till the hazard is removed.

1.13.2.30 Notice of certain dangerous occurrences (Section 88A)

Where in a factory any dangerous occurrence of such nature as may be prescribed occurs, whether causing any bodily injury or disability or not, the manager of the factory shall send notice thereof to such authorities, and in such form and within such time, as may be prescribed

1.13.2.31 Power to direct enquiry into cases of accident or disease (Section 90)

The State Government may appoint a competent person to inquire into the causes of any accident occurring in a factory or into any case where a disease specified in Third Schedule has been contracted in a factory.

1.13.2.32 Liability of owner of premises in certain circumstances (Section 93)

Where in any premises separate buildings are leased to different occupiers for use as separate factories, the owner of the premises shall be responsible for the provision and maintenance of common facilities and services, such as approach roads, drainage, water supply, lighting and sanitation.

1.13.2.33 Obligations of workers (Section 111)

No worker in a factory shall willfully interfere with or misuse any appliance, convenience or other thing provided in a factory for the purposes of securing the health, safety or welfare of the workers therein; shall willfully and without reasonable cause do anything likely to endanger himself or others; and shall willfully neglect to make use of any appliance or other thing provided in the factory for the purposes of securing the health of safety of the workers therein.

1.140 PUBLIC LIABILITY INSURANCE ACT, 1991

1.14.1OBJECTIVE AND SCOPE The Act provides for compensation in case of accidents occurring during handling of hazardous substances on no fault basis.

1.14.2 RELEVANT PROVISIONS OF THE ACT:

1.14.2.1 Important definitions (Section 2)

1. Accident- Unintended occurrence while handling any hazardous substance resulting in death or injury to any person or damage to any property.
2 Handling- Manufacture, processing, treatment, package, storage, transportation, use, transfer etc. of any hazardous substance.
3 Hazardous substance- Substance or preparation defined as such under the Environment (Protection) Act, 1986.

1.14.2.2 No fault liability (Section 3)

In case of death or injury to any person or damage to any property, owner is liable to give relief. Said relief is not available to workman. 'Workman' is defined under the Workmen's Compensation Act, 1923. Further, the death, injury or damage to property should be due to an accident and the Claimant does not have to establish that the death, injury or damage was due to any wrongful act, neglect or default of any person. (No Fault)

1.14.2.3Owner to take out insurance policy (Section 4)

Prior to handling of any hazardous substance, owner has to take out insurance policies. Such policies should insure owner against his liability to provide relief in case of accident. As provided under Section 3.

1.14.2.4Verification and Publication of Accident by Collector (Section 5)

In case an accident occurs at any place within the jurisdiction of the Collector, it is his duty to verify occurrence of such accident and to invite applications for claim for relief under Section 6.

1.14.2.5 Application for Claim for Relief (Section 6)

Application for relief in case of accident can be made by

- By the person who sustains the injury or his duly authorized agent.
- By legal representatives of the deceased or his duly authorized agent.
- By owner of property to which damage is caused or by his duly authorized agent.

Application has to be made to the Collector within five years of date of occurrence of the accident.

1.14.2.6 Award of Relief (Section 7)

Collector will hold an inquiry into the claim. For this purpose the owner has to be given notice of the application made under Section 6 and all the parties should be heard. Collector will follow summary procedure in holding inquiry and will make an award determining the amount of relief. The amount to be paid by the insurer or owner may be specified by the Collector. The manner in which such amount will be deposited by the insurer or the owner

can be specified in the award itself. The insurer will deposit such amount within thirty days of date of announcement of award.

The award should specify the persons to whom the amount of relief should be paid. Copy of the award should be made available to the parties within fifteen days from the date of award. Collector has all the powers of a Civil Court for taking evidence on oath, enforcing attendance of witnesses, discovery ad production of documents etc. In case the owner or the insurer fails to deposit the amount specified in the award, such amount shall be recoverable as arrears of land revenue or of public demand. Claim for relief should be disposed off within three months of the receipt of the application for relief. Collector can power to grant a temporary injunction to restrain owner from removing or disposing of his property for the purpose of evading payment to be made by him under the award. The procedure to be followed by the Collector is specified under rules 1 to 4 of Order XXXIX of the First Schedule to the Code of Civil Procedure, 1908.

1.14.2.7Establishment of Environment Relief Fund (Section 7A)

Section 7A provides for establishment of a Environment Relief Fund by the Central Government. When Collector makes an award under Section 7, amount of relief shall be paid out of the Environment Relief Fund established under this section.

1.14.2.8Protection of Action Taken in Good Faith (Section 20)

Person, officer, authority or agency is protected from being sued, prosecuted or legally proceeded against for anything done in good faith in pursuance to this Act, rules, orders or directions etc.

1.14.2.9Amount of Relief (Third Schedule)

1. Reimbursement of medical expenses incurred- Maximum of Rs. 12,500 in each case.
2. Relief in case of fatal accident- Rs. 25,000 per person in addition to reimbursement of medical expenses.
3. Relief in case of permanent total or permanent partial disability or other injury or sickness- Reimbursement of medical expenses and cash relief on the basis of percentage of disablement. Relief for total permanent disability will be Rs. 25,000.

4. Relief for loss of wages due to temporary partial disability (reduces the earning capacity of the victim)- Fixed monthly relief not exceeding Rs. 1,000 per month up to a maximum of 3 months (victim should be hospitalized for a period exceeding 3 days and should be above 16 years of age).

5. Relief in case of damage to private property- Up to Rs. 6,000 depending upon actual damage.

1.15.0 THE PUBLIC LIABILITY INSURANCE RULES, 1991

1.15.1 OBJECTIVE AND SCOPE

These rules framed by Central Government in exercise of the powers conferred by section 23 of the Public Liability Insurance Act, 1991 provide for the effective implementation of the Act.

1.15.2 RELEVANT PROVISIONS OF THE RULES:

1.15.2.1 Definitions (Section 2):

(a) "Act" means the Public Liability Insurance Act, 1991;
(b) "Advisory Committee" means the committee constituted by the Central government and called the Public Liability Insurance Advisory Committee (PLIAC);

1.15.2.2 Application for relief (Section 3):

An application for claim for relief shall be made to the Collector in Form I.

1.15.2.3 Documents that may be required (Section 4):

The claim application shall be made to the Collector in Form I accompanied by the following documents -
(i) Certificate of an authorized physician regarding disability or injury or illness caused by the accident;
(ii) Death Certificate and/or post mortem report in the case of a fatal accident;

(iii) Certificate of the employer regarding loss of wages due to temporary or partial disability,(iv) Medical bills and receipts;
(v) Certificate of cost of repairs or replacement of private property damaged by the accident;
(vi) Any other documents which may have relevance to the claim.

1.15.2.4 Powers of Collector (Section 5):

Collector may follow summary procedure for conducting an inquiry on anapplication for relief under the Act. Collector has all the powers of a Civil Court i.e.
(a) Summoning and enforcing the attendance of any person and examining him on oath.
(b) Requiring the discovery and production of documents;
(c) Receiving evidence on affidavits;
(d) Requisitioning any public record or document
(e) Issuing commissions for the examining of witness or documents;
(f) Dismissing an application for default or proceeding ex-parte;
(g) Setting aside any order of dismissal of any application for default or any order passed by it exparte;
(h) Inherent powers of a civil court as-served under section 151 of the Code of Civil Procedure, 1908.

1.15.2.5 Establishment and Administration (Section 6):
An owner will create and establish a fund by depositing with the State Bank of India as the public liability Insurance fund of that owner. The fund created shall be utilized for meeting the liability arising out of any claim awarded against the owner who has created the fund and to discharge the amount awarded by the Collector.

Fund shall be operated by an Administrator to be nominated by the owner. The owner shall notify the nomination of the Administrator to the Central Government.

1.15.2.6 Extent of Liability (Section 10):
The maximum aggregate liability of the insurer to pay relief under an award to several claimants arising out of an accident shall not exceed rupees five crores and in case of more than one accident shall not exceed rupees fifteen crores in the aggregate.

Any award for relief which exceeds the amount payable under the insurance Policy shall be met from the Relief Fund and in case the award exceeds the total of the amount of insurance and the Relief Fund the amount which falls short of such sum payable shall by the owner.

1.15.2.7 Contribution of owner to the Environmental Relief Fund (Section 11):

An owner shall contribute to the Environmental Relief fund a sum equal to the premium payable to the insurer. Every contribution to the Environmental Relief Fund shall be payable to the insurer, together with the amount of premium.

1.16.0 THE PROTECTION OF PLANT VARIETIES AND FARMERS'RIGHTS ACT, 2001

1.16.1 OBJECTIVE AND SCOPE

Act provides for the establishment of an effective system for protection of plant varieties, the rights of farmers and plant breeders and encourages development of new varieties of plants. The Act highlights the necessity of recognizing and protecting the rights of the farmers in respect of their contribution made at any time in conserving, improving and making available plant genetic resources for the development of new plant varieties. Further, the Act declares that for accelerated agricultural development in the country, it is necessary to protect plant breeders' rights to stimulate investment for research and development, both in the public and private sector, for the development of new plant varieties. Such protection will facilitate the growth of the seed industry in the country which will ensure the availability of high quality seeds and planting material to the farmers. The Act undertakes measures for the protection of the rights of farmers and plant breeders in light of India's obligation on ratification of the Agreement on Trade Related Aspects of Intellectual Property Rights for giving effect to subparagraph (b) of paragraph 3 of article 27 in Part II of the said Agreement relating to protection of plant varieties.

1.16.2 RELEVANT PROVISIONS OF THE ACT

1.16.2.1 Definitions (Section 2)

i. "Authority" means the Protection of Plant Varieties and Farmers' Rights Authority established under sub-section (I) of section 3

ii. "benefit sharing", in relation to a variety, means such proportion of the benefit accruing to a breeder of such variety or such proportion of the benefit accruing to the breeder from an agent or a licensee of such variety, as the case may be, for which a claimant shall be entitled as determined by the Authority under section 26;

iii. "breeder" means a person or group of persons or a farmer or group of farmers or any institution which has bred, evolved or developed any variety

iv. "essential characteristics" means such heritable traits of a plant variety which are determined by the expression of one or more genes of other heritable determinants that contribute to the principal features, performance or value of the plant variety;

1.16.2.2 Protection of Plant Varieties and Farmers' Rights Authority (Section 3)

The Central Government shall establish an Authority to be known as the Protection of Plant Varieties and Farmers' Rights Authority for the purposes of this Act.

1.16.2.3 General functions of Authority (Section 8)

It shall be the duty of the Authority to promote, by such measures as it thinks fit, the encouragement for the development of new varieties of plants and to protect the rights of the farmers and breeders.

1.16.2.4 Registry (Section 12)

Central Government shall establish, for the purposes of this Act, a Registry which shall be known as the Plant Varieties Registry.

1.16.2.5 Application for registration (Section 13)

For the purposes of this Act, a Register called the National Register of Plant Varieties shall be kept at the head office of the Registry, wherein shall be entered the names of all the registered plant varieties with the names and addresses of their respective breeders, the rights of such breeders in respect of the registered varieties, the particulars of the denomination of each registered variety, its seed or other propagating material along with specification of RELEVANT features thereof and such other matters as may be prescribed.

1.16.2.6 Persons who may make application (Section 16)

An application for registration shall be made by any person claiming to be the breeder of the variety; or any successor of the breeder of the variety; or any person being the assignee of the breeder of the variety in respect of the rights to make such application; or any farmers or group of farmers or community of farmers claiming to be the breeder of the variety; or any person authorized in the prescribed manner by a person specified to make application or any university or publicly funded agricultural institution claiming to be the breeder of the variety.

1.16.2.7 Test to be Conducted (Section 19)

Every applicant shall, along with the application for registration made under this Act, make available to the Registrar such quantity of seed of a variety for registration of which such application is made, for the purpose of conducting tests to evaluate whether seeds of such variety along with parental material conform to the standards as may be specified by regulations.

1.16.2.8 Issue of certificate of registration (Section 24)

When an application for registration of a variety (other than an essentially derived variety) has been accepted and either the application has not been opposed and the time of notice of opposition has expired; or the application has been opposed and the opposition has been rejected, the Registrar shall register the variety.

On the registration of the variety (other than an essentially derived variety), the Registrar shall issue to the applicant a certificate of registration in the prescribed form and sealed with the seal of the Registry and send a copy thereof to the Authority for denomination of benefit sharing and to such other authority, as may be prescribed, for information. The maximum time required by the Registrar for issuing the certificate of registration from the date of filing of the application for registration of a variety shall be such as may be prescribed.

.

The Registrar shall have power to issue such directions to protect the interests of a breeder against any abusive act committed by any third party during the period between filing of application for registration and decision taken by the Authority on such application.

1.16.2.9 Researcher's Rights (Section 30)

Nothing contained in this Act shall prevent the use of any variety registered under this Act by any person using such variety for conducting experiment or research; or the use of a variety by any person as an initial source of variety for the purpose of creating other varieties.

1.16.2.10 Farmers Rights (Section 39)

A farmer who has bred or developed a new variety shall be entitled for registration and other protection in like manner as a breeder of a variety under this Act.

1.16.2.11 Gene Fund (Section 45)

The Central Government shall constitute a Fund to be called the National Gene Fund and there shall be credited thereto t he benefit sharing received in the prescribed manner from the breeder of a variety or an essentially derived variety registered under this Act, or propagating material of such variety or essentially derived variety, as the case may be; the annual fee payable to the Authority by way of royalty; the compensation deposited in the Gene Fund; t h e contribution from any national and international organization and other sources.

1.16.2.12 Power of Authority to make order for compulsory license in certain circumstances (Section 47)

At any time, after the expiry of three years from the date of issue of a certificate of registration of a variety, any person interested may make an application to the Authority alleging that the reasonable requirements of the public for seed or other propagating material of the variety have not been satisfied or that the seed or other propagating material of the variety is not available to the public at a reasonable price and pray for thee grant of a compulsory license to undertake production, distribution and sale of the seed or other propagating material of that variety.

1.16.2.13 Plant Varieties Protection Appellate Tribunal (Section 54*)*

The Central Government may establish a Tribunal to be known as the Plant Varieties Protection Appellate Tribunal to exercise the jurisdiction, powers and authority conferred on it by or under this Act.

1.16.2.14 Infringement (Section 64)

A right established under this Act is infringed by a person who, not being the breeder of a variety registered under this Act or a registered agent or a registered licensee of that variety, sells, exports, imports or produces such variety without the permission of its breeder or within the scope of a registered license or registered agency without permission of the registered licensee or registered agent, as the case may be; who uses, sells, exports, imports or produces any other variety giving such variety, the denomination identical with or deceptively similar to the denomination of a variety registered under this Act in such manner as to cause confusion in the mind of general people in identifying such variety so registered.

1.16.2.15 Prohibition to apply denomination of a registered variety (Section 68)

No person other than the breeder of a variety registered under this Act or a registered licensee or a registered agent thereof shall use the denomination of that variety in the manner as may be prescribed.

1.16.2.16 Bar of jurisdiction (Section 89)

.

No civil court shall have jurisdiction in respect of any matter which the Authority or the Registrar or the Tribunal is empowered by or under this Act to determine.

1.17.0 THE BIOLOGICAL DIVERSITY ACT, 2002

1.17.1 OBJECTIVE AND SCOPE

To provide for the conservation of Biological Diversity, sustainable use of its components and fair and equitable sharing of benefits arising out of the use of biological resources and knowledge, a Convention, the United Nations Convention on Biological Diversity was held at Rio de Janerio in 1992, wherein the sovereign rights of the States over their biological resources were reaffirmed. The main objective of the convention is conservation of biological diversity, sustainable use of its components and fair and equitable sharing of the benefits arising out of utilization of genetic resources. India being signatory to the said convention found it necessary to give effect to the said convention. Accordingly Biological

Diversity Bill was introduced in the Parliament. The Bill was passed by both the Houses of Parliament received the assent of the assent of the President on 5th February, 2003.

1.17.2 RELEVANT PROVISION OF THE ACT

1.17.2.1 Definition

a) "Biological diversity" means the variability among living organisms from all sources and the ecological complexes of which they are part and includes diversity within species or between species and of eco-systems.

b) “Biological resources” means plants, animals and micro-organisms or parts thereof, their genetic material and by-products (excluding value added products) with actual or potential use or value, but does not include human genetic material. “Bio-survey and bio-utilisation” means survey or collection of species, sub-species, genes, components and extracts of biological resource for any purpose and includes characterization, inventorisation and bioassay. “Commercial utilization” means end uses of biological resources for commercial utilization such as drugs, industrial enzymes, food flavours, fragrance, cosmetics, emulsifiers, oleoresins, colours, extracts and genes used for improving crops and livestock through genetic intervention, but does not include conventional breeding or traditional practices in use in any agriculture, horticulture, poultry, dairy farming, animal husbandry or bee keeping.

c) "Research" means study or systematic investigation of any biological resource or technological application that uses biological systems, living organisms or derivatives thereof to make or modify products or processes for any use.

d) "Sustainable use" means the use of components of biological diversity in such manner and at such rate that does not lead to the decline of the biological diversity thereby maintaining its potential to meet the needs and aspirations of present and future generations.

1.17.2.2 Certain persons not to undertake Biodiversity related activities without approval of National Biodiversity Authority (Section 3)

Any person (a) who is not a citizen of India;

(b) A citizen of India, who is a non-resident;

(c) A body corporate, association or organization –

(i) Not incorporated or registered in India; or

(ii) Incorporated or registered in India under any law for the time being in force which has any non-Indian participation in its share capital or management

Is required to take prior approval of the National Biodiversity Authority for obtaining any biological resource occurring in India or knowledge associated thereto for research or for commercial utilization or for bio-survey and bio-utilization.

1.17.2.3 National Biodiversity Authority (section 8)

The Central Government for the purpose of this Act shall establish a body to be called the National Biodiversity Authority.

1.17.2.4 Functions and powers of the national biodiversity authority (section 18)

The National Biodiversity Authority may –

(a) Advise the Central Government on matters relating to the conservation of biodiversity, sustainable use of its components and equitable sharing of benefits arising out of the utilization of biological resources.

(b) Advise the State Governments in the selection of areas of biodiversity importance to be notified under sub-section (1) of section 37 as heritage sites and measures for the management of such heritage sites.

(c) Perform such other functions as may be necessary to carry out the provisions of this Act.

(d) The National Biodiversity Authority may, on behalf of the Central Government, take any measures necessary to oppose the grant of intellectual property rights in any country outside India on any biological resource obtained from India or knowledge associated with such biological resource which is derived from India.

1.17.2.5 Approval by the National Biodiversity Authority (section 19)

Any person who intends to obtain biological resource occurring in India or knowledge associated thereto for research or for commercial utilization or for bio-survey and bio-utilization or transfer the results of any research relating to biological resources, has to take approval by the National Biodiversity Authority in a prescribed manner.

1.17.2.6 State Biodiversity Board (Section 22)

The State Government for the purposes of this Act, shall establish a Board for the State to be known as the (name of the State) Biodiversity Board.

1.17.2.7 Functions of the State Biodiversity Board (Section 23)

The functions of the State Biodiversity Board shall be to -

(a) advise the State Government, subject to any guidelines issued by the Central Government, on matters relating to the conservation of biodiversity, sustainable use of its components and equitable sharing of the benefits arising out of the utilization of biological resources;

(b) Regulate by granting of approvals or otherwise requests for commercial utilization or bio-survey and bio-utilization of any biological resource by Indians;

(c) Perform such other functions as may be necessary to carry out the provisions of this Act or as may be prescribed by the State Government.

1.17.2.8 Power of State Biodiversity Board to restrict certain activities violating the objectives of conservation etc. (Section 24)

The State Biodiversity Board has power to restrict certain activities which are detrimental or contrary to the objectives of conservation and sustainable use of biodiversity or equitable sharing of benefits arising out of such activity.

1.17.2.9 Central Government to develop National strategies, plans, etc., for conservation, etc., of biological diversity (Section 36)

(a) The Central Government shall develop national strategies, plans, programmes for the conservation and promotion and sustainable use of biological diversity including measures for identification and monitoring of areas rich in biological resources, promotion of in situ, and ex situ, conservation of biological resources, incentives for research, training and public education to increase awareness with respect to biodiversity.

(b) Where the Central Government has reason to believe that any rich in biological diversity, biological resources and their habitats is being threatened by overuse, abuse or neglect, it shall issue directives to the concerned State Government to take immediate ameliorative measures; offering such State Government any technical and other assistance that is possible to be provided or needed.

(c) The Central Government shall, integrate the conservation, promotion and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies.

(d) The Central Government shall undertake measures, -

(i) For assessment of environmental impact of that project which is likely to have adverse effect on biological diversity, with a view to avoid or minimize such effects and where appropriate provide for public participation in such assessment;

(ii) To regulate, manage or control the risks associated with the use and release of living modified organisms resulting from biotechnology likely to have adverse impact on the conservation and sustainable use of biological diversity and human health.

1.17.2.10 Biodiversity Heritage Sites (Section 37) The State Government may, from time to time in consultation with the local bodies, notify in the Official Gazette, areas of biodiversity importance as biodiversity heritage sites under this Act.

- The State Government, in consultation with the Central Government, may frame rules for the management and conservation of all the heritage sites.
- The State Government shall frame schemes for compensating or rehabilitating any person or section of people economically affected by such notification.

1.17.2.11 Power of the Central Government to notify threaten species (Section 38)

The Central Government, in consultation with the concerned State Government, may from time to time notify any species which is on the verge of extinction or likely to become extinct in the near future as a threatened species and prohibit or regulate collection for any purpose and take appropriate steps to rehabilitate and preserve those species.

1.17.2.12 Biodiversity Management Committees (Section 41)

Every local body shall constitute a Biodiversity Management Committee within its area for the purpose of promoting conservation, sustainable use and documentation of biological diversity including preservation of habitats, conservation of land races, folk varieties and cultivars, domesticated stocks and breeds of animals and micro organisms and chronicling of knowledge relating to biological diversity.

1.18.0 FOREST (CONSERVATION) RULES, 2003

1.18.1 OBJECTIVE AND SCOPE

These Rules have been made in exercise of the powers conferred by sub-section (1) of section 4 of the Forest (Conservation) Act, 1980 and in supersession of the Forest (Conservation) Rules, 1981.

1.18.2 RELEVANT PROVISIONS OF THE RULES:

1.18.2.1 Definitions (Rule 2)

i. "Nodal Officer" means any officer not below the rank of Conservator of Forests, authorized by the State Government to deal with the forest conservation matters under the Act;

ii. "Regional Office" means a Regional Office of the Central Government in the Ministry of Environment and Forests established as part of the Ministry to deal with the forest conservation matters under the Act;

iii. "User Agency" means any person, organization or Company or Department of the Central or State Government making a request for diversion or de-notification of forest land for non-

forest purpose or using forest land for non-forest purpose in accordance with the permission granted by the Central Government under the Act or the rules.

1.18.2.2 Composition of the Committee (Rule 3)

The Committee shall be composed of the Director General of Forests, Ministry of Environment and Forests – Chairperson; Additional Director General of Forests, Ministry of Environment and Forests- Member; Additional Commissioner (Soil Conservation), Ministry of Agriculture- Member; Three eminent experts in forestry and allied disciplines (non-officials)- Members; Inspector General of Forests (Forest Conservation), Ministry of Environment and Forests - Member Secretary. Additional Director General of Forests shall act as the Chairperson in the absence of Director General of Forests.

1.18.2.3 Submission of the proposals seeking approval of the Central Government under section 2 of the Act. (Rule 6)

Every user agency, who wants to use any forest land for non-forest purposes, shall make his proposal. Every State Government or other authority, after having received the proposal shall send the proposal to the Central Government within ninety days of the receipt of the proposal from the user agency for proposals seeking first time approval under the Act and within sixty days for proposals seeking renewal of leases where approval of the Central Government under the Act had already been obtained earlier.

1.18.2.4 Committee to advice on proposals received by the Central Government. (Rule 7)

Central Government shall refer every proposal, complete in all respects, received by it to the Committee for its advice thereon. While tendering the advice, the Committee may also suggest any conditions or restrictions on the use of any forest land for any non-forest purpose, which in its opinion, would minimize adverse environmental impact.

1.18.2.5 Action of the Central Government on the advice of the Committee (Rule 8)

The Central Government shall, after considering the advice of the Committee tendered under rule 7 grant approval to the proposal with or without conditions or reject the same within sixty days of its receipt.

1.19.0 DISASTER MANAGEMENT ACT, 2005.

1.19.1OBJECTIVE AND SCOPE:

The Disaster Management Act, 2005 provides for the effective management of disasters. The Act marks a paradigm shift in the nature of disaster management in India with focus shifting towards disaster mitigation, prevention and preparedness. This Act said to be the mother Act dealing with disasters, both natural and man-made establishes the National Disaster Management Authority at the Central Level and replicates the model at the State and district level.

1.19.2 RELEVANT PROVISIONS OF THE ACT:

1.19.2.1Definitions

(a) Disaster means a Catastrophe, mishap, calamity or grave occurrence in any area arising from natural or man- made causes, accident or negligence which results in substantial loss of life or human suffering, destruction of property, damage to environment beyond the coping capacity of the community of the affected area.

(b) "Disaster management" means a continuous and integrated process of planning, organising, coordinating and implementing measures which are necessary or expedient for-

(i) Prevention of danger or threat of any disaster;

(ii) Mitigation or reduction of risk of any disaster or its severity or consequences;

(iii) capacity-building;

(iv) Preparedness to deal with any disaster;

(v) Prompt response to any threatening disaster situation or disaster;

(vi) Assessing the severity or magnitude of effects of any disaster;

(vii) Evacuation, rescue and relief;

(viii) Rehabilitation and reconstruction;

The Supreme Court in N.D. *Jayal and Anr. Vs. Union of India (UOI) and Ors.(2004)9SCC362* observed: Disaster Management means all aspects of planning,

coordinating and implementing all measures which are necessary or desirable to prevent, minimize, overcome or to stop the spread of a disaster upon the people or any property and includes all stages of rescue and immediate relief. It is a proven fact that lot of human suffering and misery from large number of disasters can be mitigated by taking timely actions, planning and preventive measures. It is possible only through well functioning disaster management framework. This will enable us to minimize, control and limit the effects of disaster and will streamline the disaster management exercises. Our present relief centered re-active approach after the striking of disaster need to be changed into preparedness oriented pro-active attitude. This is the aim of pre-disaster preparations. Disaster Management Plans has to play an integral role in this exercise. They are blue prints for the management of disasters. The Disaster Management Plans should contain the aspects of disaster prevention and of ways for its management in the untoward occurrence of a disaster. A proper plan will place the disaster management exercise on a more firm foundation. Disaster Management activities should be integrated with the developmental activities. Incidentally, this is also the resolve of the Yokohama Strategy of the United Nations International Decade of Natural Disaster Reduction, to which India is a party. There is an affirmative obligation on the part of the State to preserve and protect human life and property. This obligation is an integral element in fulfilling developmental endeavors. Therefore, disaster management cannot be separated from sustainable development.

(c) District Authority refers to the District Disaster Management Authority.

(d) District Plan refers to the Plan for disaster management for district.

(e) Local Authority refers to Panchayati raj institutions, municipalities, district board, cantonment board, town planning authority, Zila Parishad or other authority responsible for providing essential services within a specified local area.

1.19.2.2 Establishment of National Disaster Management Authority (Section 3)

National Disaster Management Authority consisting of Chairperson and other members (not exceeding nine) should be established by Central Government. Prime Minister will be the ex officio Chairperson of it.

1.19.2.3 Powers and functions of National Authority (Section 6)

National Authority is responsible for laying down policies, plans and guidelines for disaster management. It is responsible for

-Approving National Plan

-Approving plans prepared by Ministries / Government Departments in accordance with national plans.

-Laying down guidelines to be followed by State Authorities and different Ministries or Government Departments while drawing up plans.

-Coordinate enforcement and implementation of policy and plan for disaster management.

-Take measures for prevention of disaster

1.19.2.4 Advisory Committee (Section 7)

National Authority will have an advisory committee consisting of experts in the field of disaster management at national, State or district level to make recommendation on different aspect of disaster management.

1.19.2.5National Executive Committee (Section 8)

National Executive Committee will be constituted to assist the National Authority.

1.19.2.6 Constitution of Sub-Committees (Section 9)

National Executive Committee can constitute one or more sub-committees for efficient discharge of its functions.

1.19.2.7 Functions of National Executive Committee (Section 10)

National Executive Committee is responsible for implementing the policies of National Authority. It is responsible for acting as the coordinating and monitoring body for disaster management. It is also in charge of preparation of the National Plan. The plan has to be approved by National Authority. It is also responsible for providing the necessary technical assistance to the State Government, State authorities and District Authorities for preparing their disaster management plans.

1.19.2.8 National Plan (Section 11)

A disaster management plan for the whole country known as the National Plan will be drawn up by the National Executive Committee.

1.19.2.9State Disaster Management Authorities (Section 14)

State government will establish a State Disaster Management Authority. State Authority will consist of a Chairperson and other members (not exceeding nine). Chief Minister will be the Chairperson, ex officio.

1.19.2.10Advisory Committee (Section 17)

State Authority will have an advisory committee consisting of experts in the field of disaster management.

1.19.2.11 Functions of State Authority (Section 18)

State Authority is responsible for laying down the State disaster management policy. It has to approve the disaster management plans prepared by different departments of State Government. It also lays down the guidelines which are to be followed by the different State Department.

Supreme Court in *Municipal Corporation, Delhi v. Association of Victims of Uphaar Tragedy*,(Air 2012 SC 100) observed The Delhi Disaster Management Authority, established by the Government of NCT of Delhi may expeditiously evolve standards to manage the disasters relating to cinema theatres and the guidelines in regard to ex-gratia assistance. It should be directed to conduct mock drills in each cinema theatre at least once in a year.

1.19.2.12 Guidelines for Minimum Standard of Relief by State Authority (Section 19)

State Authority will lay down guidelines for providing standard of reliefs to persons affected by disaster in State.

1.19.2.13 State Executive Committee (Section 20, 22)

State Executive Committee will assist State Authority in performance of its functions. State Executive Committee consists of the Chief Secretary to the State (Chairperson, ex officio) and four secretaries to the State Government of different departments. It is responsible for

implementing the National Plan and State Plan on disaster management. It is also the coordinating and monitoring body for disaster management in the State.

Its chief functions are-

1. It examines the vulnerability of different parts of the State to different forms of disasters. Accordingly, it specifies measures to be taken.

2. It lays down guidelines for preparation of disaster management plans by departments of Government of State and District Authorities.

3. It monitors implementation of disaster management plans prepared by State Government and District Authorities.

4. It gives directions to Departments and other authority and bodies in State regarding the action to be taken to deal with any disaster.

5. It advises, assists and coordinates activities of different Departments of State Government, District Authorities and different bodies engaged in disaster management.

6. It provides technical assistance and advice to District Authorities and local authorities in carrying out their functions.

7. It can examine construction in any local area in the State and if such construction is not in accordance with the approved standards, it can direct the District Authority or the local authority to take necessary actions.

1.19.2.14 State Plan (Section 23)

Every State will have a plan for disaster management known as the State Disaster management Plan.

1.19.2.15 District Disaster Management Authority (Section 25)

District Disaster Management Authority is to be established for every district in the State. District Authority will consist of the Chairperson and other members (not exceeding seven). This includes the Collector or District Magistrate or Deputy Commissioner of the district (will act the Chairperson, ex officio), the elected representative of the local authority(Co-Chairperson, ex officio), Chief Executive Officer of the District Authority (ex officio), Superintendent of Police (ex officio), Chief Medical Officer of district (ex officio), other

district level officers (not exceeding two). In Tribal Areas (referred to in the Sixth Schedule to the Constitution), Chief Executive Member of the district council of autonomous district will be the co-Chairperson (ex officio). In districts where zila Parishad exists, Chairperson shall be the co-Chairperson of the District Authority. An officer, not below the rank of Additional Collector or Additional District Magistrate or Additional Deputy Commissioner will be appointed to be the Chief Executive Officer of the District Authority.

1.19.2.16 Powers of Chairperson of District Authority (Section 26)

Chairperson of the District Authority can in case of emergency exercise all the powers of the District Authority.

1.19.2.17 Powers and functions of District Authority (Section 30)

District Authority will act as the district planning, coordinating and implementing body for disaster management. It has the following functions

1. Preparing a disaster management plan (including district response plan for the district).
2. Coordinating and monitoring the implementation of the National Policy, State Policy, National Plan, State Plan and District Plan.
3. Identification of districts vulnerable to disasters.
4. Taking steps for the prevention and mitigation of disaster.
5. Ensuring that the guidelines laid down by National Authority and State Authority are followed by all departments of Government at district level and the local authorities in the district.
6. Giving directions to different authorities at district level and local authorities to take measures for prevention or mitigation of disasters.
7. Laying down guidelines for prevention of disaster management plans by Government department at the district level and local authorities in the district.

8. Monitoring implementation of disaster management plans prepared by the Government Department at the district level.

9. Reviewing state of capabilities for responding to disasters.

10. Reviewing preparedness measures to respond effectively to any disaster or threatening disaster situation.

11. Organizing specialized training programmes for officers, employees and voluntary rescue workers in the district.

12. Organizing community training and awareness programmes.

13. Setting up, maintaining, reviewing and upgrading mechanism for early warning and dissemination of information to public.

14. Prepare, review and update district level response plan.

15. Coordinate response to any threatening disaster situation.

16. Ensuring that Government Department at district levels and local authorities prepare their response plans.

17. Examining construction in district and ensuring that it meets the necessary standards.

18. Identifying buildings and places which can be used as relief centers.

19. Establishing stockpiles of relief and rescue material.

20. - Providing information to State Authority relating to different aspects of disaster management.

21. Encouraging involvement of non-governmental organizations and voluntary social-welfare institutions in district for disaster management.

The Supreme Court in *Kishen Pattnayak and Anr. vs. State of Orissa* [1989Supp(1)SCC258 : AIR1989SC677] considered a letter written to the Chief Justice of India, highlighting the miserable condition of the inhabitants of the district of Kalahandi in the State of Orissa on account of extreme poverty, by the petitioners as a writ petition. This writ petition was taken along with another writ petition filed by Indian People's Front alleging starvation deaths, drought diseases and famine in the districts of Koraput and

Kalahandi due to utter negligence and callousness of the administration and the Government of Orissa. In order to ascertain the correct state of affairs, the Court was pleased to direct the District Judge of Kalahandi to enquire as to whether the State Government has, in fact, implemented the social welfare measures in the district of Kalahandi and whether such measures were adequate to meet the needs of the people there. The report was however not considered.

The Supreme Court held that a district-level Natural Calamities Committee consisting of the Collector, other officials and the popular representatives like MPs and MLAs of the district, who are required to review the progress of relief work and the measures taken to meet the drought conditions from time to time was sufficient and no new committee was required to be formed. The Government of Orissa was directed to nominate the names of at least five persons belonging to recognised voluntary organisations and registered voluntary agencies as members of the said Natural Calamities Committee of the district. The Committee was to hold at least one meeting every two months and the function of the Committee would not be confined only to the cases of starvation deaths, but it shall be responsible for looking after the welfare of the people of the district.

1.19.2.18 District plan (Section 31)

Every district will have a plan for disaster management. The plan will include the areas in the district which are vulnerable to different forms of disasters. The plan should list down the measures to be taken to prevent and mitigate disasters.

1.19.2.19 Plans by different authorities at district level and their implementation (Section 32)

Authorities at district level will prepare a disaster management plan.

1.19.2.20 Powers and functions of District Authority in case of any disaster (Section 34)

District Authority has the following powers and functions:--

1. Give directions for release and use of resources available with Government Department and local authority.
2. Control vehicular traffic in the affected area.
3. Remove debris, conduct search and carry out rescue operations.

4. Provide shelter, food, drinking water, healthcare and other essential services.
5. Establish emergency communication system in affected area.
6. Make arrangements for disposal of unclaimed dead bodies.
7. Construct temporary bridges or other necessary structures and demolish hazardous structures.

1.19.2.21 State Government to take measures (Section 38)

State Government will take all measures specified in the guidelines laid down by the National Authority and other measures necessary for disaster management.

1.19.2.22 Disaster Management Plan of Departments of State (Section 40)

Every department of state Government shall prepare a disaster management plan.

1.19.2.23 Functions of the Local Authority (Section 41)

Local Authority will take all measures necessary for disaster management. This includes ensuring that its officers and employees are trained for disaster management, maintaining resources relating to disaster management, ensuring construction projects confirm to standards and specifications laid down for prevention of disaster and carrying out relief, rehabilitation and reconstruction activities in affected area.

1.19.2.24 National Institute of Disaster Management (Section 42)

National Institute of Disaster Management will be constituted by Central Government. The institute will be responsible for developing training modules, undertake research and documentation in disaster management and organize training programmes. It will also be responsible for providing assistance to State Government and State training institutes in formulation of State level policies etc.

1.19.2.25 National Disaster Response Force (Section 44)

National Disaster response Force is to be constituted for providing specialist response to disasters.

1.19.2.26 National Disaster Response Fund (Section 46)

Central Government will constitute National Disaster Response Fund for meeting disaster situations.

1.19.2.27 National Disaster Mitigation Fund (Section 47)

Central Government will constitute National Disaster Mitigation Fund for projects exclusively for mitigation of disaster.

1.19.2.28 Establishment of funds by State Government (Section 48)

State Government will constitute a State Disaster Response Fund, District Disaster Response Fund, State Disaster Mitigation Fund and District Disaster Mitigation Fund.

1.19.2.29 Offences and penalties (Chapter X)

Chapter X deals with offences and penalties. Obstruction of any officer in discharge of his functions under the Act is punishable under Section 51. Making of false claim for the purpose of obtaining any relief, assistance or other benefit is punishable under Section 52. Misappropriation of money or materials meant for providing relief in any disaster situation is punishable under Section 53. Making false alarm as to disaster or its magnitude leading to panic is punishable under Section 54. In case of offence being committed by any Government Department, head of Department is deemed to be guilty of the offence (Section 55). Failure of any officer in duty imposed under this Act is punishable under Section 56. In case of any offence being committed by a company or body corporate, the persons who were in charge of the company at the relevant time and the company will be liable for such acts under Section 58.

1.19.2.30 Prohibition against discrimination (Section 61)

No discrimination on the ground of sex, caste, community, descent or religion should be done while providing compensation and relief to the victims of disaster.

1.19.2.31 Bar of Jurisdiction of Court (Section 71)

Except the Supreme Court or High Court, no court shall have jurisdiction to entertain any suit in respect of anything done on instructions issued by Central Government, National Authority, State Government, State Authority or District Authority in relation to its functions under this Act.

1.20.0 FOOD SAFETY AND STANDARDS ACT 2006

1.20.1 OBJECTIVE AND SCOPE: An Act to consolidate the laws relating to food and to establish the Food Safety and Standards Authority of India for laying down science based standards for articles of food and to regulate their manufacture, storage, distribution, sale and import, to ensure availability of safe and wholesome food for human consumption and for matters connected therewith or incidental thereto.

1.20.2 RELEVANT PROVISIONS OF THEACT:

1.20.2.1 Declaration as to expediency of control by the Union (Section 2)

It is hereby declared that it is expedient in the public interest that the Union should take under its control the food industry.

1.20.2.2 Definitions (Section 3)

i. "adulterant" means any material which is or could be employed for making the food unsafe or sub-standard or mis-branded or containing extraneous matter;

ii. "advertisement" means any audio or visual publicity, representation or pronouncement made by means of any light, sound, smoke, gas, print, electronic media, internet or website and includes through any notice, circular, label, wrapper, invoice or other documents;

iii. "Chairperson" means the Chairperson of the Food Authority;

iv. "claim" means any representation which states, suggests or implies that a food has particular qualities relating to its origin, nutritional properties, nature, processing, composition or otherwise;

v. "Commissioner of Food Safety" means the Commissioner of Food Safety appointed under section 30;

vi. " consumer" means persons and families purchasing and receiving food in order to meet their personal needs;

vii. "contaminant" means any substance, whether or not added to food, but which is present in such food as a result of the production (including operations carried out in crop husbandry, animal husbandry or veterinary medicine), manufacture,

processing, preparation, treatment, packing, packaging, transport or holding of such food or as a result of environmental contamination and does not include insect fragments, rodent hairs and other extraneous matter;

viii. "Designated Officer" means the officer appointed under section 36;

ix. "extraneous matter" means any matter contained in an article of food which may be carried from the raw materials, packaging materials or process systems used for its manufacture or which is added to it, but such matter does not render such article of food unsafe;

x. "food" means any substance, whether processed, partially processed or unprocessed, which is intended for human consumption and includes primary food to the extent defined in clause (ZK), genetically modified or engineered food or food containing such ingredients, infant food, packaged drinking water, alcoholic drink, chewing gum, and any substance, including water used into the food during its manufacture, preparation or treatment but does not include any animal feed, live animals unless they are prepared or processed for placing on the market for human consumption, plants prior to harvesting, drugs and medicinal products, cosmetics, narcotic or psychotropic substances:Provided that the Central Government may declare, by notification in the Official Gazette, any other article as food for the purposes of this Act having regards to its use, nature, substance or quality;

xi. "food additive" means any substance not normally consumed as a food by itself or used as a typical ingredient of the food, whether or not it has nutritive value, the intentional addition of which to food for a technological (including organoleptic) purpose in the manufacture, processing, preparation, treatment, packing, packaging, transport or holding of such food results, or may be reasonably expected to result (directly or indirectly), in it or its by-products becoming a component of or otherwise affecting the characteristics of such food but does not include "contaminants" or substances added to food for maintaining or improving nutritional qualities;

xii. " Food Analyst" means an analyst appointed under section 45;

xiii. " Food Authority" means the Food Safety and Standards Authority of India established under section 4;

xiv. "food business" means any undertaking, whether for profit or not and whether public or private, carrying out any of the activities related to any stage of manufacture, processing, packaging, storage, transportation, distribution of food, import and includes food services, catering services, sale of food or food ingredients;

xv. "food business operator" in relation to food business means a person by whom the business is carried on or owned and is responsible for ensuring the compliance of this Act, rules and regulations made thereunder;

xvi. "food laboratory" means any food laboratory or institute established by the Central or a State Government or any other agency and accredited by National Accreditation Board for Testing and Calibration Laboratories or an equivalent accreditation agency and recognised by the Food Authority under section 43;

xvii. "food safety" means assurance that food is acceptable for human consumption according to its intended use;

xviii. "food safety audit" means a systematic and functionally independent examination of food safety measures adopted by manufacturing units to determine whether such measures and related results meet with objectives of food safety and the claims made in that behalf;

xix. "Food Safety Management System" means the adoption of Good Manufacturing Practices, Good Hygienic Practices, Hazard Analysis and Critical Control Point and such other practices as may be specified by regulation, for the food business;

xx. " Food Safety Officer " means an officer appointed under section 37;

xxi. "hazard" means a biological, chemical or physical agent in, or condition of, food with the potential to cause an adverse health effect;

xxii. " import" means bringing into India any article of food by land, sea or air;

xxiii. "improvement notice" means a notice issued under section 32 of this Act;

xxiv. "infant food" and "infant milk substitute" shall have the meanings assigned to them in clauses (f) and (g) of sub-section (1) of section 2 of the Infant Milk Substitutes, Feeding Bottles and Infant Foods (Regulation of Production, Supply and Distribution) Act,1992, respectively;

xxv. "ingredient" means any substance, including a food additive used in the manufacture or preparation of food and present in the final product, possibly in a modified form;

xxvi. "label" means any tag, brand, mark, pictorial or other descriptive matter, written, printed, stencilled, marked, embossed, graphic, perforated, stamped or impressed on or attached to container, cover, lid or crown of any food package and includes a product insert;

xxvii. " licence" means a licence granted under section 31;

xxviii. "local area" means any area, whether urban or rural, notified by the Commissioner of Food Safety, to be a local area for the purposes of this Act;

xxix. "manufacture" means a process or adoption or any treatment for conversion of ingredients into an article of food, which includes any sub-process, incidental or ancillary to the manufacture of an article of food;

xxx. "manufacturer" means a person engaged in the business of manufacturing any article of food for sale and includes any person who obtains such article from another person and packs and labels it for sale or only labels it for such purposes;

xxxi. "Member" means Member of the Food Authority and includes the Chairperson;

xxxii. "misbranded food" means an article of food-

A. if it is purported, or is represented to be, or is being-

i. offered or promoted for sale with false, misleading or deceptive claims either;

a. upon the label of the package, or

b. through advertisement, or

ii. sold by a name which belongs to another article of food; or

iii. offered or promoted for sale under the name of a fictitious individual or company as the manufacturer or producer of the article as borne on the package or containing the article or the label on such package; or

B. if the article is sold in packages which have been sealed or prepared by or at the instance of the manufacturer or producer bearing his name and address but-

i. the article is an imitation of, or is a substitute for, or resembles in a manner likely to deceive, another article of food under the name of which it is sold, and is not plainly and conspicuously labelled so as to indicate its true character; or

ii. the package containing the article or the label on the package bears any statement, design or device regarding the ingredients or the substances contained therein, which is false or misleading in any material particular, or if the package is otherwise deceptive with respect to its contents; or

iii. the article is offered for sale as the product of any place or country which is false; or

C. if the article contained in the package-

i. contains any artificial flavouring, colouring or chemical preservative and the package is without a declaratory label stating that fact or is not labelled in accordance with the requirements of this Act or regulations made thereunder or is in contravention thereof; or

ii. is offered for sale for special dietary uses, unless its label bears such information as may be specified by regulation, concerning its vitamins, minerals or other dietary properties in order sufficiently to inform its purchaser as to its value for such use; or

iii. is not conspicuously or correctly stated on the outside thereof within the limits of variability laid down under this Act.

xxxiii. "notification" means a notification published in the Official Gazette;(zh) "package" means a pre-packed box, bottle, casket, tin, barrel, case, pouch,

receptacle, sack, bag, wrapper or such other things in which an article of food is packed;

xxxiv. "premises" include any shop, stall, hotel, restaurant, airline services and food canteens, place or vehicle or vessel where any article of food is sold or manufactured or stored for sale;

xxxv. "prescribed" means prescribed by rules made by the Central Government or the State Government, as the case may be under this Act;

xxxvi. "primary food" means an article of food, being a produce of agriculture or horticulture or animal husbandry and dairying or aquaculture in its natural form, resulting from the growing, raising, cultivation, picking, harvesting, collection or catching in the hands of a person other than a farmer or fisherman;

xxxvii. "prohibition order" means an order issued under section 33 of this Act;

xxxviii. "risk", in relation to any article of food, means the probability of an adverse effect on the health of consumers of such food and the severity of that effect, consequential to a food hazard;

xxxix. "risk analysis", in relation to any article of food, means a process consisting of three components, i.e., risk assessment, risk management and risk communication;

xl. "risk assessment" means a scientifically based process consisting of the following steps:

i. hazard identification,

ii. hazard characterisation,

iii. exposure assessment, and

iv. risk characterisation;

xli. "risk communication" means the interactive exchange of information and opinions throughout the risk analysis process concerning risks, risk-related factors and risk perceptions, among risk assessors, risk managers, consumers, industry, the academic community and other interested parties, including the explanation of risk assessment findings and the basis of risk management decisions;

xlii. "risk management" means the process, distinct from risk assessment, of evaluating policy alternatives, in consultation with all interested parties considering risk assessment and other factors relevant for the protection of health of consumers and for the promotion of fair trade practices, and, if needed, selecting appropriate prevention and control options;

xliii. "sale" with its grammatical variations and cognate expressions, means the sale of any article of food, whether for cash or on credit or by way of exchange and whether by wholesale or retail, for human consumption or use, or for analysis, and includes an agreement for sale, an offer for sale, the exposing for sale or having in possession for sale of any such article, and includes also an attempt to sell any such article;

xliv. "sample" means a sample of any article of food taken under the provisions of this Act or any rules and regulations made there under;

xlv. "specified by regulations" means specified by regulations made by the Food Authority;

xlvi. "standard", in relation to any article of food, means the standards notified by the Food Authority;

xlvii. "State Government" in relation to a Union territory means the Administrator of that Union territory appointed by the President under article 239 of the Constitution;

xlviii. "substance" includes any natural or artificial substance or other matter, whether it is in a solid state or in liquid form or in the form of gas or vapour;

xlix. "sub-standard", an article of food shall be deemed to be sub-standard if it does not meet the specified standards but not so as to render the article of food unsafe;

l. "Tribunal" means the Food Safety Appellate Tribunal established under section 70;

li. "unsafe food" means an article of food whose nature, substance or quality is so affected as to render it injurious to health:-

a. by the article itself, or its package thereof, which is composed, whether wholly or in part, of poisonous or deleterious substances; or

b. by the article consisting, wholly or in part, of any filthy, putrid, rotten, decomposed or diseased animal substance or vegetable substance; or

c. by virtue of its unhygienic processing or the presence in that article of any harmful substance; or(iv) by the substitution of any inferior or cheaper substance whether wholly or in part; or

d. by addition of a substance directly or as an ingredient which is not permitted; or

e. by the abstraction, wholly or in part, of any of its constituents; or

f. by the article being so coloured, flavoured or coated, powdered or polished, as to damage or conceal the article or to make it appear better or of greater value than it really is; or

g. by the presence of any colouring matter or preservatives other than that specified in respect thereof; or

h. by the article having been infected or infested with worms, weevils or insects; or

i. by virtue of its being prepared, packed or kept under insanitary conditions; or

j. by virtue of its being mis-branded or sub-standard or food containing extraneous matter; or

k. by virtue of containing pesticides and other contaminants in excess of quantities specified by regulations.

2. Any reference in this Act to a law which is not in force in the State of Jammu and Kashmir shall, in relation to that State, be construed as a reference to the corresponding Law, if any, in force in that State.

1.20.2.3 Establishment of Food Safety and Standards Authority of India (Section 4)

The Central Government shall, by notification, establish a body to be known as the Food Safety and Standards Authority of India to exercise the powers conferred on, and to perform

the functions assigned to, it under this Act. The Food Authority shall be a body corporate by the name aforesaid, having perpetual succession and a common seal with power to acquire, hold and dispose of property, both movable and immovable, and to contract and shall, by the said name, sue or be sued. The head office of the Food Authority shall be at Delhi. The Food Authority may establish its offices at any other place in India.

1.20.2.4 Duties and functions of Food Authority (Section 16)

It shall be the duty of the Food Authority to regulate and monitor the manufacture, processing, distribution, sale and import of food so as to ensure safe and wholesome food. Food Authority may by regulations specify-

a. the standards and guidelines in relation to articles of food and specifying an appropriate system for enforcing various standards notified under this Act;

b. the limits for use of food additives, crop contaminants, pesticide residues, residues of veterinary drugs, heavy metals, processing aids, myco-toxins, antibiotics and pharmacological active substances and irradiation of food;

c. the mechanisms and guidelines for accreditation of certification bodies engaged in certification of food safety management systems for food businesses;

d. the procedure and the enforcement of quality control in relation to any article of food imported into India;

e. the procedure and guidelines for accreditation of laboratories and notification of the accredited laboratories;

f. the method of sampling, analysis and exchange of information among enforcement authorities;

g. conduct survey of enforcement and administration of this Act in the country;

h. food labelling standards including claims on health, nutrition, special dietary uses and food category systems for foods; and

i. the manner in which and the procedure subject to which risk analysis, risk assessment, risk communication and risk management shall be undertaken.

The Food Authority shall also-

a. provide scientific advice and technical support to the Central Government and the State Governments in matters of framing the policy and rules in areas which have a direct or indirect bearing on food safety and nutrition;

b. search, collect, collate, analyse and summarise relevant scientific and technical data particularly relating to-

i. food consumption and the exposure of individuals to risks related to the consumption of food;

ii. incidence and prevalence of biological risk;

iii. contaminants in food;

iv. residues of various contaminants;

v. identification of emerging risks; and

vi. introduction of rapid alert system;

c. promote, co-ordinate and issue guidelines for the development of risk assessment methodologies and monitor and conduct and forward messages on the health and nutritional risks of food to the Central Government, State Governments and Commissioners of Food Safety;

d. provide scientific and technical advice and assistance to the Central Government and the State Governments in implementation of crisis management procedures with regard to food safety and to draw up a general plan for crisis management and work in close co-operation with the crisis unit set up by the Central Government in this regard;

e. establish a system of network of organisations with the aim to facilitate a scientific co-operation framework by the co-ordination of activities, the exchange of information, the development and implementation of joint projects, the exchange of expertise and best practices in the fields within the Food Authority's responsibility;

f. provide scientific and technical assistance to the Central Government and the State Governments for improving co-operation with international organisations;

g. take all such steps to ensure that the public, consumers, interested parties and all levels of panchayats receive rapid, reliable, objective and comprehensive information through appropriate methods and means;

h. provide, whether within or outside their area, training programmes in food safety and standards for persons who are or intend to become involved in food businesses, whether as food business operators or employees or otherwise;

i. undertake any other task assigned to it by the Central Government to carry out the objects of this Act;

j. contribute to the development of international technical standards for food, sanitary and phyto-sanitary standards;

k. contribute, where relevant and appropriate, to the development of agreement on recognition of the equivalence of specific food related measures;

l. promote co-ordination of work on food standards undertaken by international governmental and non-governmental organisations;

m. promote consistency between international technical standards and domestic food standards while ensuring that the level of protection adopted in the country is not reduced; and

n. promote general awareness as to food safety and food standards.

The Food Authority shall make it public without undue delay-

a. the opinions of the Scientific Committee and the Scientific Panel immediately after adoption;

b. the annual declarations of interest made by members of the Food Authority, the Chief Executive Officer, members of the Advisory Committee and members of the Scientific Committee and Scientific Panel, as well as the declarations of interest if any, made in relation to items on the agendas of meetings;

c. the results of its scientific studies; and

d. the annual report of its activities.

The Food Authority may, from time to time give such directions, on matters relating to food safety and standards, to the Commissioner of Food Safety, who shall be bound by such directions while exercising his powers under this Act;

The Food Authority shall not disclose or cause to be disclosed to third parties confidential information that it receives for which confidential treatment has been requested and has been acceded, except for information which must be made public if circumstances so require, in order to protect public health.

1.20.2.5 Use of food additive or processing aid (Section 19)

No article of food shall contain any food additive or processing aid unless it is in accordance with the provisions of this Act and regulations made there under. Explanation.-For the purposes of this section, "processing aid" means any substance or material, not including apparatus or utensils, and not consumed as a food ingredient by itself, used in the processing of raw materials, foods or its ingredients to fulfill a certain technological purpose during treatment or processing and which may result in the non-intentional but unavoidable presence of residues or derivatives in the final product.

1.20.2.6 Contaminants, naturally occurring toxic substances, heavy metals, etc (Section 20)

No article of food shall contain any contaminant, naturally occurring toxic substances or toxins or hormone or heavy metals in excess of such quantities as may be specified by regulations.

1.20.2.7 Pesticides, veterinary drugs residues, antibiotic residues and micro-biological counts (Section 21)

1. No article of food shall contain insecticides or pesticides residues, veterinary drugs residues, antibiotic residues, solvent residues, pharmacological active substances and micro-biological counts in excess of such tolerance limits as may be specified by regulations.

2. No insecticide shall be used directly on article of food except fumigants registered and approved under the Insecticides Act, 1968.Explanation.-For the purposes of this section,-

   a. "pesticide residue" means any specified substance in food resulting from the use of a pesticide and includes any derivatives of a pesticide, such as conversion products, metabolites, reaction products and impurities considered to be of toxicological significance and also includes such residues coming into food from environment;

   b. "residues of veterinary drugs" include the parent compounds or their metabolites or both in any edible portion of any animal product and include residues of associated impurities of the veterinary drug concerned.

1.20.2.8 Responsibilities of the food business operator (Section 26)

1. Every food business operator shall ensure that the articles of food satisfy the requirements of this Act and the rules and regulations made thereunder at all stages of production, processing, import, distribution and sale within the businesses under his control.

2. No food business operator shall himself or by any person on his behalf manufacture, store, sell or distribute any article of food-

   i. which is unsafe; or

   ii. which is misbranded or sub-standard or contains extraneous matter; or

   iii. for which a licence is required, except in accordance with the conditions of the licence; or

   iv. which is for the time being prohibited by the Food Authority or the Central Government or the State Government in the interest of public health; or

   v. in contravention of any other provision of this Act or of any rule or regulation made thereunder.

3. No food business operator shall employ any person who is suffering from infectious, contagious or loathsome disease.

4. No food business operator shall sell or offer for sale any article of food to any vendor unless he also gives a guarantee in writing in the form specified by regulations about the nature and quality of such article to the vendor: Provided that a bill, cash memo, or invoice in respect of the sale of any article of food given by a food business operator to the vendor shall be deemed to be a guarantee under this section, even if a guarantee in the specified form is not included in the bill, cash memo or invoice.

5. Where any food which is unsafe is part of a batch, lot or consignment of food of the same class or description, it shall be presumed that all the food in that batch, lot or consignment is also unsafe, unless following a detailed assessment within a specified time, it is found that there is no evidence that the rest of the batch, lot or consignment is unsafe: Provided that any conformity of a food with specific provisions applicable to that food shall be without prejudice to the competent authorities taking appropriate measures to impose restrictions on that food being placed on the market or to require its withdrawal from the market for the reasons to be recorded in writing where such authorities suspect that, despite the conformity, the food is unsafe.

1.20.2.9 Liability of manufacturers, packers, wholesalers, distributors and sellers (Section 27)

1. The manufacturer or packer of an article of food shall be liable for such article of food if it does not meet the requirements of this Act and the rules and regulations made thereunder.

2. The wholesaler or distributor shall be liable under this Act for any article of food which is-

   a. supplied after the date of its expiry; or

   b. stored or supplied in violation of the safety instructions of the manufacturer; or

   c. unsafe or misbranded; or

   d. unidentifiable of manufacturer from whom the article of food have been received; or

   e. stored or handled or kept in violation of the provisions of this Act, the rules and regulations made there under; or

f. received by him with knowledge of being unsafe.

3. The seller shall be liable under this Act for any article of food which is-

a. sold after the date of its expiry; or

b. handled or kept in unhygienic conditions; or

c. misbranded; or

d. unidentifiable of the manufacturer or the distributors from whom such articles of food were received; or

e. received by him with knowledge of being unsafe.

1.20.2.10 Compensation in case of injury or death of consumer (Section 65)

1. Without prejudice to the other provisions of this Chapter, if any person whether by himself or by any other person on his behalf, manufactures or distributes or sells or imports any article of food causing injury to the consumer or his death, it shall be lawful for the Adjudicating Officer or as the case may be, the court to direct him to pay compensation to the victim or the legal representative of the victim, a sum-

a. not less than five lakh rupees in case of death;

b. not exceeding three lakh rupees in case of grievous injury; and

c. not exceeding one lakh rupees, in all other cases of injury:

Provided that the compensation shall be paid at the earliest and in no case later than six months from the date of occurrence of the incident: Provided further that in case of death, an interim relief shall be paid to the next of the kin within thirty days of the incident.

2. Where any person is held guilty of an offence leading to grievous injury or death, the Adjudicating Officer or the court may cause the name and place of residence of the person held guilty, the offence and the penalty imposed to be published at the offender's expense in such newspapers or in such other manner as the Adjudicating Officer or the court may direct and the expenses of such publication shall be deemed to be part of the cost attending the conviction and shall be recoverable in the same manner as a fine.

3. The Adjudicating Officer or the court may also,-

a. order for cancellation of licence , re-call of food from market , forfeiture of establishment and property in case of grievous injury or death of consumer;

b. issue prohibition orders in other cases

1.21.0 THE DISASTER MANAGEMENT (NATIONAL DISASTER RESPONSE FORCE) RULES, 2008

1.21.1OBJECTIVE AND SCOPE

In exercise of the powers conferred by Section 75 (1) and Section 75 (2) (f) of the Disaster Management Act, 2005 the Central Government has made THE DISASTER MANAGEMENT (NATIONAL DISASTER RESPONSE FORCE) RULES, 2008.

1.21.2 RELEVANT PROVISIONS OF THE ACT:

1.21.2.1 Definitions

a) "Act" means the Disaster Management Act 2005.
b) "Battalion" means a unit of the Central Para Military Force earmarked by that force as battalion.
c) "Central Para Military Force" means the Central Para Military Force constituted under-
    i. The Central reserve Police Force Act,1949
    ii. The Border Security Force Act, 1968
    iii. The Central Industrial Security Force Act, 1968
    iv. The Indo-Tibetan Border Police Force Act, 1992
d) "National Authority" means the national Disaster Management Authority established under section 3(1) of the Act.
e) "National Disaster Response Force" means National Disaster Response Force constituted under section 44(1) of the Act.

1.21.2.2 Constitution of force (Rule 3)

The personnel deputed from the Central Para Military Forces (herein after referred to as CPMF) by the Central Government in the Ministry of Home Affairs shall be deemed to have

been deputed in the National Disaster Response Force here in after referred to as NDRF under these rules.

The Central Government may, in consultation with national authority, appoint such number of personnel from the CPMF to the NDRF for management of Disaster having skills and technical qualification as prescribed by the Central Government.

In case of shortage of qualified personnel, the Central government may appoint such personnel on contract basis or on deputation from other organization.

The tenure of the personnel is for five years and not more than 25%of force may be replaced in one year.

1.21.2.3 Superintendence, Direction and Control of Force (Rule 4)

NDRF shall be controlled by National Authority the Director General of NDRF shall be in command and shall in turn report to the Vice Chairmen of National Authority.

1.21.2.4 The Responsibility, Training, Duties, etc (Rule 5)

The NDRF shall be trained as specialized force equipped to deal with disasters.

1.21.2.5 Conditions of Service (Rule 6)

The personnel deputed from CPMF to NDRF shall continue to be regulated by the rules applicable by the respective forces.

1.22.0 CULTURAL HERITAGE CONSERVATION BILL, 2010

1.22.1 OBJECTIVE AND SCOPE:

Bill provides for the constitution of a Board for the conservation of cultural and natural heritage and for matters connected therewith. The Bill is being legislated in pursuance of the United Nations Educational Scientific and Cultural Organization Convention concerning the Protection of the World Cultural and Natural Heritage which was held in Paris in 1972, which India ratified in 1977, to ensure effective and active measures for protection, conservation and presentation of the cultural and natural heritage situated on the territory of each State Party. The Bill seeks to enact a law for the purpose of implementing the decisions to take appropriate legal, scientific, technical, administrative and financial measures necessary for

the identification, protection, conservation, presentation and rehabilitation of cultural and natural heritage. The terms 'cultural heritage' and 'natural heritage' have been given a very comprehensive meaning to include all cultural and natural heritage, provided for in the Convention and the terms also cover the ancient monuments and archaeological sites and remains defined in the Ancient Monuments and Archaeological Sites and Remains Act, 1958.

1.22.2 RELEVANT PROVISIONS OF THE BILL

1.22.2.1 Definitions (Clause 2)

(a) 'Board' means the Cultural Heritage Conservation Board constituted under Clause 3;

(b) 'Convention' means the United Nations Educational, Scientific and Cultural Organization Convention concerning the Protection of the World Cultural and Natural Heritage held in Paris in 1972 and ratified by India in 1977;

(c) 'Cultural heritage' includes the following:—
(i) 'Ancient monument' and 'archaeological sites and remains' defined in Ancient Monuments and Archaeological Sites and Remains Act, 1958;
(ii) Monuments;
(iii) Groups of buildings, groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding universal value;
(iv) Sites;

(d) "Natural heritage" includes,—
(i) Natural sites or precisely delineated natural areas which are of outstanding value from the point of view of science, conservation or natural beauty;
(ii) Geological and physiographical formations which constitute the habitat of threatened species of animals and plants and are of outstanding value from the point of view of science or conservation;
(iii) Natural features consisting of physical and biological formations which are of outstanding value from the aesthetic or scientific point of view;

1.22.2.2Cultural Heritage Conservation Board (Clause 3)

Central Government shall constitute a Board to be known as the Cultural Heritage Conservation Board.

The Board shall consist of a Chairperson, fourteen other members to be appointed by the Central Government from amongst persons who have knowledge and experience in the field of archaeology, history, architecture, conservation, science and technology, environment science, town and country planning or public administration.

1.22.2.3Functions of Board (Clause 4)

Board shall monitor the implementation of obligations under the Convention; advise Central Government on identification, safe-keeping, conservation and preservation of cultural heritage and natural heritage; issue directions to ensure safety, security, conservation and management of cultural heritage and natural heritage; undertake an inquiry and initiate legal action in consultation with the Central Government, in case of offences relating to cultural heritage and natural heritage sites; take measures necessary for implementation of provisions of Act etc.

1.22.2.4 Damage to heritage Site (Clause 5)

Whoever damages cultural heritage or natural heritage site; indulges in any propaganda with the intention of causing any damage to a cultural heritage or natural heritage site; commits any offence under Clause 30 of the Ancient Monuments and Archaeological Sites and Remains Act, 1958; shall be guilty of committing an offence under this Act.

1.22.2.5 Punishment for damage to heritage site (Clause 6)

Any person who commits any offence under Clause 5 shall be punishable with rigorous imprisonment for a term which may extend to five years, or with fine, which may extend to one lakh rupees, or with both.

1.22.2.6 Every person holding a civil post to assist the Board (Clause 9)

It shall be the duty of every person holding a civil post in connection with the affairs of the Union or a State to assist the Board in discharge of its functions.

1.22.2.7 Act to have overriding effect (Clause 10)

The provisions of this Act shall have effect notwithstanding anything inconsistent contained in any other law for the time being in force.

1.22.2.8 Provisions of the Act to be in addition to other laws (Clause 11)

The provisions of this Act shall be in addition to, and not in derogation of, any other law for the time being in force.

1.23.0 NATIONAL GREEN TRIBUNAL ACT 2010

1.23.1OBJECTIVE AND SCOPE

In June 2010, Government of India notified introduction of National Green tribunal Act 2010 leading to establishment of a National Green Tribunal (NGT) for effective and expeditious disposal of cases relating to environmental protection, conservation of forests and other natural resources. The National Green Tribunal began operative from 18th Oct 2010. The tribunal repeals and replaces the earlier National Environment Tribunal Act 1995 and the National Environment Appellate Authority 1997 and all cases pending before them stand transferred to this tribunal. The green tribunal comprises a chairperson, judicial officers and environmental expert members who will hear the cases regarding infringement of environmental protection and rights around the country and have the powers to decide and disperse compensations. Initially, the green tribunal is proposed to be set up in five places- Delhi, Bhopal, Pune, Kolkata and Chennai. The green tribunal shall hear the disputes arising from enforcement of any legal right relating to environment and shall also include violation of a specific statutory environmental obligation by an individual, firm, company, local authority etc. Instances where an individual or the community at large is affected or likely to be affected or the gravity of damage to environment is substantial or damage to public health is broadly measurable could trigger complaints under the green tribunal. The green tribunal will function as appellate authority to persons aggrieved by any order or decision made under

the Water (Prevention and control of Pollution) Act 1974, Water (Prevention and Control of Pollution) Cess Act 1977, Forest (Conservation) Act 1980, Air (Prevention and Control Pollution) Act 1981, Environment (Protection) Act 1986 and Biological Diversity Act 2002. The NGT has powers to regulate its own procedure and is not bound by the procedure laid down by the Code of Civil Procedure 1908 or by the rules of evidence contained in the Indian Evidence Act 1872. All proceedings before the NGT shall be deemed to be judicial proceedings and the tribunal, while passing any order or award shall apply the principle of sustainable development, the precautionary principle and the polluter pays principle. The complaint filed before the tribunal must be disposed within six months.

1.23.2 RELEVANT PROVISIONS OF THE ACT:

1.23.2.1 Definitions (Section 2)

i. “accident” means an accident involving a fortuitous or sudden or unintended occurrence while handling any hazardous substance or equipment, or plant, or vehicle resulting in continuous or intermittent or repeated exposure to death, of, or, injury to, any person or damage to any property or environment but does not include an accident by reason only of war or civil disturbance;

ii. “environment” include water, air and land and the inter-relationship, which exists among and between water, air and land and human beings, other living creatures, plants, micro-organism and property;

iii. “handling”, in relation to any hazardous substance, means the manufacture, processing, treatment, package, storage, transpiration, use, collection, destruction, conversion, offering for sale, transfer or the like of such hazardous substance;

iv. “hazardous substance” means any substance or preparation which is defined as hazardous substance in the Environment (Protection) Act, 1986, and exceeding such quantity as specified or may be specified by the Central Government under the Public Liability Insurance Act, 1991;

v. “injury” includes permanent, partial or total disablement or sickness resulting out of an accident;

vi. “Substantial question relating to environment” shall include an instance where there is a direct violation of a specific statutory environment obligation by a person by which, the community at large other than an individual or group of individuals is affected or likely to be affected by the environmental consequences; or the gravity of damage to the environment or property is substantial; or the damage to public health is broadly measurable; the environmental consequences relate to a specific activity or a point source of pollution;

1.23.2.2 Establishment of Tribunal (Section 3)

The Central Government shall establish a Tribunal to be known as the National Green Tribunal to exercise the jurisdiction, powers and authority conferred on such Tribunal by or under this Act.

1.23.2.3 Tribunal to settle disputes (Section 14)

The Tribunal shall have the jurisdiction over all civil cases where a substantial question relating to environment (including enforcement of any legal right relating to environment), is involved and such question arises out of the implementation of the enactment. No application for adjudication of dispute under this section shall be entertained by the Tribunal unless it is made within a period of six months from the date on which the cause of action for such dispute first arose.

1.23.2.4 Relief, compensation and restitution (Section 15)

The Tribunal may, by an order, provide, relief and compensation to the victims of pollution and other environmental damage arising under the enactments specified in the Schedule I (including accident occurring while handling any hazardous substance); for restitution of property damaged; for restitution of the environment for such area or areas, as the Tribunal may think fit. The Tribunal may, having regard to the damage to public health, property and environment divided the compensation or relief payable under separate heads specified in

Schedule II so as to provide compensation or relief to the claimants and for restitution of the damaged property or environment, as it may think fit.

1.23.2.5 Tribunal to have appellate jurisdiction (Section 16)

Any person aggrieved by an order or decision, made, on or after the commencement of the National Green Tribunal Act, 2010, by the appellate authority under section 28 of the Water (Prevention and Control of Pollution) Act, 1974; an order passed, on or after the commencement of the National Green Tribunal Act, 2010, by the State Government under section 29 of the Water (Prevention and Control of Pollution) Act, 1974; direction issued, on or after the commencement of the National Green Tribunal Act, 2010, by a Board, under section 33A of the Water (Prevention and Control of Pollution) Act, 1974; an order or decision made, on or after the commencement of the National Green Tribunal Act, 2010, by the appellate authority under section 13 of the Water (Prevention and Control of Pollution) Cess Act,1977; an order or decision made, on or after the commencement of the National Green Tribunal Act, 2010, by the State Government or other authority under section 2 of the Forest (Conservation) Act, 1980; an order or decision, made, on or after the commencement of the National Green Tribunal Act, 2010, by the Appellate Authority under section 31 of the Air (Prevention and Control of Pollution) Act, 1981; any direction issued, on or after the commencement of the National Green Tribunal Act, 2010, under section 5 of the Environment (Protection) Act, 1986; an order made, on or after the commencement of the National Green Tribunal Act, 2010, granting environmental clearance in the area in which any industries, operations or processes or class of industries, operations and processes shall not be carried out or shall be carried out subject to certain safeguards under the Environment (Protection) Act, 1986; an order made, on or after the commencement of the National Green Tribunal Act, 2010, refusing to grant environmental clearance for carrying out any activity or operation or process under the Environment (Protection) Act, 1986; any determination of benefit sharing or order made, on or after the commencement of the National Green Tribunal Act, 2010, by the National Biodiversity Authority or a State Biodiversity Board under the provisions of the Biological Diversity Act, 2002, may, within a period of thirty days from the date on which the order or decision or direction or determination is communicated to him, prefer an appeal to the Tribunal.

1.23.2.6 Liability to pay relief or compensation in certain cases (Section 17)

Where death of, or injury to, any person (other than a workman) or damage to any property or environment has resulted from an accident or the adverse impact of an activity or operation or process, under any enactment the person responsible shall be liable to pay such relief or compensation for such death, injury or damage, under all or any of the heads as may be determined by the Tribunal. If the death, injury or damage caused by an accident or the adverse impact of an activity or operation or process under any enactment specified in Schedule I cannot be attributed to any single activity or operation or process but in the combined or resultant effect of several such activities, operations and processes, the Tribunal may, apportion the liability for relief or compensation amongst those responsible for such activities, operations and processes on an equitable basis. The Tribunal shall, in case of an accident, apply the principle of no fault.

1.23.2.7 Procedure and powers of Tribunal (Section 19)

The Tribunal shall not be bound by the procedure laid down by the Code of Civil Procedure, 1908 but shall be guided by the principles of natural justice. The Tribunal shall have power to regulate its own procedure. The Tribunal shall also not be bound by the rules of evidence contained in the Indian Evidence Act, 1872. The Tribunal shall have, for the purposes of discharging its functions under this Act, the same powers as are vested in a civil court under the Code of Civil Procedure, 1908, while trying a suit. Tribunal shall be deemed to be a civil court.

1.23.2.8 Tribunal to apply certain principles (Section 20)

The Tribunal shall, while passing any order or decision or award, apply the principles of sustainable development, the precautionary principle and the polluter pays principles.

1.23.2.9 Appeal to Supreme Court (Section 22)

Any person aggrieved by any award, decision or order of the Tribunal, may, file an appeal to the Supreme Court, within ninety days from the date of communication of the award, decision order of the Tribunal, to him, on any one or more of the grounds specified in section 100 of the Code of Civil Procedure, 1908.

1.23.2.10 Deposit of amount payable for damage to environment (Section 24)

Where any amount by way of compensation or relief is ordered to be paid under any award or order made by the Tribunal on the ground of any damage to environment, the amount shall be remitted to the authority specified. The amount of compensation or relief credited to the Environmental Relief Fund may be utilized by such persons or authority, in such manner and for such purposes relating to environment, as may be prescribed.

1.23.2.11 Execution of award or order or decision of Tribunal (Section 25)

An award or order or decision of the Tribunal under this Act shall be executable by the Tribunal as a decree of a civil court, and for this purpose, the Tribunal shall have all the powers of a civil court.

1.23.2.12 Penalty for failure to comply with orders of Tribunal (Section 26)

Whosever, fails to comply with any order or award or decision of the Tribunal under this act, he shall be punishable with imprisonment for a term which may extend to three years, or with fine which may extend to ten crore rupees, or with both and in case the failure or contravention continues, with additional fine which may extend to twenty-five thousand rupees for every day during which such failure or contravention continues after conviction for the first such failure or contravention.

1.23.2.13 Offences by Government Department (Section 28)

Where any department of the Government fails to comply with any order or award or decision of the Tribunal under this Act, the Head of the Department shall be deemed to be guilty of such failure and shall be liable to be proceeded against for having committed an offence under this Act and punished accordingly.

1.23.2.14 Bar of jurisdiction (Section 29)

No civil court shall have jurisdiction to entertain any appeal in respect of any matter, which the Tribunal is empowered to determine under its appellate jurisdiction. No civil court shall

have jurisdiction to settle dispute or entertain any question relating to any claim for granting any relief or compensation or restitution of property damaged or environment damaged which may be adjudicated upon by the Tribunal and no injunction in respect of any action taken or to be taken by or before the Tribunal in respect of the settlement of such dispute or any such claim for granting any relief or compensation or restitution of property damaged or environment damaged shall be granted by the civil court.

1.23.2.15 Cognizance of offences (Section 30)

No court shall take cognizance of any offence under this act except on a complaint made by the Central Government or any authority or officer authorized in this behalf by that Government; or any person who has given notice of not less than sixty days in such manner as may be prescribed, of the alleged offence and of his intention to make a complaint, to the Central Government or the authority or officer authorized as aforesaid. No court inferior to that of a Metropolitan Magistrate or, a Judicial Magistrate of the first class shall try any offence punishable under this Act.

1.24.0 WETLANDS (CONSERVATION AND MANAGEMENT) RULES, 2010

1.24.1 OBJECTIVE AND SCOPE:

Wetlands (Conservation and Management) Rules, 2010 have been drafted by the Ministry of Environment and Forests to ensure better conservation and management and to prevent degradation of existing wetlands in India. Wetlands are critical for human development as a large number of people are dependent on them for drinking water, food and livelihood. Under the Rules, wetlands have been classified for better management and easier identification. Central Wetland Regulatory Authority has been set up to ensure proper implementation of the Rules and perform all functions for management of wetlands in India. Apart from necessary government representatives, the Authority shall have a number of expert members to ensure that wetland conservation is carried out in the best possible manner. In order to ensure there is no further degradation of wetlands, the Rules specify activities which are harmful to wetlands such as industrialization, construction, dumping of untreated waste, reclamation etc. and prohibit these activities in the wetlands. Other activities such as harvesting, dredging etc may be carried out in

the wetlands but only with prior permission from the concerned authorities.

1.24.2 RELEVANT PROVISIONS OF THE RULES:

1.24.2.1Definitions (Rule 2)

1. 'Act' means the Environment (Protection) Act, 1986.
2. 'Wetland' means an area of marsh, fen, peat land or water; natural or artificial, permanent or temporary, with water that is static, flowing, fresh, brackish or salt, including areas of marine water, the depth of which at low tide does not exceed six meters and includes all inland waters such as lakes, reservoir, tanks, backwaters, lagoon, creeks, estuaries and manmade wetland. It does not include main river channels, paddy fields and the coastal wetlands covered under the notification of the Government of India in the Ministry of Environment and Forest, S.O. number 114 (E) dated the 19th February, 1991.

1.24.2.2 Protected Wetlands (Rule 3)

The following wetlands are regulated under the Rules, namely:_

1. Wetlands categorized as Ramsar Wetlands of International Importance under the Ramsar Convention;
2. Wetlands in areas which are ecologically sensitive and important;
3. Wetlands lying within UESCO World Heritage Site;
4. High altitude wetlands at or above an elevation of two thousand five hundred metres with an area equal to or greater than five hectares etc.

1.24.2.3 Restrictions on activities within wetlands (Rule 4)

Reclamation of wetlands, setting up of new industries, manufactures or handling or storage or disposal of hazardous substances covered under the Manufactures, Storage and Import of Hazardous Chemical Rules, 1989, solid waste company, discharge of untreated wastes and effluents from industries, cities, towns and other human settlements, any construction of a permanent nature and any other activity likely to have an adverse impact on the ecosystem of the wetland are prohibited.

1.22.2.4 Constitution of Central Wetlands Regulatory Authority (Rule 5)

Central Government will constitute the Central Wetlands Regulatory Authority. The said authority will appraise proposals for identification of new wetlands, projects or activities; identify with the concerned local authorities to enforce the provisions contained under these rules; grant clearances or identify the areas for the grant of clearance for regulated activities in the wetlands within their respective jurisdictions; determine the zone of direct influence of the wetlands and issue necessary directions for the conservation, preservation and wise use of wetlands.

1.24.2.5 Appeals against the decisions of the Authority (Rule 9)

Any person aggrieved by the decision of the Authority may appeal to the National Green Tribunal constituted under the National Green Tribunal Act, 2010 within a period of sixty days from the date of such decision.

CHAPTER TWO

FIRE

Fire is a very good servant, but, a very bad master. As long as fire is under our control, it serves a lot of useful purposes for us, but, once it goes out of our control, it destroys and devastates. The occurrence of fire-related accidents is often inevitable – in spite of all the safety precautions. Fire tragedy has been a major source of disaster ranging from fire in schools and other public places such as cinema halls to fire explosions in commercial environments like chemical factories, mines, oil fields and industries which result in death, injury or damage to property. The major reasons for an electrical fire are identified as:-

(1)Short circuit in wiring/cables;

(2)Loose connections giving rise to sparking;

(3) Overloading of conductors/cables;

(4) Electrical source close to flammable material;

(5) Use of inferior grade materials and equipments;

(6) Use of under-sized fuses leading to sparking and break down and

(7) Generation of static electricity.

Fire is also caused by electrical short-circuits compounded by **lack of**

a) Requisite obstruction-free exit points,
b) Emergency lights and sign posts
c) Sound system to relay the message
d) Space constraints for the entry and effective operation of fire fighting vehicles and non-availability of water for contributing fire.
e) Lack of smoke detectors, fire alarm, fire extinguishers and fire drills let the fire take its own course.

The law has contemplated such situations and has enacted Acts *inter alia* such as Cinematograph Act, Electricity Act 2003, The Boilers Act, 1923, The Inflammable Substances Act, 1952. The Mines Act, 1952 and fire service legislations of various states to prevent fire. However, fire hazards arise outside the scope of such enactments.

THE LEGISLATIONS TO PREVENT FIRE HAZARDS ARE AS FOLLOWS:

2.1.0 0THE BOILERS ACT, 1923

2.2.1 OBJECTIVE AND SCOPE:

In the year 1863, a very serious boiler explosion occurred in Calcutta which caused the loss of several lives. As a result of this explosion, the necessity of inspection of boilers was widely recognised and a bill was introduced in the Bengal Council to provide for the inspection of steam boilers. In the year 1864, the Bengal Act VI of 1864 was passed which provided for the inspection of steam boilers and prime movers in the town and suburbs of Calcutta. This is the beginning of boiler legislation in India. Following the Bengal Act of 1864, each of the other provinces framed legislation. At that time there were seven different Acts and seven different sets of rules and regulations. Those Acts and rules & regulations were inconsistent with one another. As the differences in the Acts and rules and regulations among the various provinces in India gave rise to many difficulties and hampered the development of industries, the Central Government appointed a committee called "The Boiler Law Committee" in 1920 to examine and report on the general question of boiler legislation in India.

The Boiler Laws Committee, 1920-21, the first to review the boiler laws on a national scale reported in March, 1921. The report criticised the differences in the Acts, rules and regulations. The report also pointed out that in the inspection of boilers the personal element was a weighty factor, and the difference in regulations resulted in what was termed as "provincial jealousy". The report stressed that all provinces should be subject to the same regulations and work done in one province should be accepted as correct in another province. The Committee recommended that regulations to cover the standard conditions for material, design and construction of boilers should be framed by Government of India and make applicable to all the provinces. The report also pointed out that regulations were entirely of technical nature and there was no reason for which these regulations would be affected by local conditions. The Committee prepared a draft Act on the lines of which, the basic All-India Act was passed in 1923. The Boiler Laws Committee also prepared a uniform set of technical regulations and a model set of administrative rules. A sharp distinction was drawn between the regulations and the rules. The regulations referred entirely to technical matters where as the rules referred to questions concerning the administration of the Act. Indian Boiler act, 1923 provides for the safety of life and property of persons from the danger of explosion of boilers.

2.2.2 RELEVANT PROVISIONS OF THE ACT:

2.2.2.1 Definition

i. "accident" means an explosion of boiler, or boiler component, which is calculated to weaken the strength or an uncontrolled release of water or steam there from, liable to cause death or injury to any person or damage to any property;

ii. "boiler" means a pressure vessel in which steam is generated for use external to itself by application of heat which is wholly or partly under pressure when steam is shut off but does not include a pressure vessel,—

(i) With capacity less than 25 litres (such capacity being measured from the feed check valve to the main stream stop valve);

(ii) with less than one kilogram per centimeter square design gauge pressure and working gauge pressure; or

(iii) in which water is heated below one hundred degrees centigrade

2.2.2.2 Limitation of application (Section 3)

The Act will not apply to locomotive boilers belonging to or under the control of the railways; any boiler or boiler component in any vessel propelled wholly or in part by the agency of steam; belonging to, or under the control of, the Army, Navy or Air Force; or appertaining to a sterilizer disinfector used in hospitals or nursing homes, if the boiler does not exceed one hundred litres incapacity.

2.2.2.3 Technical Adviser (Section 4A)

The Central Government shall appoint a Technical Adviser from amongst the persons having such qualifications and experience as may be prescribed by rules.

2.2.2.4 Welders certificate (Section 4B)

Any person who proposes to undertake any welding work connected with or related to a boiler, or a boiler component or both shall apply to a Competent Authority for issue of a Welders certificate.

2.2.2.5 Conditions precedent for manufacture of boiler and boiler component (Section 4C)

No person shall manufacture or cause to be manufactured any boiler or boiler component, or both unless he has provided in the premises or precincts wherein such boiler or boiler component, or both are manufactured, such facilities for design and construction as may be prescribed by regulations; the design and drawings of the boiler and boiler component have been approved by the Inspecting Authority ; the materials, mounting and fittings used in the construction of such boiler or boiler component, or both conform to the specifications prescribed by regulations; and the persons engaged for welding boiler or boiler component hold Welders certificate issued by a Competent Authority.

2.2.2.6 Inspection during manufacture (Section 4D)

Every manufacturer, before commencing manufacture of a boiler or boiler component, shall engage an Inspecting Authority for carrying out inspection.

2.2.2.7 Inspection during erection (Section 4E)

The owner who proposes to register a boiler shall engage on Inspecting Authority for carrying out inspection at the stage of erection of the boiler.

2.2.2.7 Conditions precedent for repairing boiler and boiler component (Section 4F)

No person shall repair or cause to be repaired any boiler or boiler component unless he has provided in the premises or precincts, where in such boiler or boiler component or both are being used, facilities for repairs prescribed by regulations; the design and drawings of the boiler or boiler component, and the materials, mountings and fittings used in the repair of such boiler or boiler component conform to the regulations; persons engaged in welding, holds a Welders certificate issued by a Competent Authority; every user who does not have the in-house facilities for repair of boiler or boiler component shall engage a Boiler Repairer possessing a Boiler Repairer certificate for repair of a boiler or boiler component ; every user shall engage a Competent Person for approval of repairs to be carried out in-house or by the

repairers.

2.2.2.8 Chief Inspector, Deputy Chief Inspectors and Inspectors (Section 5)

The State Government may appoint such persons as it thinks fit to be Inspectors for the State for the purposes of this Act. The State Government may appoint such persons as it thinks fit to be Deputy Chief Inspectors for the State. Every Deputy Chief Inspector may exercise the powers and perform the duties conferred and imposed on Inspectors by or under this Act. The State Government shall appoint a person to be Chief Inspector for the State who may, in addition to the powers and duties conferred and imposed on the Chief Inspector by or under this Act, exercise any power or perform any duty so conferred or imposed on Deputy Chief Inspectors or Inspectors. The Deputy Chief Inspectors and Inspectors shall exercise the powers and perform the duties conferred and imposed on them by or under this Act under the general superintendence and control of the Chief Inspector. The Chief Inspector, Deputy Chief Inspectors and Inspectors may offer such advice as they think fit to owners regarding the proper maintenance and safe working of boilers.

2.2.2.9 Prohibition of use of unregistered or uncertified boiler (Section 6)

No owner of a boiler shall use the boiler or permit it to be used—
(a) Unless it has been registered in accordance with the provisions of this Act;
(b) In the case of any boiler which has been transferred from one State to another, until the transfer has been reported in the prescribed manner;
(c) Unless a certificate or provisional order authorising the use of the boiler is for the time being in force under this Act;
(d) At a pressure higher than the maximum pressure recorded in such certificate or provisional order;
(e) Where the Central Government has made rules requiring that boilers shall be in charge of persons holding certificates of proficiency or competency, unless the boiler is in charge of a person holding the certificate required by such rules.

2.2.2.10 Registration (Section 7)

The owner of any boiler which is not registered under the provisions of this Act may apply to the Inspector along with such other documents as may be prescribed by regulations to have the boiler registered. The Chief Inspector shall, on registering the boiler, order the issue to the owner of a certificate in the prescribed form authorizing the use of the boiler for a period not exceeding twelve months at a pressure not exceeding such maximum pressure as he thinks fit and as is in accordance with the regulations made under this Act.

2.2.2.11 Renewal of certificate (Section 8)

A certificate authorising the use of a boiler shall cease to be in force on the expiry of the period for which it was granted; or when any accident occurs to the boiler.

2.2.2.12 Duty of owner at examination (Section 14)

The owner thereof shall be bound to afford to the Competent Person all reasonable facilities for the examination; to have the boiler properly prepared and ready for examination in the manner prescribed by regulations; and in the case of an application for the registration of a boiler, to provide such drawings, specifications, certificates and other particulars as may be prescribed by regulations. If the owner fails to comply with the provisions the Competent Person shall refuse to make the examination and shall report the case to the Chief Inspector who forbids him to use the boiler.

2.2.2.13 Production of certificates, etc. (Section 15)

The owner of any boiler who holds a certificate or provisional order relating thereto shall, at all reasonable times during the period for which the certificate or order is in force be bound to produce the same when called upon to do so by a District Magistrate, Commissioner of Police or Magistrate of the first class having jurisdiction in the area in which the boiler is for the time being, or by the Chief Inspector or by an Inspector or by any Inspector appointed under the Factories Act, 1948 , or by any person specially authorized in writing by a District Magistrate or Commissioner of Police.

2.2.2.14 Transfer of certificate (Section 16)

If any person becomes the owner of a boiler during the period for which a certificate or provisional order relating thereto is in force the preceding owner shall be bound to make over to him the certificate or provisional order.

2.2.2.15 Powers of entry (Section 17)

An inspector may for the purpose of inspecting or examining a boiler or any steam-pipe attached thereto at all reasonable times enter any place or building within the limits of the area for which he has been appointed in which he has reason to believe that a boiler is in use.

2.2.2.16 Report of accidents (Section 18)

If any accident occurs to a boiler or boiler component, the owner or person in charge thereof shall within twenty-four hours of the accident, report the same in writing to the Inspector. Every such report shall contain a true description of the nature of the accident and of the injury, if any, caused thereby to the boiler or to the boiler component or to any person, and shall be in sufficient detail to enable the Inspector to judge of the gravity of the accident. Every person shall be bound to answer truly to the best of his knowledge and ability every question put to him in writing by the Inspector as to the cause, nature or extent of the accident.

2.2.2.17 Appeals to Chief Inspector (Section 19)

Any person considering himself aggrieved by an order made by an Inspector or a refusal of an Inspector to make any order or to issue any certificate may within thirty days from the date on which such order or refusal is communicated to him, appeal against the order or refusal to the Chief Inspector.

2.2.2.18 Appeals to appellate authority (Section 20)

Any person considering himself aggrieved by an order of the Chief Inspector refusing to register a boiler or to grant or renew a certificate in respect of a boiler; or refusing to grant a certificate having validity for the full period applied for; or refusing to grant a certificate authorising the use of a boiler at the maximum pressure desired; or withdrawing or revoking a certificate or provisional order; or reducing the amount of pressure specified in any certificate or the period for which such certificate has been granted; or ordering any structural alteration, addition or renewal to be made in or to a boiler or steam-pipe, or refusing sanction to the making of any structural alteration, addition or renewal in or to a boiler, may, within

thirty days of the communication to him of such order, prefer an appeal to the Central Government.

2.2.2.19 Minor penalties (Section 22)

Any owner of a boiler who refuses or without reasonable excuse neglects to surrender a provisional order or to produce a certificate or provisional order when duly called upon to do so, or to make over to the new owner of a boiler a certificate or provisional order , shall be punished with fine which may extend to five thousand rupees.

2.2.2.20 Penalties for illegal use of boiler (Section 23)

Any owner of a boiler who, in any case in which a certificate or provisional order is required for the use of the boiler under this Act, uses the boiler either without any such certificate or order being in force or at a higher pressure than that allowed thereby, shall be punishable with fine which may extend to one lakh rupees, and, in the case of a continuing offence, with an additional fine which may extend to one thousand rupees for each day after the first day in regard to which he is convicted of having persisted in the offence.

2.2.2.21 Trial of offences (Section 27)

No offence made punishable by or under this Act shall be tried by a Court inferior to that of a Presidency Magistrate or a Magistrate of the first class.

2.2.2.22CentralBoilers Board (Section 27A)

Board to be called the Central Boilers Board shall be constituted. The Board shall have full power to regulate by means of bye-laws or otherwise its own procedure and the conduct of all business to be transacted by it, the constitution of committees and sub-committees of members and the delegation to them of any of the powers and duties of the Board.

2.2.2.23Power to make regulations (Section 28)

The Board may by notification make regulations consistent with this Act for laying down the standard conditions in respect of material, design, construction, erection, operation and maintenance which shall be required for the purposes of enabling the registration and certification of boilers, boiler components, boiler mountings and fittings; for prescribing the circumstances in which, the extent to which, and the conditions subject to which variation

from the standard conditions laid down may be permitted; for prescribing the method of determining the maximum pressure at which a boiler may be used; for regulating the registration of boilers, prescribing the fees payable and for the inspection and examination of boilers , the drawings, specifications, certificates and particulars to be produced by the owner, the method of preparing a boiler for examination, the form of the Inspector's report ,the method of marking the register number, and the period within which such number is to be marked on the boiler; for regulating the inspection and examination of boilers and boiler components, boiler mountings and fittings, and prescribing forms of certificates; for ensuring the safety of persons working inside a boiler; for prescribing the qualifications and experience subject to which the Inspecting Authorities, Competent Authorities and Competent Persons shall be recognised under this Act; the conditions subject to which and the manner in which manufacturer of boiler components or material may be recognised; facilities for design and construction which are required to be provided in the premises in which the manufacturing of any boiler or boiler component is carried out; fee for the purposes of inspection or grant of recognition or any certificate under this Act; procedure for examination and grant of Welders certificate; powers and functions which the Board may delegate to the Technical Adviser; documents to be enclosed along with the application for registration of boilers or renewal of a certificate authorising the use of boilers; the manner of inspection of boilers; the period for which a certificate authorising the use of a boiler may be renewed; the conditions subject to which and the form in which Competent Person shall renew a certificate authorising the use of boilers; the manner and the form in which a Repairer's certificate shall be issued; the manner in which the boiler shall be prepared for examination; drawings specification, documents and other particulars which owner of a boiler is required to make available to the Competent Person; the manner in which a person may be authorized to conduct energy audit and the manner in which such audit shall be conducted; the manner in which disputes between the States with respect to registration of boilers shall be resolved; and for providing for any other matter which is not a matter of merely local or State importance.

2.2.0 THE CINEMATOGRAPH FILM RULE 1948

2.2.1 OBJECTIVE AND SCOPE

In exercise of the powers conferred by section 4 and section 29(1) of The Petroleum Act, 1934, as applied to the storage and transport of cinematograph films having nitro-cellulose base by notification of the Government of India in the Late Department of Labour, dated 14th

January, 1946 the Central Government had make The Cinematograph Film Rules, 1948. These rules apply to the storage and transport of Nitro-cellulose based cinematograph films. These Rules extend to whole of India except the State of Jammu and Kashmir.

2.2.2 RELEVANT PROVISIONS OF THE RULE:

2.2.2.1 Definitions (Rule 3)

a) "the Act" means the Petroleum Act, 1934;
b) "Chief Inspector" means the Chief Inspector of Explosives in India;
c) "District Authority" means-(i) in a presidency town and the suburbs thereof (if any) which are for the time being situated within the local limits of the jurisdiction of the Commissioner of Police, the Commissioner of Police; (ii) in the cities of Hyderabad and Secunderabad-cum Cantonment area, the Commissioner of City Police, Hyderabad; and (iii) elsewhere, the "District Magistrate";
d) "District Magistrate" includes an Additional District Magistrate;
e) "Inspector" means an officer authorized by the Central Government under sub-section (1) of section 18 of the Act;
f) "Partition" means a wall constructed of non-inflammable materials conforming to one of the specifications given in Schedule I;
g) "Prescribed Container" means a receptacle which-

- is made of metal to hold me or two standard rolls and is of a design approved by the Chief Inspector;
- is kept closed at all times except when standard roll is being placed in or is being withdrawn from it; and
- bears a stamped, embossed, painted or printed warning exhibiting in conspicuous characters the words "Nitrate Motion Picture Film" and also, either, the words "Highly Inflammable" or "The contents are dangerous if exposed to excessive heat or open flame";

h) "Storage shed" means a building used for the storage of film in quantity not exceeding 100 lb;
i) "Transport box" means a box intended for packing prescribed containers of film, constructed according to specification laid down in Schedule II.

2.2.2.2 Prevention of Accidents (Rule 6)

All due precautions shall be taken at all times to prevent accident by fire or explosion.

2.2.2.3 Prohibition of Fires and Smoking (Rule 7)

No fire, light, smoking or other means of ignition capable of igniting film will be allowed in any vehicle carrying film.

2.2.2.4 Receptacles for Film (Rule 8)

Film shall be contained only in a prescribed container.

2.2.2.5 Transport of Film in Vehicles (Rule10)

Film may be transported in a vehicle, provided:-

(i) No other highly inflammable goods are carried in the vehicle;

(ii) No passengers are allowed to be carried in the vehicle;

(iii) The consignment is attended by a responsible person; and

(iv) The film during transit is deposited in a building fulfilling the requirements of conditions endorsed on license form C, D or E, as the case may be according to the quantity of film carried.

2.2.2.6 Prohibition to Transport Film in Vehicles Fitted With Producer Gas Generators (Rule 12)

Film shall not be carried in motor vehicles, fitted with producer-gas generators.

2.2.2.7 Transport by Railway (Rule 13)

a) Film while in custody of the railway administration for dispatch or delivery or while in transit shall not be stored except in a cool and shaded place away from other articles where it is not exposed to direct rays of the sun.

b) Where film is conveyed by rail it shall be subject to all the regulations made by railway administration over whose line it is conveyed.

c) All fires, lights and other means of ignition capable of igniting film shall be kept away from film stored.

2.2.2.8 Transport by Water (Rule 15)

a) Film may be transported by water, provided it is towed on or under deck in a cool and accessible place, away from living quarters and galley fires.

b) Film may be transported coastwise provided it is packed and stowed in accordance with the regulations issued from time to time by the Board of Trade for regulating the carriage of dangerous goods and explosives in ships.

2.2.2.9 Precautions against Fire (Rule 19)

a) No person shall smoke in any premises where film is stored or handled. Conspicuous 'No Smoking' signs shall be posted or hung up at prominent places outside the rooms where film is stored or handled.
b) No person shall carry matches, fuses, or other appliances for producing ignition or explosion in any premises where film is stored or handled.
c) No fire, furnace or other source of heat or light other than approved electric light, shall be allowed in any premises where film is stored or handled.
d) Efficient means of extinguishing fires shall always be maintained in proper working order outside the premises where film is stored or handled.

2.3.0 OILFIELDS (REGULATION AND DEVELOPMENT) ACT, 1948

2.3.1 OBJECTIVE AND SCOPE:

The Act provides for the regulation of oilfields and for the development of mineral oil resources. The Act declares that it is expedient in the public interest to provide for the regulation of oilfields and for the development of mineral oil resources. The legislation is the basic enabling statute for licensing and leasing of petroleum and gas blocks by the appropriate government. The Act covers mineral oils which are defined as including natural gas and petroleum. The Act empowers central government to make rules with regard to mining leases and for the development of mineral oil.

2.3.2 RELEVANT PROVISIONS OF THE ACT:

2.3.2.1 Definitions (Section 2)

i.“Mine" means any excavation for the purpose of searching for or obtaining mineral oils and includes an oil well;

ii. “Mineral oils" include natural gas and petroleum;

iii. " Mining lease" means a lease granted for the purpose of searching for, winning, working, getting, making merchantable, carrying away or disposing of mineral oils or for purposes connected therewith, and includes an exploring or a prospecting license;

i. " Oilfield" means any area where any operation for the purpose of obtaining natural gas and petroleum, crude oil, refined oil, partially refined oil and any of the products of petroleum in a liquid or solid state, is to be or is being carried on.

2.3.2.2No mining lease to be valid unless it is in accordance with this Act (Section 4)

No mining lease shall be granted after the commencement of this Act otherwise than in accordance with the rules made under this Act.

2.3.2.3Power to make rules as respects mineral development (Section 6)

Central Government may make rules for the conservation and development of mineral oils. Such rules may provide for the development of any mineral oil resources in any area by prescribing or regulating the use of any engines machinery or other equipment; the regulation of the drilling, re-drilling, deepening, shutting down, plugging and abandoning of oil-wells in an oil-field and for the limitation or prohibition of such operation and for the taking of remedial measures to prevent waste of or damage to oil; the regulation of the methods of producing oil in any oilfield, and the limitation or prohibition of such methods; the compulsory notification of all new borings and shaft sinking's, and the preservation of boring records and specimens of cores of all new bore- holes; the taking of samples from mines and new bore- holes; the regulation of the arrangements for the storage of mineral oils and the stocks thereof that may be kept by any person; the collection of royalties, and the levy and collection of fees or taxes, in respect of mineral oils mined, quarried, excavated or collected; the submission by the owners or lessees of mines of special or periodical returns and reports and the forms in which and the authorities to whom such returns and reports shall be submitted.

2.3.2.4 Power of inspection (Section 11)

For the purpose of ascertaining the position of the working, actual or prospective, of any mine or abandoned mine or for any other purpose mentioned in this Act or the rules made there-under, any officer authorized by the Central Government in this behalf shall have the right to enter and inspect any mine, order the production of any document, book, register or record in the possession or power of any person having the control of, or connected with, any mine; examine any person having the control of, or connected with, any mine.

2.4.0 THE CINEMATOGRAPH ACT, 1952

2.4.1 OBJECTIVE AND SCOPE:

The Cinematograph Act, 1952 makes provision for the certification of cinematograph films for exhibition and for regulating exhibitions by means of cinematographs. Parts I, II and IV extends to the whole of India and Part III extends to the Union territories only. This Act came into force on 28-7-1952 as notification in the Official Gazette by Central Government

The Act makes provision for the certification of cinematographic films for public exhibition and regulation of exhibition by means of cinematograph.

2.4.2 RELEVANT PROVISIONS OF THE ACT

2.4.2.1 Cinematograph Exhibitions to Be Licensed (Section 10)

No person shall give an exhibition by means of cinematograph elsewhere than in a place licensed under this part of the Act or otherwise than in compliance with any conditions and restrictions imposed by the licenses.

In *Municipal Corporation of Delhi v. Uphaar Tragedy Victims Association and Others* [(2011) 14 SCC 481] while deciding the extent of liability of the theatre owner, the DVB (Delhi Vidyut Board), MCD (Municipal Corporation of Delhi) and the licensing authority responsible for the fire tragedy, the Apex Court noted that *The Cinematograph Act, 1952* provides for regularization of exhibition of cinemas and that in s. 10 the Act provides that a cinema theatre cannot be run without obtaining license from the licensing authority. The Court while dealing with the recommendations of the *Naresh Kumar committee* noted that in regard to performance of statutory functions and duties, the courts will not award damages unless there is malice or conscious abuse. The Court agreed with the report of the committee that there is a lack of safety culture and lack of the will to improve performance. While exonerating the MCD from monetary liability, the Court observed that the parliament enacted the *Disaster Management Act, 2005* and having regard to the object of the Act; the same was brought in force keeping public interest in mind. The following observation of the Court resonates the object of the Act:

"*74. The key to successfully meeting the consequences of disasters is preparedness. There can be no complacency. Human tendency is to be awake and aware in the immediate aftermath of a disaster. But as the days pass, slowly the disaster management equipment and the disaster management personnel are allowed to slip away from their readiness. Only when the next disaster takes place, is there a sudden awakening. In regard to preparedness to meet*

disasters there could be no let up in the vigil. The expenditure required for maintaining a high state of alert and readiness to meet disasters may appear to be high and wasteful regarding "non- disaster periods" but the expenditure and readiness is absolutely must. Be that as it may"

The Apex Court while upholding the suggestions of the High Court added *inter alia* that

- *An endeavour should be made to have a single point nodal agency/licensing authority consisting of experts in structural Engineering/building, fire prevention, electrical systems etc. The existing system of police granting licenses should be abolished.*
- *The Delhi Disaster Management Authority, established by the Government of NCT of Delhi may expeditiously evolve standards to manage the disasters relating to cinema theatres and the guidelines in regard to ex gratia assistance. It should be directed to conduct mock drills in each cinema theatre at least once in a year.*

The Court held that the liability shall be 85% on the part the licensee and 15% on the part of DVB.

2.4.2.2 Licensing Authority (Section 11)

The authority having power to grant licenses shall be the district magistrate.

2. 4.2.3 Restrictions on Powers of Licensing Authority (Section 12)

The licensing authority shall not grant a license under, unless it is satisfied that adequate precautions have been taken in the place, in respect of which the license is to be given, to provide for the safety of persons attending exhibitions therein.

2.4.2.4 Power of Central Government or Local Authority to Suspend Exhibition Of Films In Certain Cases (Section 13)

The Lieutenant- Governor or, as the case may be, the Chief Commissioner, in respect of the whole or any part of a Union territory and the district magistrate in respect of the district within his jurisdiction, any, if he is of opinion that any film which is being publicly exhibited is likely to cause a breach of the peace, by order, suspend the exhibition of the film by an order for a period of two month and during such suspension the film shall be deemed to be an uncertified film in the State, part or district, as the case may be.

2.4.2.5 Penalties for contravention of this Part (section 14)

Part III lays down that If the owner or occupier permits the place to be used in contravention of the provision of this Part or the rules made there under or of the condition and restrictions upon or subject to which any license has been granted under this Part III, he shall be punishable with fine which may extend to one thousand rupees and, in the case of a continuing offence, with a further fine which may extend to one hundred rupees for each day during which the offence continues.

2.4.2.6 Power to Make Rules (Section 16)

The Central Government may, make rules providing for the regulation of cinematograph exhibitions for securing the public safety.

Suggestions[22] of the Supreme Court to Government for consideration and implementation:

(i) Every licensee (cinema theatre) shall be required to draw up an emergency evacuation plan and get it approved by the licensing authority.

(ii) Every cinema theatre shall be required to screen a short documentary during every show showing the exits, emergency escape routes and instructions as to what to do and what not to do in the case of fire or other hazards.

(iii) The staff/ushers in every cinema theatre should be trained in fire drills and evacuation procedures to provide support to the patrons in case of fire or other calamity.

(iv) While the theatres are entitled to regulate the exit through doors other than the entry door, under no circumstances, the entry door (which can act as an emergency exit) in the event of fire or other emergency) should be bolted from outside. At the end of the show, the ushers may request the patrons to use the exit doors by placing a temporary barrier across the entry gate which should be easily movable.

(v) There should be mandatory half yearly inspections of cinema theatres by a senior officer from the Delhi Fire Services, Electrical Inspectorate and the Licensing Authority to verify whether the electrical installations and safety measures are properly functioning and take action wherever necessary.

[22]*Municipal Corporation of Delhi v. Uphaar Tragedy Victims Association and Others* [(2011) 14 SCC 481]

(vi) As the cinema theatres have undergone a change in the last decade with more and more multiplexes coming up, separate rules should be made for Multiplex Cinemas whose requirements and concerns are different from stand-alone cinema theatres.

(vii) An endeavour should be made to have a single point nodal agency/licensing authority consisting of experts in structural Engineering/building, fire prevention, electrical systems etc. The existing system of police granting licenses should be abolished.

(viii) Each cinema theatre, whether it is a multiplex or stand-alone theatre should be given a fire safety rating by the Fire Services which can be in green (fully compliant), yellow (satisfactorily compliant), red (poor compliance). The rating should be prominently displayed in each theatre so that there is awareness among the patrons and the building owners.

(ix) The Delhi Disaster Management Authority, established by the Government of NCT of Delhi may expeditiously evolve standards to manage the disasters relating to cinema theatres and the guidelines in regard to ex gratia assistance. It should be directed to conduct mock drills in each cinema theatre at least once in a year.

2.5.0 THE INFLAMMABLE SUBSTANCES ACT, 1952

2.5.1 OBJECTIVE AND SCOPE

By virtue of Section 30(1) of the Petroleum Act, 1934, the Central Government may apply, by notification, any or all the provisions of the act to any dangerously inflammable substance other than explosive and thus regulate the import, transport, storage and production of that substance. The Act was enacted to declare certain substances to be dangerously inflammable. To provide of the regulation of their import, transport, storage and production by applying the Petroleum Act, 1934, and the rules there under.

2.5.2 RELEVANT PROVISION OF THE ACT

2.5.2.1 Declaration of Certain Substance to be dangerously inflammable. (Section 3)

The liquids and other substances mentioned, namely:-

- Acetone,
- Calcium phosphide, Carbide of calcium
- Cinematograph films having a nitro-cellulose base,
- Ethyl acohol,
- Methyl alcohol,
- Wood naphtha, are declared to be dangerously inflammable.

2.5.2.2 Power to Apply Petroleum Act to dangerously inflammable Substance (Section 4)

The Central Government may, by notification in the official Gazette, apply any or all provisions of the Petroleum Act 1934 and Rules to any dangerously inflammable substance.

2.6.0 THE MINES ACT, 1952

2.6.1 OBJECTIVE AND SCOPE:

The Mines Act, 1952 contains provisions for measures relating to the health, safety and welfare of workers in the coal, metalliferous and oil mines. The Act prescribes the duties of the owner to manage mines and mining operation and the health and safety in mines. It also prescribes the number of working hours in mines, the minimum wage rates, and other related matters. The Act is administered by the Ministry of Labour and Employment through the Directorate General of Mines Safety (DGMS). DGMS is the Indian Government regulatory agency for safety in mines and oil-fields. It conducts inspections and inquiries, issues competency tests for the purpose of appointment to various posts in the mines, organises seminars/conferences on various aspects of safety of workers. The mission of DGMS is to reduce the risk of occupational diseases and injury to persons employed in mines and to continually improve safety and health standards, practices and performance in the mining industry. The Central Government has set up 'Courts of Inquiry' in order to investigate into the accidents which result in the death of 10 or more miners.

2.6.2 RELEVANT PROVISIONS OF THE ACT:

2.6.2.1 Definition

i. "adult" means a person who has completed his eighteenth year;

ii. "agent", when used in relation to a mine, means every person, whether appointed as such or not, who, acting or purporting to act on behalf of the owner, takes part in the management, control, supervision or direction of the mine or of any part thereof ;

iii. "Chief Inspector" means the Chief Inspector of Mines appointed under this Act

iv. "District magistrate" means, in a presidency-town, the person appointed by the Central Government to perform the duties of a district magistrate under this Act in that town.

v. a person is said to be **"employed"** in a mine who works as the manager or who works under appointment by the owner, agent or manager of the mine or with the knowledge of the manager, in any mining operation; in operating, servicing, maintaining or repairing any part of any machinery used in or about the mine; in operations, within the premises of the mine, of loading for despatch of minerals; in any office of the mine; in any welfare, health, sanitary or conservancy services required to be provided or in any kind of work whatsoever which is connected with mining operations.

vi. "Inspector" means an Inspector of Mines appointed under this Act, and includes a district magistrate when exercising any power or performing any duty of an Inspector which he is empowered by this Act to exercise or perform.

vii. "Mine" means any excavation where any operation for the purpose of searching for or obtaining minerals has been or is being carried on.

viii. "Minerals" means all substances which can be obtained from the earth by mining, digging, drilling, dredging, hydraulicing quarrying or by any other operation and includes mineral oils.

ix. "Reportable injury" means any injury other than a serious bodily injury which involves or in all probability will involves the enforced absence of the injured person from work for a period of seventy-two hours or more.

x. "Serious bodily injury" means any injury which involves the permanent loss of any part or section- of. a body or the use of any part or section of a body, or the permanent loss of or injury to the sight or hearing or any permanent physical incapacity or the fracture of any bone or one or more joints or bones of any phalanges of hand or foot;

2.6.2.2 Chief Inspector and Inspectors (Section5)

The Central Government may appoint a person to be Chief Inspector of Mines for all the territories to which this Act extends. The district magistrate may exercise the powers and perform the duties of an Inspector subject to the general or special orders of the Central Government.

2.6.2.3 Functions of Inspectors (Section 6)

Chief Inspector may authorize any Inspector named or any class or Inspectors specified to exercise such of the powers of the Chief Inspector under this Act as he may specify. The

Chief Inspector may prohibit or restrict the exercise by any Inspector named or any class of Inspector specified in the order of any power conferred on Inspectors under this Act. The Chief Inspector shall declare the local area or areas within which or the group or class of mines with respect to which Inspectors shall exercise their respective powers.

2.6.2.4 Powers of Inspectors of Mines (Section7)

The Chief Inspector and any Inspector may --

(a) Make examination and inquiry to ascertain whether the provisions of this Act are observed in the case of any mine;

(b) Enter, inspect and examine any mine or any part thereof at any time by day or night;

(c) Examine into, and make inquiry respecting, the state and condition of any mine and all matters connected with health, safety and welfare of the persons employed in the mine.

2.6.2.5 Facilities to be provided for occupational health survey (Section9A)

Chief Inspector may undertake safety and occupational health survey in a mine after giving notice in writing to the manager of the mine and the owner, agent or manager of the mine shall afford all necessary facilities for the collection of samples and other data pertaining to the survey.

2.6.2.6 Committees and Functions of the Committee (Section 12, 13)

Central Government shall constitute for the purposes of this Act, a Committee consisting of a person in the service of the Government to act as Chairman; the Chief Inspector of Mines; two persons to represent the interests of miners appointed by the Central Government; two persons to represent the interest of owners of mines appointed by the Central Government; two qualified mining engineers not directly employed in the mining industry appointed by the Central Government.

Committee constituted under section 12 shall consider proposals for making rules and regulations under this Act and make appropriate recommendations to the Central Government; enquire into accidents or other matters as may be referred to it by the Central Government.

2.6.2.7 Duties and Responsibilities of owners, agents and managers (Section18)

The owner and agent of every mine shall each be responsible for making financial and other provisions and for taking other steps as may be necessary for compliance with the provisions of this Act and the regulations.

2.6.2.8 Powers of Inspectors when causes of danger not expressly provided against exist or when employment of persons is dangerous (Section 22)

If it appears to the Chief Inspector or an Inspector that in any mine management or direction is dangerous to human life or safety or defective so as to threaten the bodily injury of any person, he may give notice in writing thereof to the owner, agent or manager of the mine. Where the owner, agent or manager of a mine fails to comply with the terms of a notice given the Chief Inspector or the Inspector may prohibit the employment in the mine of any person whose employment is not in his opinion reasonably necessary for securing compliance with the terms of the notice.

2.6.2.9 Power to prohibit employment in certain cases (Section 22A)

Where in respect of any matter relating to safety for which express provision is made and the owner, agent or manager of a mine fails to comply with such provisions, the Chief Inspector may give notice in writing requiring the same to be complied with within such time as he may specify in the notice. Where the owner, agent or manager fails to comply with the terms of a notice given the Chief Inspector may prohibit the employment in the mine of any person whose employment is not, in his opinion, reasonably necessary for securing compliance with the terms of the notice.

2.6.2.10 Notice to be given of accidents (Section 23)

Whenever there occurs in or about a mine an accident causing loss of life or serious bodily injury, or an explosion, ignition, spontaneous heating, outbreak of fire or irruption or in rush of water or other liquid matter, or an influx of inflammable or noxious gases, or a breakage of ropes, chains or other gear by which persons or materials are lowered or raised in a shaft or an incline, or an over winding of cages or other means of conveyance in any shaft while persons or materials are being lowered or raised, or a premature collapse of any part of the workings, or any other accident which may be prescribed, the owner, agent or manager of the mine shall give notice of the occurrence to such authority in such form and within such time as may be prescribed.

2.6.2.11Power of Government to appoint court of inquiry in cases of accidents (Section 24)

When any accident of nature referred to section 23 occurs in or about a mine, the Central Government may, if it is of opinion that a formal inquiry into the causes of and circumstances attending the accident ought to be held, appoint a competent person to hold such inquiry. The person holding an inquiry under this section shall made a report to the Central Government stating the causes of the accident and its circumstances, and adding any observations which he or any of the assessors may think fit to make.

2.6.2.12Notice of certain diseases (Section 25)

Where any person employed in mine contracts any disease notified by the Central Government in the Official Gazette as a disease connected with mining operations, the owner, agent or manager of the mine shall send notice thereof to the Chief Inspector.

2.6.2.13 Power to direct investigation of causes of disease (Section 26)

Central Government may if it considers it expedient to do so, appoint a competent person to inquire into and report to it on any case where a disease notified under sub-section (1) of section 25 has been or is suspected to have been contracted in a mine.

2.6.2.14 Prohibition of the presence of persons below eighteen years of age in a mine (Section 45)

No person below eighteen years of age shall be allowed to be present in any part of a mine above ground where any operation connected with or incidental to any mining operation is being carried on.

2.6.2.15 Notice of accidents (Section70)

Whoever in contravention of the provision of sub-section (1) of section 23 fails to give notice of any accidental occurrence or to post a copy of the notice on the special notice board referred to in that sub-section and to keep it there for the period specified shall be punishable with imprisonment for a term which may extend to three months, or with fine which may extend to five hundred rupees, or with both. Whoever in contravention of a direction made by the Central Government under sub-section (3) of section 23 fails to record in the prescribed register or to give notice of any accidental occurrence shall be punishable with imprisonment

for a term which may extend to three months, or with fine which may extend to five hundred rupees, or with both.

2.7.0 INDIA ELECTRICITY RULES, 1956

2.7.1 OBJECTIVE AND SCOPE:

In exercise of powers, conferred by Section 37 of the Indian Electricity Act 1910, Electricity Rules were made by Central Electricity Board. . These Rules have been saved in the Electricity Act 2003 as given in Section 185 of the Act. It shall continue to be enforced till regulation/rules under Section 53 of the Electricity Act 2003 are made. There are 143 rules in eleven chapters. In Electricity Rules necessary efforts are made to follow basic principles of safety and installation. These are- design and manufacture of basic components, planning and design of tailor made systems, installation, operation and maintenance of electricity.

2.7.2RELEVANT PROVISIONS OF THE RULE:

2.7.2.1General Safety Precaution (Chapter IV)

2.7.2.1.1 Construction, installation, protection, operation and maintenance of electric supply lines and apparatus (Rule: 29)

a) All electric supply lines and apparatus shall be of sufficient rating insulation and estimated fault current level and of sufficient mechanical strength, for the duty which may be required to perform under the environmental conditions of installation and shall be constructed, installed, protected, worked and maintained in such a manner that it ensure the safety of human beings, animals and property.

b) Relevant code of practice of the Bureau of Indian Standards including National Electrical Code may be followed to carry out the purpose of this rule. In event of any inconsistency, the provisions of the rules may prevail.

c) The material and apparatus used shall conform to the relevant specifications of the Bureau of Indian Standards where such specifications have already been laid down.

2.7.2.1.2 Proper distinction between live, neutral and earth conductors (Rule: 32)

An indication of a permanent nature shall be provided by the owner of the earthed or earthed neutral conductor or the conductor which is to be connected thereto, to enable such conductor to be distinguished from any live conductor.

2.7.2.1.3 Earthed terminal on Consumer's premises (Rule: 33)

Earth pits should be constructed and maintained strictly as per IS 732. The earth resistance of earth electrodes shall not exceed 5 ohms.

2.7.2.1.4 Caution / Danger Notices (Rule: 35)

Owner of every MV, HV, EHV and LV installation shall affix permanently in conspicuous position a caution (Danger) notice in Hindi or English and in local language of the district with sign of skull bones of design as per BIS Specification: 2551.

2.7.2.1.5 Handling of Electric Supply lines Apparatus (Rule: 36)

a) Before any conductor or apparatus is handled adequate precautions shall be taken, by earthing or other suitable means to discharge electrically such conductor or apparatus if there is danger there from, and to prevent any conductor or apparatus from being accidentally or inadvertently electrically charged when persons are working thereon.

b) Every person who is working on an electric supply line or apparatus or both shall be provided with tools and devices, such as gloves, rubber shoes, safety belts, ladders, earthing devices, helmets line testers and like for protecting him from mechanically and electrical injury. Such tools and devices shall always be maintained in sound and efficient working conditions.

c) No person shall work on any live electric supply line or apparatus and no person shall assist such person on such work, unless he is authorized on that behalf, and takes the safety measures approved by the inspector.

2.7.2.1.6 Provision applicable to Protective Equipment (Rule: 43)

a) Fire buckets filled with clean dry sand ready for immediate use for extinguishing fires, in addition to fire extinguishers suitable for dealing with electric fires, shall be conspicuously marked and kept in all generating stations, enclosed sub-stations in convenient situation. The fire extinguishers shall be tested

for satisfactory operation at least once a year and record of such tests shall be maintained.

b) First aid boxes or cupboards, conspicuously marked and equipped with such contents as the state government may specify, shall be provided and maintained in every generating station , enclosed sub-station, so as to be readily accessible during all working hours.

c) All such boxes and cupboards shall, except in the case of unattended b-stations, be kept in charge of responsible persons who are trained in first aid treatment and one of such persons shall be available during working hours.

2.7.2.1.7 Instruction for restoration of persons suffering from electric shock (Rule: 44)

a) Instruction in English or Hindi and the local language of district, for the restoration of persons suffering from electric shock shall be affixed by the owner in a conspicuously place in every enclosed sub-stations and switch stations in which electricity is used.

b) Shock treatment charts to be displayed and all authorized persons are acquainted with shock treatment procedures.

2.7.2.1.8 Intimation of Accident (Rule: 44 A)

a) This rule makes provision for submission of intimation of accident to Electrical Inspector with least possible delay.

b) If any accident occurs in connection with the generation, transmission, supply or use of energy in or in connection with, any part of the electric supply lines or other works, of any person and the accident results in or is likely to have resulted in loss of human or animal life or in any injury to a human being or any animal, such person of the state electricity board/supplier, not below the rank of a junior engineer or equivalent shall send to the inspector a report within 24 hours of the knowledge of the occurrence of accident and a written report in the form set out in Annexure X111 within 48 hours of the knowledge of occurrence of fatal and all other accidents.

2.7.2.1.9 Periodic Inspection (Rule: 46)

Where an installation is already connected to the supply system of the supplier, every such installation shall be periodically inspected and tested at intervals not exceeding 5 years either by the inspector or the supplier. Also, periodical inspection of HV and EHV installations of supplier has been included.

2.7.2.2 General Conditions Relating To Supply and Use of Energy

2.7.2.2.1 Rule 48

As per this rule, electrical installation works of a consumer should be carried out by a licensed contractor.

2.7.2.2.2Rule 49

As per, this rule the insulation resistance should be above prescribed limit.

2.7.2.2.3 Declared voltage of supply to consumer (Rule 54)

The supplier shall not permit the voltage, at the point of Commencement of supply, to vary from the declared voltage:

a) In case of low or medium voltage by more than 6%
b) In case of high voltage, by more than 6% on the higher side and by more than 9% on lower side.
c) In case of extra high voltage, by more than 10% on the higher side and by more than 12.5% on lower side.

2.7.2.2.4 Declared frequency of supply to consumer (Rule 55)

A supplier shall not permit the frequency of an A.C. supply to vary from the declared frequency by more than 3%

2.7.2.2.5Factor of safety for various supports (Rule 76)

a) Metal supports……1.5
b) Mechanically processed concrete support…….…….2.0
c) Hand model concrete support……...2.5
d) Wood support…….……..…..3.0

- Minimum clearance above ground of the lowest conductor shall be as under:

Across a street:

a) For low and medium voltage lines……... 5.8 meters
b) For high voltage lines……..…6.1 meters

Along a street:

a) For low and medium voltage lines…….…….5.5 meters

b) For high voltage lines……5.8 meters

Elsewhere

a) For low, medium and high voltage up to 11 KV……..……..…4.6 meters
b) For low, medium and high voltage up to 11 KV insulated…….4 meters
c) For high voltage lines above 11 KV…….5.2 meters

Extra high voltage lines- 5.2 meters+ 0.3 meters for every 30 KV

2.7.2.2.6 Minimum clearance from buildings of low and medium voltage lines and service lines. (Rule 79)

a) Vertical clearance……2.5 meters
b) Horizontal clearance….1.2 meters

Any conductor less than the above clearance shall be adequately insulated and shall be attached at suitable intervals to bear earthed bearer wire having a breaking strength of not less than 350 kg

2.7.2.2.7 Clearance from building of High and extra high voltage lines (Rule 80)

Vertical clearance:

i. High voltage including 33 KV…3.7 meters
ii. Extra high voltage 3.7 meters+ 0.3 meters for every 33 KV or part thereof.

Horizontal clearance:

i. High voltage up to…11 KV1.2 meters
ii. Voltage above 11 KV……...2.0 meters
iii. Extra high voltage 2.0 meters+ 0.3 meters for every 33 KV or part thereof.

2.7.3.2.8: Earthing (Rule 90)

All metal supports and metallic fitting shall be permanently and efficiently earthed. Each stay wire shall be efficiently earthed or an insulator provided in it at height not less than 3.0 meter from the ground.

2.8.0 THE COAL MINES REGULATIONS, 1957

2.8.1 OBJECTIVE AND SCOPE

The regulations have been made by the Central Government **i**n exercise of the powers conferred by Regulation 57 of the Mines Act, 1952 and in supersession of the Indian Coal Mines Regulations, 1926.

2.8.2RELEVANT PROVISIONS OF THE RULES

2.8.2.1 Definitions (Regulation 2)

i. “District Magistrate” in relation to any mine, means the District Magistrate or the Deputy Commissioner, as the case may be, who is vested with the executive powers of maintaining law and order in the revenue district in which the mine situated:

ii. “Explosive” shall have the same meaning as is assigned to that term in the Indian Explosives Act, 1884;

iii. “Permitted explosive” means an explosive manufactured by such firm and of such type as the Chief Inspector may from time to time specify.

2.8.2.2 Notice of abandonment or discontinuance (Regulation 6)

When it is intended to abandon a mine or seam or to discontinue working thereof for a period exceeding 60 days, the owner, agent or manager shall give to the Chief Inspector and the Regional Inspector a notice stating the reasons for the proposed abandonment or discontinuance and the number of persons likely to be affected thereby.

2.8.2.3 Notice of re-opening (Regulation 7)

When it is intended to re-open a mine or seam after abandonment or after discontinuance for a period exceeding 60 days, the owner, agent or manager shall give to the Chief Inspector, the Regional Inspector and the District Magistrate notice.

2.8.2.4 Change in ownership and addresses, etc (Regulation 8)

When a change occurs in the name of ownership of a mine or in the address of the owner, the owner, agent or manager shall give to the Chief Inspector and the Regional Inspector a notice.

2.8.2.5 Notice of Accident (Regulation 9)

When there occurs in or about a mine an accident causing loss of life or serious bodily injury in connection with mining operations; an explosion or ignition; a spontaneous heating or

outbreak of fire, or appearance of smoke or other indication of heating or outbreak of fire; an influx of noxious gases; an occurrence of inflammable gas in a mine to which Regulation 144 does not apply; an eruption of water; an instantaneous failure of a pillar, part of a pillar or several pillars of coal (i.e., a 'bump') in workings below ground; a premature collapse of any part of the workings; any accident due to explosives; a breakage or fracture of rope, chain, headgear, pulley or axle or bearing thereof, or other gear by which persons are lowered or raised; an over winding of cages or other means of conveyance while men are being lowered or raised; a breakage or fracture of any essential part of winding engine, crankshaft, coupling, bearing, gearing, clutch, drum or drum shaft, or failure of emergency brake; a bursting of any equipment containing steam, compressed air or other substance at high pressure; or a breakage, fracture or failure of any essential part of any machine or apparatus whereby the safety of persons may be endangered; the owner, agent or manager shall forthwith inform the Regional Inspector about the occurrence. The owner, agent or manager shall simultaneously exhibit a copy of the notice on a special notice board outside the office of the mine and shall ensure that the notice is kept on the board in a legible condition for not less than 14 days from the date of such exhibition. When an accident causing loss of life or serious bodily injury occurs in or about a mine in connection with the generation, storage, transformation, transmission, supply or use of electrical energy, the owner, agent or manager shall also forthwith inform the Electrical Inspector of Mines by telephone, express telegram or special messenger. If death results from any injury the owner, agent or manager shall give notice thereof to the District Magistrate, the Chief Inspector, the Regional Inspector and the Coal Mines Labour Welfare Commissioner.

2.8.2.5 Notice of disease (Regulation 10)

Where any person employed in a mine contract any disease notified by the Central Government the owner, agent or manager shall give notice to the District Magistrate, the Coal Mines Labour Welfare Commissioner, the Chief Inspector, the Regional Inspector and Inspector of Mines (Medical).

2.8.2.6 Duties of persons employed in mines (Regulation 38)

Every person shall strictly adhere to the provisions of the Act and of the regulations and orders made there under, and to any order or direction issued by the manager or an official with a view to the safety or convenience of persons not being inconsistent with the Act and these regulations; nor shall be neglect or refuse to obey such order or directions. No persons shall interfere with, impede or obstruct any person in the discharge of his duties, nor shall he offer or render any service, or use any threat, to any other person with a view to preventing him from complying with the provisions of the Act and of the regulations, and orders made there under or from performing his duties faithfully. If any Person, who receives any such offer or threat, fails to inform the manager forthwith, he shall also be guilty of a breach of these regulations. Every person shall, immediately before proceeding to work and immediately after terminating work at the end of his shift, have his name recorded in the register maintained under Regulation 48(4) of the Act. No person shall, except with the authority of an official, remove or pass through any fence, barrier or gate, or remove or pass any danger signal. No person shall, while on duty, throw any stone or other missile with intent to cause injury, or fight or behave in a violent manner. Every person receiving any injury in the course of his duty shall, as soon as possible report the same to an official who shall arrange for the necessary first-aid to the injured person. No person shall sleep whilst on duty. No person shall test for inflammable gas with a naked lamp, or brush or waft out inflammable gas. Every person using a safety lamp shall take proper care of it and shall not place it within 0.60 metre of the swing of any tool except in the case of a lamp which is actually worn, attached to the body of such person. In the case of a flame safety lamp he shall not place it on the floor unless it is necessary to do so for the safe performance of any particular work; and is the lamp becomes damaged, he shall at once carefully lower the flame until it is extinguished, and shall, at the first opportunity, report the damage to his superior official.

2.8.2.7 Duties of competent persons (Regulation 39)

Every competent person shall be subject to orders of superior officials, and shall not depute another person to perform his work without the sanction of his superior official; absent himself without having previously obtained permission from such official for the term of his absence or without having been relieved by a duty competent person; and without permission from such official, perform during his shift any duties other than those for which he has been appointed.

2.8.2.8 Duties of officials (Regulation 40)

Every official shall carry out the duties assigned to him by the manager, under-manager or assistant manager in accordance with the provisions of the Act and of the regulations and orders made there under. Every official shall, to the best of his power, see that persons under his charge understand and carry out their respective duties properly.

2.8.2.8 Duties and responsibilities of managers (Regulation 41)

In every mine daily personal supervision shall be exercised by the manager; and in case of workings belowground, he shall visit and examine the workings belowground on at least four days in every week to see that safety in every respect is ensured. Of these inspections one at least in every fortnight shall be made during the night shift. The manager, the under-manager and the assistant manager, if any, shall each maintain, in a bound paged book kept for the purpose, a diary; and shall record therein the result of each of his inspections and also the action taken by him to rectify the defects noticed, if any. The manager shall make arrangements for all over men and other officials to meet him or an under-manager, or assistant manager once in every working day for the purpose of conferring on matters connected with their duties. The manager shall examine all reports, registers and other records required to be made or kept in pursuance of the Act and shall countersign the same and date his signature.

2.8.2.9 Duties of Safety Officers (Regulation 41)

The duties of the Safety Officer shall be to visit surface and underground parts of the mine with a view to meeting the workers on the spot to talk to them on matters of safety, inviting suggestions thereon; to take charge of the newly recruited staff and show them around the mine pointing out the safe and unsafe acts during the course of their work in the mine; to investigate all types of accidents and incidents in the mine including minor accidents; to analyze the same with a view to pinpointing the nature and common cause of accidents in the mine; to maintain detailed statistics about mine accidents and to analyze the same with a view to pinpointing the nature and common causes of the accidents in the mine; to study and apprise the manager of all possible sources of danger such as inundation, fire, coal dust and others; to hold safety classes and give safety talks and lectures to the members of the supervisory staff; to organize safety weeks and other safety education and propaganda in

mine; to see that all concerned mine employees are fully conversant with various standing orders (such as those relating to stoppage of mine mechanical ventilators and to the occurrence of a fire or other emergency in the mine) and Systematic Timbering Rules; to provide assistance in the formulation of programme for training at the mine level; including vocational training, training in gas-testing, and training in First Aid; to report to the manger as a result of his visits to the various parts of the mine, as to whether the provisions of the Mines Act, Regulations and Rules made there under are being complied with in the mine; to promote safety practices generally and to lend active support to all measures intended for furthering the cause of safety in the mine; and to assist the manager in any other matter relating to safety in the mine.

2.8.2.10 Duties and responsibilities of under manager or assistant mangers (Regulation 42)

The under manager or assistant manager shall carry out the duties assigned to him by the manager, and shall see that in the part of the mine assigned to him by the manager, all work is carried out in accordance with the provisions of the act and of the regulations and orders made there under. The under manager or assistant manager shall, subject to the orders of the manager, visit and examine the workings under his charge, or part thereof, on every working day. The under manager or assistant manager shall, from time to time, carefully examine every travelable part of the mine or part thereof placed under his charge, whether frequented by work persons or not. In the absence of the manager, the under manager or assistant manager shall have the same responsibility, discharge the same duties and be subject to the same liabilities as the manager, but not so as to exempt the manager there from.

2.8.2.11 Duties of Ventilation Officer (Regulation 42A)

The Ventilation Officer shall ensure the observances of all regulations and orders concerning ventilation, gas and coal dust including dust suppression and shall advise the manager if any alteration is required in the ventilation system to ensure adequacy of ventilation in compliance with the regulations or orders; advise the manager on day to day problems of ventilation, gas and coal dust; maintain close liaison with the under managers and other supervisory staff, and assist them in their day-to-day ventilation problems; carry out ventilation surveys of the mine and undertake any other special work relating thereto as may be directed by the manager from time to time; take such steps as are necessary to ensure compliance with the ventilation standards required in terms of these regulations or otherwise;

examine at frequent intervals all ventilation appliances like doors, brattices, air crossings, regulators, stopping's, booster and auxiliary fans, ventilation ducting's and other devices of ventilation control in the mine and report any defect in the same to the manager. He shall take necessary steps to stop any leakage through such devices and see that the ventilation appliances are maintained in good order; see that sufficient quantity of good air is coursed into all working places and reaches all other workings belowground.

2.8.2.12 Duties and responsibilities of over man (Regulation 43)

The over man shall have responsible charge and control of such part of the mine, and shall carry out such duties, as may be assigned to him by the manager. He shall, while on duty, carry a tracing of the workings of such district and shall keep the tracing up-to-date. He shall, in his district, make the inspections and reports required by these regulations. He shall be responsible to see that the subordinate officials and competent persons in his district carry out their respective duties in a proper manner. He shall, to the best of his power, enforce in his district the provisions of the Act, of these regulations and orders made there under. He shall see that every air-crossing, stopping, door, brattice and other ventilation device is maintained in good order.

2.8.2.13 Duties and responsibilities of Sirdars (Regulation 44)

The Sirdar or other competent person appointed shall have responsible charge and control of the district of the mine assigned to him by the manager or the under-manager or assistant manager. He shall take reasonable means to ensure the proper observance of the requirements of the Act by persons under his charge and shall report any contravention thereof to his superior official. He shall make such inspection and reports as are required by these regulations. He shall ensure that no inexperienced person is employed on any work except under the supervision of an experienced person. He shall see that the roof and sides of all travelling roadways to, and working places in, his district are made and kept secure. He shall report to his superior official any deficiency in timber, appliances and other necessaries required for the safe working of the district.

2.8.2.13 Duties and responsibilities of shot firers (Regulation 45)

The shot firers shall carry out his duties in accordance with the provisions of the regulations and shall not hand over any explosives to any unauthorized person; see that clay, sand or

other suitable stemming material is available in sufficient quantities at convenient places; be present when shots are being charged and stemmed; and shall himself fire the shots; and be responsible, when a shot has misfired, for seeing that the place is adequately fenced.

2.8.2.14 Details of timber man (Regulation 46)

The timber man shall carry out the orders of the manager, under manager or assistant manager, over man, sirdar or other competent person with respect to the securing of roof and sides. He shall at once report to the sirdar or other competent person any shortage of timber in his district. He shall also be responsible to see that woodcuttings are not left in any working belowground.

2.8.2.15 Duties of attendants of main mechanical ventilators (Regulation 47)

The person in charge of the main mechanical ventilator shall keep the ventilator running at the speed fixed by the manager; examine the machinery and observe the pressure-recorded or water gauge and the speed-indicator at intervals of not more than one hour, and shall, enter the readings of the indicator in a bound-paged book kept for the purpose at the fan-house; immediately report to his superior official any stoppage of, damage to, or defect or arrangement in the machinery, or any unusual variation in the water-gauge or other indicators; shall also immediately report to him any unusual circumstances in regard to mine ventilation which may come to his notice; and where the ventilator is continuously operated, shall not leave his post until received by a duly appointed substitute.

2.8.2.16 Duties of lamp-room in charges (Regulation 48)

The competent person in charge of a safety lamp-room shall be responsible for ensuring that all lamps in the safety lamp-room are properly maintained in accordance with the provisions of the regulations; shall see that the safety lamp-room is kept in a neat and tidy condition, and that all damaged and defective gauges, glasses and other parts of safety lamps are not kept or stored in such room; shall see that fire extinguishers or other means of dealing with fires provided in the safety lamps room are in good condition and readily available for use; shall see that all records required by the regulations for the issue, return and maintenance of safety lamps are properly maintained; and shall carry out such other duties relating to the maintenance, issue and return of safety lamps as may be specified by the manager or the under manager or assistant manager.

2.8.2.17 Duties and responsibilities of surveyors (Regulation 49)

The surveyor shall make such accurate surveys and leveling, and prepare such plans and Regulations and tracings thereof, as the manager may direct or as may be required by the Act .

2.8.2.17Duties and responsibilities of engineers (Regulation 50)

The engineer or other competent person appointed shall hold general charge of all machinery at the mine; and shall be responsible for the proper installation, maintenance and safe working of such machinery; shall, when any machinery is shifted or newly installed, see that it is given a trial run before it is put into use and shall be present during every such trial run; shall be present throughout whenever any work is installing, changing or recapping of any winding rope, or of installing changing or annealing any suspension gear, is being carried on; shall see that the provisions of the Act are properly carried out by.

2.8.2.18 Duties of winding enginemen (Regulation 51)

At the beginning of his shift the winding engineman shall examine the engine, brakes and all appliances in his charge, and shall satisfy him that they are in good working order. Every winding engineman shall during his shift keep the winding engine and apparatus connected therewith properly cleaned and oiled, and shall see that the engine room is clean and free of inflammable material.

The winding engineman shall not allow any unauthorized person to enter the engine room or in any way to interfere with the engine.

.

2.8.2.19 Duties of banks men and on setters (Regulation 52)

Every banks man or on setter shall have full control of the top or bottom of shaft and the inset, as the case may be and shall report to such official any person who, without authority, gives a signal or disobeys instructions.

2.8.2.20 Duties of haulage attendants, etc. (Regulation 53)

At the beginning of his shift, the haulage engineman shall examine the engine, its brake and all appliances in his charge, and shall satisfy him that they are in good working order.

2.8.2.21 Duties of Locomotive drivers (Regulation 54)

The locomotive driver shall, before commencing work in his shifts, ensure that the audible signal and the brakes of the locomotive are in proper working order. The locomotive driver shall not work the on locomotive except during hours of daylight, unless the locomotive is fitted with sufficient headlights as prescribed.

2.8.2.22 Surface precautions against fire (Regulation 117)

All surface structures and supports within a horizontal distance of 10 metres from all entrances to a mine shall be of incombustible material. Shale or other carbonaceous material shall not be heaped or dumped, and dead leaves or dry vegetation shall not be allowed to accumulate or remain, and combustible materials other than materials required for use within a period of 24 hours, and inflammable materials, shall not be stored within a distance of 15 metres from any entrance to a mine, which is not effectively sealed off from the workings belowground. No person shall deposit any heated material or ashes on any outcrop of coal or in any opencast working or any ground broken by extraction of coal. No person shall light a fire or permit a fire to be lighted in any opencast working within a distance of 15 metres from any entrance to a mine, except by the permission in writing of the manager and only for a special purpose specified in such order. A competent person shall, once at least in every seven days, inspect the top of all entrances to a mine, all opencast workings and any ground broken by extraction of coal in order to ascertain whether the precaution laid down in this regulation have been complied with, and for the presence of any fire that may have broken out or any indications thereof.

2.8.2.22 Underground precautions against fire (Regulation 118)

No timber or other combustible material shall be used in the construction of, or in connection with, any shaft lining or any room housing any machinery or apparatus belowground. Wood cuttings shall not be left in any working belowground, but shall be removed to the surface at the end of every shift. No person shall light a fire or permit a fire to be lighted in any workings belowground. No person shall leave a portable light or lamp belowground unless he has placed it in charge of some other person remaining therein. At the end of a shift, unless the mine is worked by a continuous succession of shifts, after all persons have left the mine, all lights shall be extinguished and all power cut off. Proper provisions shall be made to prevent an outbreak of the fire belowground or the spread of fire from any part of the same mine or from any adjoining mine, and adequate steps shall be taken to control or isolate any

such fire or heating that may occur. All unused workings connected to the surface though a walkable entrance which is not permanently closed, shall once at least in every 30 days be inspected by a competent person for signs of illicit distillation of liquor.

2.8.2.22 Further precautions against spontaneous heating (Regulation 118A)

The seam or Regulation shall be worked in panels having independent ventilation in such a manner that it is possible to isolate one from another easily if necessary. No coal, shale or other carbonaceous material shall be left or stacked belowground. Where removal of fallen coal out of the mine is not practicable, the area shall be effectively sealed off. No extraction of pillars in any seam or Regulation shall be commenced until fire dams or stopping's have been provided in all entrance to the panel, except that in the fire dams or stopping's built in entrances which are to be kept open for ventilation or haulage suitable doors or openings may be left and bricks and other suitable materials shall be kept readily available their vicinity. Every depillaring district shall be inspected on every idle day, and all unused workings which have not been sealed off shall be inspected once at least in every seven days, by a competent person for any fire risks.

2.8.2.23 Equipment for free-fighting (Regulation 120)

In every mine unless expressly exempted in writing by the Regional Inspector, effective means of delivering to all working places belowground and all other places of fire risk such as coal stocks, spoil heaps containing carbonaceous material and exposed coal surfaces liable to heating an adequate quantity of water at sufficient pressure for the purpose of efficient fire fighting shall be provided and kept maintained; fire stations with a suitable supply of fire-fighting equipment shall be established and kept maintained at convenient points, both on surface and belowground; and sufficient supply of sand or in combustible, dust or suitable portable fire extinguishers shall be provided; an up to-date fire-fighting plan showing the water mains, taps, fire-stations, pumping stations, ventilation system, escape route etc. shall be kept maintained and a copy thereof posted in the mine office and a convenient places belowground. Adequate number of persons shall also be trained in the use of fire-extinguishers and in fire fighting. Fire-extinguishers containing chemicals which are liable, when operated, to give off poisonous noxious gases shall not be provided or used belowground:

2.8.2.24 Precautions when a fire exists (Regulation 122)

No person shall be employed in any seam where a fire or spontaneous heating exists in a lower seam whether such fire has been sealed off by means of fire stopping's or not; or where the seam has a common ventilation system with another seam on fire; or where the outlets of openings of the seam are within 60 metres of an active fire or spontaneous heating in a higher seam or on the surface in any ash heap or spoil heap or in any other heap or place or any other fire or spontaneous heating which cannot be controlled immediately or where broken ground connected with the seam exists within 60 metres of such fire or spontaneous heating; or where the parting with an overlying seam on fire or in which spontaneous heating has taken place; or with surface containing an active fire or spontaneous heating in any spoil heap or ash heap or in any other heap or place; or any other fire or spontaneous heating which cannot be controlled immediately, consist of less than 10 metres of hard rock; except with the permission in writing of the Chief Inspector and subject to such conditions as he may specify therein.

2.8.2.25 Precautions against dust (Regulation 123)

The owner, agent or manager of every mine shall take such steps as are necessary for the minimizing of emissions of dust and for the suppression of dust which enters the air at any work place below ground or on surface and for ensuring that the exposure of workers to respirable dust is limited to an extent that is reasonably practicable but in any cast not exceeding the limits that are harmful to the health of persons. The owner, agent or manager or every mine where need of dust respirators might arise, shall provide dust respirators in sufficient number and at no cost to the concerned work persons for their use; for the dust respirators to be regularly cleaned, disinfected and maintained in efficient working order; and for the proper fitting of and for thorough training of the concerned workers in the need for the correct use of respirators. No process of crushing, breaking, disintegrating, opening, grinding, screening or sieving of coal or any operation incidental thereto, shall be carried out at any mine unless efficient watering or other appropriate and effective dust control measures, such as, bust not limited to isolation, enclosure, exhaust ventilation and dust collection are designed, provided, maintained and used.

2.8.2.26 Precautions against irruption of gas (Regulation 124)

Where any working is extended to within 30 metres of any goal or disused workings containing or likely to contain an accumulation of inflammable or noxious gases, there shall be maintained at least one bore-hole not less than 1.5 metres in advance of the working. The

operation of drilling the bore hole shall be carried out under the supervision of a competent person, and no lamp or light other than an approved safety lamp or torch shall be used in any such working.

2.8.2.27 Recovery and exploratory work (Regulation 125)

After an explosion of inflammable gas or coal dust has occurred in a mine, only such persons as are authorize by the manager or by the principal official present at the surface, shall be allowed to enter the mine. When it is intended of proposed to reopen a mine or part thereof, which has been isolated, sealed off or flooded with water to deal with a fire or spontaneous heating, the owner, agent or manager shall, not less than 14 days before the commencement of such work, give notice in writing of such intention or proposal to the Regional Inspector and the Chief Inspector.

2.8.2.28 Danger from surface water (Regulation 126)

Where any mine or part thereof is so situated that there is any danger of inrush of surface water into the mine or part, adequate protection against such inrush shall be provided and maintained.

2.8.2.29 International flooding (Regulation 128)

When the owner, agent or manager intends or proposed, by introducing water from the surface or from any other part of the mine or from an adjacent mine, to flood any part of the workings of his mine, he shall give, in writing, not less than 14 days' notice of such intention or proposal to the Chief Inspector and the Regional Inspector and to the management of all adjoining mines and of such other mines as might be affected by such flooding.

2.8.2.30 Construction of a water dam, etc. (Regulation 129)

Where in any mine, it is intended to construct a reservoir, dam or other structure to withstand a pressure of water or other material which will flow when wet, or to control an inrush of water, the owner, agent or manager shall give in writing not less than 14 days notice of such intention to the Regional Inspector. Every such notice shall be accompanied by two copies of plans and Regulations showing the design and other details of the proposed construction.

2.8.2.31 Standard of ventilation (Regulation 130)

It shall be the duty of the owner, agent or manager of every mine to take such steps as are necessary for securing that there is constantly produced in all parts of the mine belowground which are not sealed off, ventilation adequate to clear away smoke, steam and dust; to dilute gases that are inflammable or noxious so as to render them harmless; to provide air containing a sufficiency of oxygen; and to prevent such excessive rise of temperature or humidity as may be harmful to the health of persons.

2.8.2.32 General lighting (Regulation 151)

Adequate general lighting arrangements shall be provided during working hours on the surface where the natural light is insufficient : in every engine house, in the vicinity of every working shaft, at every open cast working, at every shunting or marshaling yard, and at very place where persons have to work; and belowground at every shaft landing and shaft bottom or siding which is in regular use; in every travelling roadway normally used by 50 or more persons during any shift: Provided that the provisions of this clause shall be deemed to have been complied with where electric or carbide lamps or lights are provided to every work person; at the top and bottom of every self-acting incline in regular use; at every place on a haulage roadway, at which tubs are regularly coupled or uncoupled or attached to or detached from a haulage rope; at every place at which tubs are regularly filled mechanically; at every room and place containing any engine, motor or other apparatus; at every place where any pillar is under extraction; and at every first aid station below ground.

2.8.2.32 Type of Explosives to be used in mines (Regulation 159)

No explosive shall be used in a mine except that provided by the owner, agent or manager. The explosives provided for use shall be of good quality and, as far as can be known, in good condition. No liquid oxygen explosives shall be used in any workings belowground.

2.8.2.33 Storage of explosives (Regulation 160)

No owner, agent or manager shall store, or knowingly allow any other person to store, within the premises of a mine any explosives otherwise than in accordance with the provisions of rules made under the Indian Explosives Act, 1884. Explosives shall not be taken into or kept in any building except a magazine duly approved by the Licensing Authority under the Indian Explosives Act, 1884. Explosives shall not be stored below ground in amine except with the approval in writing of the Chief Inspector and subject to such conditions as he may specify

therein. Such storage shall be done only in a magazine or magazines duly license in accordance with the provisions of rules made under the Indian Explosives Act, 1884.

2.8.2.34 Precautions in the use of Permitted Explosives (Regulation 173)

In any mine in which the use of Permitted Explosives is required no shot shall be fire in coal unless the coal has been undercut, overcut or side cut; and the length of the shot hole is at least 15 centimetres less the depth of the cut; no detonator shall be used, unless it is an electric detonator with a copper tube; where more shots than one are charged for firing, the shots shall be fire simultaneously; and the aggregate charge in [1][any shot to be fired] in coal shall not exceed such permissible maximum charge, as the Chief Inspector may, by a notification in the Official Gazette, lay down for the kind of Permitted Explosives used.

2.8.2.35 Use and supply of helmet (Regulation 191A)

No person shall go into, or work, in or be allowed to go into or work in, a mine, other than the precincts of a mine occupied by an office building, canteen, creche, rest shelter, first aid room or any other building of a similar type, unless he wears a helmet of such type as may be approved by the Chief Inspector by a general or special order in writing.

2.9.0 THE COAL MINES (CONSERVATION AND DEVELOPMENT) ACT, 1974

2.9.1 OBJECTIVE AND SCOPE

The Act provides for the conservation of coal and development of coal mines and for matters connected therewith. Section 2 of the Act declares that the Central Government should take under its control the regulation and development of coal mines to the extent provided in the Act.

2.9.2RELEVANT PROVISIONS OF THE ACT

2.9.2.1 Power of Central Government in respect of conservation of coal and development of coal mines (Section 4)

Central Government may for the purpose of conservation of coal and for the development of coal mines, exercise such powers as it may deem necessary. The Central Government may by order addressed to the owner, agent or manager of a coal mine, require him to take measures necessary for the purpose of conservation of coal or for development of coal mines including

in any coal mine, stowing for safety, or the prevention of any factor which may adversely affect the conservation of coal or development of coal mine, or washing of coal

2.9.2.2 Duty of owner to take steps for the conservation and development of coal mine (Section 5)

Owner of a coal mine shall take steps to ensure the conservation of coal and development of the coal mine. The owner of a coal mine shall execute such stowing and other operations as may be necessary to be taken in furtherance of the objects of this Act in so far as such objects relate to the conservation of coal or development of the coal mine or the utilization of coal obtained from the coal mine; acquire such stowing and other materials as may be necessary for ensuring the conservation of coal, and safety in, the coal mine; undertake research in relation to conservation of coal, development of coal mines and utilization of coal; plan and undertake development of the coal mines in a scientific manner; undertake such other activity as the Central Government may, for the furtherance of the objects of this Act, direct.

2.9.2.3 Imposition of excise duties (Section 6)

There shall be levied and collected on all coal raised and dispatched, and on all coke manufactured and dispatched, from the collieries in India, such duty of excise, as may be fixed by the Central Government.

2.9.2.4 Imposition of customs duty (Section 7)

Central Government may impose on all coal, imported or brought into India from any place outside India, a duty of customs.

2.9.2.5 Utilization of proceeds of duties levied and collected under sections 6 and 7 (Section 9)

In each financial year, a sum not exceeding the net proceeds of the duties of excise and customs levied and collected under sections 6 and 7, respectively, during the preceding financial year shall be disbursed by the Central Government in accordance with such procedure as may be prescribed, to the owners, agents or managers of coal- mines or to any other person for conservation of coal and development of coal mines; grant of stowing materials and other assistance for stowing operations; execution of stowing and other operations for the safety in coal mines or conservation of coal; prosecution of research work, connected with conservation and utilization of coal; and any other purpose connected with the conservation of coal or development of coal mines, or transportation, distribution or utilization of coal.

2.9.2.6 Duty of owner to open Coal Mine Conservation and Development Account (Section 10)

The owner of every coal mine, to whom any money is disbursed under section 9, shall open a separate account in a scheduled bank, to be known as the" Coal Mine Conservation and Development Account" and shall credit to the said Account all sums so disbursed to him. The money standing to the credit of the Coal Mine Conservation Development Account and accretions thereto shall be applied by the owner of the coal mine to the furtherance of the objects of this Act; the acquisition of stowing or other materials needed for stowing operations in coal mines; the execution of stowing and other operations in furtherance of the objects of this Act; the prosecution of research work connected with the conservation, development and utilization of coal and safety in coal mines; the planning and development of coal mines in a scientific manner; and any other expenditure which the Central Government may direct to be defrayed out of the money standing to the credit of the Account.

2.9.2.7Power of Inspectors (Section 11)

Chief Inspector or any Inspector may make such examination and inquiries as he thinks fit in order to ascertain whether the provisions of this Act are being complied with. The Chief Inspector may direct the owner, agent or manager of a coal mine, to take such protective measures, including stowing, if the extraction or reduction of pillars in any part of the coal mine is likely to cause the crushing of pillars or the premature collapse of any part of the workings or otherwise endanger human life or the coal mine or a railway, or adequate provision against the outbreak of fire or flooding has not been made by providing for the sealing off and isolation of any part of the coal mine or for restricting the area that might be affected by fire or flooding, as the case may be.

2.10.0 THE MINES RESCUE RULES, 1985

2.10.1 OBJECTIVE AND SCOPE:

Mines Rescue Rules have been framed under the Mines Act 1952 keeping in mind the occurrence of emergencies in mines, particularly in belowground mines due to explosion, fires etc. Previously the Coal Mines Rescue Rules, 1939 were framed. The Mines Rescue Rules, 1985, replaced the Coal Mines Rescue Rules 1939. Mines Rescue Rules framed under the Mines Act 1952 provide for setting-up of rescue stations/rescue rooms, appointment of

superintendent, instructors, rescue personnel, rescue room in-charge etc, specifies the duties and responsibilities of these persons, organization and contains provisions on maintenance of equipment in mines, conduct of rescue work etc.

2.10.2 RELEVANT PROVISIONS OF THE RULE:

2.10.2.1 Application (Section 1)

Rules apply to below ground mines.

2.10.2.2 Definitions (Section 2)

i. "below ground mine" means any excavation which extends below superjacent ground.

ii. "Chief Inspector" means the Chief Inspector of Mines appointed under section 5 of the Act.

iii. "Inspector" means an Inspector of Mines appointed under the Act, and includes a district magistrate when exercising any power or performing any duty of an; Inspector which he is empowered by the Act to exercise or perform.

iv. Principal Official" means the senior – most mine official in mining discipline on duty in the mine.

v. "rescue room" means a rescue room as established and maintained.

vi. "Rescue station" means a rescue station established and maintained under rule 3.

vii. "Rescue trained person" means a person certified by the Superintendent to be rescue trained person.

2.10.2.3 Establishment and location of rescue station (Section 3)

Chief Inspector may permit the owner of a below ground mine or a group of below ground mines to establish and maintain rescue station, stations. At every rescue station there shall be appointed one Superintendent and at least two instructions. There shall be maintained a rescue brigade of not less than eighteen rescue trained persons.

2.10.2.4 Functions of rescue stations (Section 4)

Functions of rescue station shall include:-

(i) Imparting initial training in rescue and recovery work;

(ii) Imparting refresher training to rescue trained persons;

(iii) Providing support by its own rescue teams and equipment in case of major accidents or long lasting rescue and recovery operations; and

(iv) Carrying out the functions of rescue room in respect of these below ground mines where there is no rescue room.

2.10.2.5 Establishment and location of rescue rooms (Section 5)

At every below ground mine where, more than 100 persons are ordinarily employed below ground and there is no rescue station within its radius of 35 kms, the owner, shall establish and ;maintain on surface close to mine entrance a rescue room. It may be sufficient to provide one rescue room for a number of mines belonging to the same owner where the total number of persons ordinarily employed in below ground workings of all such mines does not exceed 5000 and the mines are situated radius of 35 kms.

2.10.2.6 Functions of rescue room (Section 6)

A rescue room shall provide facilities for the storage, assembly, testing and adjustments of breathing apparatus and other rescue equipment and apparatus and for their speedy transport to mines.

2.10.2.7 Duties and responsibilities of Superintendent (Section 12)

The Superintendent shall be in overall control of the rescue station and the rescue rooms served by such rescue station. The Superintendent shall ensure that all the rescue equipment and apparatus kept at the rescue station, rescue rooms and at the entrance of the below ground mines under his control are maintained in perfect working order; inspected by Instructors at specified intervals; and tests are conducted and adjustments are made.

Superintendent shall ensure that adequate stock of spare parts and supplies are kept for maintaining rescue equipment and apparatus in perfect working order. Superintendent shall ensure that persons selected for initial training and those undergoing refresher training receive the prescribed course of instructions and practices and are issued the credit certificates for the same. Superintendent shall make periodical inspection rescue rooms and the apparatus and equipment under his control. In the event of an emergency at a below ground mine, Superintendent shall perform such rescue and recovery work as may be assigned to him by the manager or in his absence by the principal official present at the surface. He shall within three days of completion of the rescue or recovery work send a report thereof to the Regional Inspector or the Chief Inspector. The Superintendent shall submit to the Chief Inspector and to the Regional Inspector detailed report on the functioning of the

rescue station and rescue rooks under his control in the preceding year on or before the 20thl day of February of the succeeding year.

2.10.2.8 Duties of Instructors (Section 13)

Under the direction of Superintendent the Instructor shall-

(a) impart course of instructions and practices to persons selected for training in rescue and recovery work as well as to rescue trained persons and maintain a record thereof; and

(b) Make inspection, test and adjustment of rescue equipment and apparatus and maintain a record thereof.

(2)In the event an emergency at a below ground mine, Instructors shall perform such rescue and recovery work as may be assigned to him by the manager or in his absence by the principal official present at the surface.

(3)Instructor shall not leave the rescue station without prior permission of the Superintendent.

(4)In the absence of the Superintendent, the Instructor shall be in charge of the rescue station.

2.10.2.9 Duties and responsibilities of rescue room in-charge (Section 14)

Every rescue room in-charge shall-

(a) Display prominently a list of mines served by his rescue room;

(b) Maintain the equipment and apparatus kept at the rescue room in perfect order;

(c) Maintain a proper record of all rescue equipment and apparatus kept at the rescue room and inspection thereof; and

(d) Not allow any unauthorized person; to enter into, or permit any unauthorized person to take out any apparatus or equipment from the rescue room.

2.10.2.10 Duties of rescue trained persons posted at rescue station (Section 15)

The rescue trained person shall-

(a) Obey order of the Superintendent and Instructor and assist them in discharge of their functions;

(b) Attend to messages, telephone calls and wireless and maintain record thereof;

(c) Maintain the rescue station in neat and tidy condition;

(d) Maintain the equipment and apparatus kept at the rescue station in perfect order;

(e) Perform rescue and recovery work in mines; and

(f) Not leave rescue station without obtaining permission from the Superintendent

2.10.2.11Duties of rescue room attendant (Section 16)

Every rescue room attendant shall-

(a) Not leave the rescue room until relieved by a substitute;

(b) Not allow any unauthorized person to enter in or to take out any apparatus or equipment from the rescue room;

(c) Attend to telephone calls and maintain a record thereof;

(d) Maintain the rescue room in neat and tidy condition; and

(e) Obey orders of the rescue room in-charge and assist him in discharge of his functions.

2.10.2.12 Appointment of rescue trained persons in mines, their disposition and accommodation (section 19)

The manager of a below ground mine, where more than 100 persons are ordinarily employed below ground, shall ensure that at least 5 rescue trained persons are readily available at surface at any time. The manager of a below ground mine, where more than 500 persons are ordinarily employed below ground, shall also ensure that persons on a scale of one man for every 100 persons or part thereof are rescue trained persons. It shall be the responsibility of the owner to provide suitable accommodation:-

(i) close to the rescue station to the Superintendent, Instructors and members of rescue brigade;

(ii) close to rescue room to rescue room in-charge rescue trained persons and attendants attached to it; and

(iii) Close to below ground mine entrance to rescue trained persons other than those specified in (i) and (ii).

(4)There shall be provided at a below ground mine effective bell or other arrangements, as may be approved by the Regional Inspector, for immediate summoning of rescue trained persons.

2.10.2.13 Duties of Manager etc. in emergency (Section 24)

On receiving information of any emergency likely to require the services of a rescue team, the manager, or in his absence the Principal Official present at the surface, shall immediately:-

(a) Inform the rescue room or the rescue stations serving the mine for necessary assistance;

(b) Summon rescue trained person employed in the mine;

(c) Inform the owner, agent or manager of nearby mines to make available the services of rescue trained persons employed therein: if so required;
(d) Inform the rescue station about the nature of the occurrence; stating whether assistance would be needed from the rescue station;
(e) Summon medical assistance; and
(f) Send information of the occurrence to the Regional Inspector.
(2)All rescue and recovery work at a below ground mine shall be conducted under the control, direction and supervision of the manager of the mine or in his absence the principal official present at the surface.

2.10.2.14Entryinto below ground mines for rescue or recovery work (Section 26)
No person shall be allowed to enter a below ground mine or part thereof which is unsafe for the purpose of engaging in rescue or recovery work, unless authorized by the manager or in his absence by the principal official of the mine present at the surface. Only rescue trained persons shall be permitted to enter the mine for the purpose of using self contained breathing apparatus. During the Course of rescue or recovery work, person or persons shall be stationed at the entrance to the below ground mine and shall keep a written record of all persons entering and leaving such mine, and the time thereof.

2.10.2.15 Rescue team members and their duties (Section 32)

The number of persons in any rescue team using breathing apparatus in a mine shall not be less than five not more than six, including the leader. In case there is no provision in any of the breathing apparatus carried by the rescue team for an extension for supply of oxygen to another person in an emergency, the team shall carry a self rescuer. Members of rescue team shall in general, use the signals prescribed in Schedule VIII in communicating to one another. In travelling with rescue apparatus on, every member of the team shall keep the place given to him when numbering off. If the pace is too quick or if distress is felt, the member shall at once call attention to the fact.

2.10.2.16 Obligation of owner, agent and manager in certain situations (Section 34)
Whenever emergency arises at a below ground mine, whether served by a rescue room or rescue station or not, the owner, agent or manager may seek assistance or additional

assistance as the case may be from the nearest rescue room or rescue station and in such an event:-

(a) All possible assistance shall be promptly rendered by the rescue room or rescue station; and

(b) The owner of the mine shall pay to the owner of the rescue station or rescue room, rendering such assistance, the full cost of rescue services and facilities borrowed.

2.11.0 INDIAN ELECTRICITY ACT 2003

2.11.1 OBJECTIVES AND SCOPE:

Before Electricity act 2003 the electricity sector was guided by The Indian Electricity Act, 1910 The Electricity (Supply) Act, 1948. Generation, distribution and transmission were carried out mainly by State electricity board. Due to politico economic situation the cross subsidies reached at unsustainable level. For purpose of distancing state govt. form tariff determination The Electricity Regulatory Commissions Act, was enacted 1998. So as to reform electricity sector further by participation of private sector and to bring in competition Electricity act enacted in 2003.

The Act de-licenses power generation completely (except for hydro power projects over a certain size). As per the Act, 10% of the power supplied by suppliers and distributors to the consumers has to be generated using renewable and non-conventional sources of energy so that the energy is reliable.

The Act was enacted to consolidate the laws relating to generation, transmission, distribution, trading and use of electricity .To take measures conducive to development of electricity industry, promoting competition, protecting interest of consumers and supply of electricity to all areas. To rationalize of electricity tariff, ensuring transparent policies regarding subsidies, promotion of efficient and environmentally benign policies constitution of Central Electricity Authority, Regulatory Commissions and establishment of Appellate Tribunal. The act extends to whole of India except state of Jammu and Kashmir

2.11.2 RELEVANT PROVISIONS OF THE ACT

2.11.2.1 Provisions Relating To Safety and Electricity Supply (Section 53):

The Central Electricity Authority may in consultation with the State Government specify suitable measures for –

a) Protecting the public (including the persons engaged in the generation, transmission or distribution or trading) from dangers arising from the generation, transmission or distribution or trading of electricity, or use of electricity supplied or installation, maintenance or use of any electric line or electrical plant.
b) Eliminating or reducing the risks of personal injury to any person, or damage to property of any person or interference with use of such property.
c) Prohibiting the supply or transmission of electricity except by means of a system which conforms to the specification as may be Specified.
d) Giving notice in the specified form to the Appropriate Commission and the Electrical Inspector, of accidents and failures of supplies or transmissions of electricity.
e) Specifying action to be taken in relation to any electric line or electrical plant, or any electrical appliance under the control of a consumer for the purpose of eliminating or reducing the risk of personal injury or damage to property or interference with its use.

In *Municipal Corporation of Delhi v. Uphaar Tragedy Victims Association and Others* [(2011) 14 SCC 481] while deciding the extent of liability of the theatre owner, the DVB (Delhi Vidyut Board), MCD (Municipal Corporation of Delhi)and the licensing authority responsible for the fire tragedy, the Apex Court noted in agreement with the Delhi High Court that the DVB violated several provisions of the Electricity Act and the Rules. The negligence on the part of DVB in maintaining the transformers and repairs led to the root cause of the incident, namely the starting of the fire. The Apex Court while upholding the suggestions of the High Court added *inter alia* that

- There should be mandatory half yearly inspections of cinema theatres by a senior officer from the Delhi Fire Services, Electrical Inspectorate and the Licensing Authority to verify whether the electrical installations and safety measures are properly functioning and take action wherever necessary.
- An endeavour should be made to have a single point nodal agency/licensing authority consisting of experts in structural Engineering/building, fire prevention, electrical systems etc. The existing system of police granting licenses should be abolished.

The Court held that the liability shall be 85% on the part the licensee and 15% on the part of DVB.

2.11.2.2Functions and Duties of Authority (Section 73(C))

Central Electricity Authority specifying the safety requirements for construction, operation and maintenance of electrical plants and electric lines.

2.11.2.3 Notice of Accidents and Inquiries (Section 161)

a) If any accident occurs in connection with the generation, transmission, distribution, supply or use of electricity in or i, any part of the electric lines or electrical plant of any person and the accident results in loss of human or animal life or in any injury to a human being or an animal, such person shall give notice of the occurrence and of any such loss or injury actually caused by the accident, to the Electrical Inspector or such other person as aforesaid and to other authorities as the Appropriate Government may by general or special order, direct.

b) The Appropriate Government may, if it thinks fit, require any Electrical Inspector, or any other person appointed by it in this behalf, to inquire and report-

- To the cause of any accident affecting the safety of the public.
- Every Electrical Inspector or other person holding an inquiry shall have all the powers of a civil court under the Code of Civil Procedure, 1908 for the purpose of enforcing the attendance of witnesses and compelling the production of documents and material objects, and every person required by an Electrical Inspector be legally bound to do so within the meaning of section 176 of the Indian Penal Code.

2.11.2.4 Appointment of Chief Electrical Inspector and Electrical Inspector (Section 162).

Government may, by notification, appoint duly qualified persons to be Chief Electrical Inspector or Electrical inspector.

In ***Superintending Engineer (Elec.), MESCOM v. Krishna Poojary [2011] NCDRC 486,*** it was observed by the court the Electrical Inspector appointed under the Electricity Act, 2003 is an authority appointed by the state Government who, in case of any accident, is directed by the state government to enquire and report back as to cause of the accident and to ascertain as whether the provisions of the Act or Rules and Regulation or any license has been violated.

2.12.0 THE MINES AND MINERALS (DEVELOPMENT & REGULATION) ACT, 2010

2.12.1 OBJECTIVE AND SCOPE:

The Mines and Minerals (Development and Regulation Act, 1957, ('MMDR') and the Mines Act, 1952, together with the rules and regulations framed under them, constitute the basic laws governing the mining sector in India. The Mines and Minerals (Development & Regulation) Act, 2010, repeals the previous Mines and Minerals (Development & Regulation) Act, 1957. The new legislation provides for the scientific development of mines and minerals under the control of the Union and the regulation of activities connected therewith.

2.12.2RELEVANT PROVISIONS OF THE ACT:

2.12.2.1 Declaration as to the expediency of Union control (Section 2)

Section 2 declares that Union should take under its control the regulation of mines and the development of minerals.

2.12.2.2 Definitions (Section 3)

i. '*Prospecting*' means the systematic process of searching for a mineral deposit by narrowing down an area of promising enhanced mineral potential through outcrop identification, geological mapping, geophysical and geochemical studies, trenching, drilling, sampling, etc. in order to facilitate general and detailed exploration.

ii. A *'prospecting license'* means a license granted under this Act to conduct prospecting, general exploration and detailed exploration operations.

iii. '*Reconnaissance*' means a systematic study to identify areas of enhanced mineral potential on a regional scale based primarily on results of regional geological, geophysical and geochemical studies through remote sensing, aerial and ground sampling surveys including, preliminary field inspections, in order to facilitate further investigation for deposit identification.

iv. *'Reconnaissance license'* means a license to conduct systematic process of identifying areas of enhanced mineral potential through reconnaissance.

v. "*Sustainable development framework"* means the National Sustainable Development Framework or a State Sustainable Development Framework prepared in pursuance to the provisions of Section 45(2) of the Act.

2.12.2.3 Reconnaissance, prospecting and mining operations to be licensed (Section 4)

No person shall undertake any reconnaissance, prospecting, general exploration, detailed exploration or mining in respect of any major or minor mineral except under a Reconnaissance License, Large Area Prospecting License, Prospecting License or Mining Lease in case of a major mineral or any other concession, in case of minor minerals. No person shall transport or store or cause to be transported or stored, any minerals other than in accordance with the provisions of this Act and Rules made there under.

2.12.2.4Rights of a holder of reconnaissance License, prospecting license or mining lease (Section 15)

On the issue of a Reconnaissance License, Large Area Prospecting License, Prospecting License or Mining Lease under this Act, it shall be lawful for the holder of such license or lease, his agents or his servants or workmen to enter the lands over which such License or Lease had been granted at all times during its currency and carry out all such reconnaissance, prospecting or mining operations as may have been permitted.

2.12.2.5 Rights of a Lessee (Section 28)

The lessee, with respect to the land leased to him, shall have the right for the purpose of mining operations on the land to:-

(a) Work the mines;

(b) Sink pits and shafts and construct buildings and roads;

(c) Erect plant and machinery;

(d) Quarry and obtain building material and road materials and make bricks;

(e) Use water and take timber;

(f) Use land for stacking purpose;

(g) Install fuel pumps/stations for diesel/petrol for own use;

(h) Construct magazine for explosives, and storage sheds for explosive related substances with permission from the licensing authority concerned;

(i) Store overburden material in areas identified for the purpose;

(j) Divert public roads, overhead electric lines etc. (at his own cost) passing through the lease, to facilitate scientific mining, and;
(k) Do any other thing specified in the lease.

2.12.2.6 Reservation of areas for conservation of mineral resources (Section 38)

The State Government, or the Central Government after consultation with the State Government concerned, may reserve for purposes of mineral conservation any area not already held under a prospecting license or mining lease, and shall notify the reservation specifying the reasons and the period of reservation. The period may be extended from time to time in the public interest.

2.12.2.7 National Mineral Fund (Section 44)

The Central Government may establish a Fund to be called as the "National Mineral Fund". The Fund may be used for:-
(a) Promoting scientific management of mining activities, and mine closures, including research and development and training.
(b) Research and development in sustainable development frameworks,
(c) Developing capacity of the Indian Bureau of Mines and any other agency as may be determined by the Central Government, in enforcing the provisions of the Act,
(d) Detecting and preventing illegal mining including commissioning of surveys and studies, and developing awareness amongst local communities and the mining sector, and
(e) Investigation for the conservation and scientific management, etc. of mineral resources in accordance with the provisions of section 48 of the Act;
(f) Providing grants-in-aid for promoting techno-economic studies for the mineral sector; and
(g) Promotion of information technology application in support of the mining and minerals sector
(h) Grant-in-aid for holding of and participation in National / International minerals and mining workshops, conferences and promotional events

2.12.2.8 State Mineral Fund (Section 45)

State Government may establish a Fund called the "State Mineral Fund". The Fund may be used for:-
(a) Funding of Panchayats or Gram Sabhas (in the case of Scheduled V areas), for the purposes of :

(i) Improvement of local infrastructure for socio-economic purposes,

(ii) Maintenance of community assets and services for local populations in the area; and

(iii) Human resource development of local populations for creating employment and self-employment capabilities.

(b) Developing capacity of the State Directorate to achieve the objects of this Act and for the operation of the State Mining Tribunal.

(c) Promotion of information technology applications in support of the mining and mineral sector

(d) Setting up and operation of Special Court.

(e) Recompensing Lessees who's Leases are prematurely terminated.

(f) Reward whistle-blowers on illegal mining

(g) Any other public purposes in relation to the objects of the Act including measures to prevent and detect illegal mining, as may be deemed expedient by the State Government from time to time.

2.12.2.9 Power of the Central Government to issue directions in the interest of scientific mineral exploration and mining and sustainable development (Section 46)

It shall be the duty of the Central Government to take all such steps as may be necessary for the conservation of strategic mineral resources in the national interest and for the scientific development and exploitation of mineral resources. To facilitate the scientific development and exploration of mineral resources and to ensure the protection of the environment and prevention and control of pollution from prospecting and mining related operations, the Central Government shall cause to be developed a National Sustainable Development Framework in consultation with the State Governments. State Government may with the previous approval of the Central

Government frame a State Sustainable Development Framework not inconsistent with the National Sustainable Development Framework. National Sustainable Development Framework shall contain guidelines enabling formulation of project-level practices for sustainable mining and shall include the following:

(i) Specification of factors and parameters influencing sustainable and scientific mining.

(ii) Broad criteria beyond which mining may not be deemed sufficiently sustainable and /or scientifically manageable

(iii) Systemic measures needed to be taken or built in to increase sustainability of mining operations considering its entire life cycle, inter-alia ensuring minimal adverse impact on quality of life of the local communities; protecting interests of affected persons including host populations; creating new opportunities for socio-economic development including for sustainable livelihoods; mineral conservation; reduction in waste generation and related waste management practices; minimizing and mitigating adverse environmental impacts particularly on surface as well as ground water, air, ambient noise and land; ensuing minimal ecological disturbance, in terms of bio-diversity, flora, fauna and habitat; promoting restoration and reclamation activities so as to make optimal use of mined out land for the benefit of the local communities

(iv) Measurable indicators of sustainable development

(v) Consultative mechanisms with stakeholder groups right from pre-mining stages through the life cycle and up to post closure stages to ensure that the stakeholder groups involvement and participation in identifying and addressing the sustainability issues

(vi) System of public disclosure of mining related activities and environmental parameters including indicators and mechanisms to facilitate formal and informal sustainability audits.

2.12.2.10 National Mining Tribunal (Section 61)

The Central Government may establish a Tribunal to be known as the National Mining Tribunal, to exercise jurisdiction, powers and authority conferred on such Tribunal by or under this Act. The Principal Bench of the National Mining Tribunal shall be in the National Capital Territory of Delhi, with benches at such other places as may be.

2.12.2.11 Powers and procedures of the National Mining Tribunal (Section 62)

National Mining Tribunal shall have the powers with respect to major minerals to:-

(a) Hear applications from affected persons and confirm or set aside any order passed by the Central or State Government under this Act or Rules there under as it may deem just and proper.

(b) Hear applications from any affected party in relation to preparation, approval and implementation of Mining Plans and Mine Closure Plans including orders or directions issued under this Act in relation thereto.
(c) Adjudicate on applications seeking directions to Central or State Governments to dispose an application, including an application for grant of concession under the Act, with respect to any major mineral within such time as the National Mining Tribunal may stipulate, in such cases where the Central and State Government have failed to dispose the application within the time prescribed by the Act.

2.12.2.12 State Mining Tribunal (Section 63)

The State Government may establish a Tribunal to be known as the State Mining Tribunal, to exercise jurisdiction, powers and authority conferred on such Tribunal by or under this Act. The State Mining Tribunal shall have the powers in respect to minor minerals:-
(a) To hear applications from affected persons and confirm or modify or set aside any order passed by the State Government under this Act or Rules there under as it may deem just and proper.
(b) To hear applications as the case may be from any affected party in relation to preparation, approval and implementation of Mining Plans, Mining Frameworks and Mine Closure Plans, including orders or directions issued under this Act or in relation thereto.
(c) To adjudicate on applications seeking directions to State Governments to dispose an application for grant of concession with respect of minor mineral within such time as the State Mining Tribunal may stipulate, in such cases where the State Government have failed to dispose the application within the time prescribed by the Act.

2.12.2.13 Special provisions to deal with contingencies (Section 70)

It shall be the duty of the Indian Bureau of Mines or any authority of Central Government as may be designated in respect of coal and atomic minerals, to render such assistances as may be required by the State Government to ensure that mining activities are regulated in accordance with the objects of this Act. Where the Indian Bureau of Mines or authority designated on the basis of information available to it comes to the conclusion that the provisions of the Act and Rules there under are not being adequately and properly exercised and that illegal or unscientific mining is going on in any State in a large scale, it shall make a

Report to this effect to the Government of India, and Government of India may issue a direction to the State Government.

2.13.0 THE OIL MINES REGULATIONS, 2011

2.13.1 OBJECTIVE AND SCOPE:

The Oil Mines Regulations contain the necessary provisions relating to safety standards to be maintained in mines.

2.13.2 RELEVANT PROVISIONS OF THE REGULATIONS:

2.13.2.1 Definitions

i. "approved" means approved by the Chief Inspector by a general or special order in writing and subject to such conditions as he may specify therein;

ii. "Approved standards" means such national or international standards which may be approved by the Chief Inspector by a general or special order in writing.

iii. "District Magistrate" in relation to any mine means the District Magistrate or the Deputy Commissioner as the case may be, who is vested with the executive powers of maintaining law and order in the revenue district in which the mine is situated.

iv. "hazardous area" means an area where hazardous atmosphere exists or is likely to occur;

v. "hazardous atmosphere" means an atmosphere containing any flammable gas in a concentration capable of ignition or containing noxious gases beyond permissible limits ;

vi. "major accident" means an occurrence including in particular, a major emission of fire or explosion from uncontrolled developments in the course of drilling and for production, storage, handling or transportation of petroleum or machinery or owing to natural events leading to serious effects (both immediate and delayed as well as inside or outside the installation) causing or likely to cause substantial loss of life or property;

2.13.2.2 Notice of accident and dangerous occurrence (Regulation 9)

Where there occurs a readily identifiable event such as a dangerous occurrence with potential to cause an injury or disease to persons at work or to the public around the workplace, or an accident in or about a mine such as an accident causing loss of life or serious bodily injury in connection with mining operations; an explosion or ignition; a blowout; an outbreak of fire; a bursting of any pipeline or equipment containing petroleum, steam, compressed air or other substance at a pressure greater than the atmospheric pressure; a major uncontrolled emission of petroleum or chemical spillage; a breakage or fracture of any essential part of draw-works, casing line or failure of emergency brake whereby the safety of persons may be endangered; a breakage, fracture or failure of any essential part of any derrick, machinery or apparatus whereby the safety of persons may be endangered; an influx of noxious gases; accident due to explosives, the owner, agent or manager shall forthwith inform the Regional Inspector immediately by telephone, telefax, express telegram or by special messenger and shall also within 24 hours of every such occurrence, give notice thereof to the Chief Inspector, the Regional Inspector and the District Magistrate **.** When an accident causing loss of life or serious bodily injury occurs in or about a mine in connection with the generation, storage, transformation, transmission, supply or use of electrical energy, the owner, agent or manager shall also forthwith inform the Electrical Inspector of Mines immediately by telefax, telephone, express telegram or special messenger. If death results from any injury already reported as serious the owner, agent or manager shall within 24 hours of his being informed or the death, give notice thereof to the Chief Inspector, Regional Inspector and District Magistrate. In respect of every person killed or injured as above, the owner, agent or manager shall send to the Chief Inspector particulars within seven days of such occurrence or within 15 days of the injured returning to duty, as the case may be.

2.13.2.3 Notice of disease (Regulation 10)

Where any person employed in a mine contracts any disease notified by the Central Government in the Official Gazette, the owner, agent or manger shall within three days of his being informed of the disease give notice thereof to the District Magistrate**,** the Chief Inspector, the Regional Inspector and Inspector of Mines (Medical).

2.13.2.4 Access to facilities and vessels (Regulation 27)

The owner agent or manager of the mine shall afford access and provide facilities for such access to the Chief Inspector, inspector and every person authorized at all times to any part of

the mine or any vessel or installation of the mine, as well as to material and information necessary to carry out inspection, survey, measurement, examination or enquiry under the Act.

2.13.2.5 Qualification and appointment of fire officer (Regulation 35)

At every mine one or more persons shall be appointed to be the fire officer for fire fighting and to assist the manager on fire prevention measures.

2.13.2.6 Qualification and appointment of shot firing officer (Regulation 36)

At every mine adequate number of shot firing officers shall be appointed for well perforation operation. No person shall be appointed as shot firing officer unless he is holder of shot firing officer certificate of competency.

2.13.2.7 General management (Regulation 38)

The owner, agent and manager shall provide for the safety, health, welfare, environment and proper discipline of persons employed in the mine.

2.13.2.8 Duties of persons employed in mines (Regulation 39)

Every person shall strictly adhere to the provisions of the Act and of the regulations and orders made there-under and to any order or direction issued by the manger or an official with a view to the safety or convenience of persons, not being inconsistent with the Act and these regulations nor shall he neglect or refuse to obey such orders or directions. Every person shall be responsible to follow safety directives and be conversant with the safety instruction issued by the manager from time to time. Before beginning work every person shall examine his place of work and the equipment that he is to use and shall forthwith report to his superior any dangerous defect that he may discover. Every person shall make use of all safeguards, safety devices and other appliances provided for his protection or the protection of others. Except in an emergency, no person unless duly authorized shall interfere with, remove, alter or displace any safety device or other appliance provided for his protection or the protection of others or interfere with any method or process adopted with a view to avoiding accidents and injuries to health. No person shall, while on duty, throw any stone or other missile with intent to cause injury or fight or behave in a violent manner nor shall impede or obstruct any other person in the discharge of duties, or offer or render any service or use any threat, to any other person with a view to prevent the other person from complying with the provisions of

the Act or the regulations. No person shall sleep or rest in a dangerous place such as scaffolds, **derrick floo**r or cranes or in the vicinity of dangerous or toxic substances, machinery, boilers, vehicles and heavy equipment's. Every person shall wear protective equipment and clothing suited to his duties and to the weather conditions. Every person receiving any injury in the course of his duty shall, as soon as possible, report the same to an official or to the competent person in charge of a first-aid station, who shall arrange for the necessary first-aid to the injured person. No person shall, except with the authority of an official, remove or pass through any fence, guard barrier or gate, or remove any danger signal.

2.13.2.9 Duties of manager (Regulation 40)

The manager shall be responsible for the safe and proper working of the mine by exercising supervision, control and direction to ensure that all work is carried out in accordance with the provisions of the Act and of the regulations and orders made there under. The manager shall ensure that sufficient supply of materials and appliances for the purpose of carrying out the provisions of the Act, the regulations and orders made there under and for ensuring the safety of the mine and persons employed therein, is always provided at the mine; and if he is not the owner or agent of the mine, he shall report in writing to the owner or agent when anything which he is not competent to order, is required for the aforesaid purpose. When an accident resulting in any serious bodily injury to any person or loss of life occurs in a mine, the manager shall inspect the site of accident immediately and shall also either himself or through safety officer have an enquiry made into the causes of and circumstances leading to the accident and the results of every such enquiry and a plan and section of the site of the accident showing the details shall be submitted to the Regional Inspector within seven days of the date of occurrence.

2.13.2.10 Duties of safety officer (Regulation 44)

The safety officer shall inspect, as often as may be necessary, the installations of the mine with a view to identify the dangers which may cause bodily injury or impair health of any person or environment; advise the manager on measures necessary to prevent dangerous situations; enquire into the circumstances and causes of all accidents whether involving persons or not and advise the manager on measures necessary to prevent recurrence of such accidents; collect, compile and analyze information in respect of accidents and dangerous

occurrences with a view to promote safe practices and improvement of working environment; organize regular safety education programmes and safety campaigns to promote safety awareness amongst persons employed in the mine and ensure that all new workers and workers transferred to new jobs receive adequate safety fire fighting and first aid training.

2.13.2.11 Duties of fire officer (Regulation 45)

The fire officer shall ensure the observance of the provisions of the Act and the regulations or orders made there under concerning fire detection, fire-fighting systems and emergency plan and advise the manager on measures necessary to ensure adequate protection against fire; ensure proper layout, installation and maintenance of fire-fighting equipment; ensure that emergency plan for likely fire situations are prepared; organize regular training of persons in charge of fire-fighting duties with particular reference to contingency or emergency plan for fire, correct assessment and handling of fire problem; ensure that persons in-charge of fire fighting duties undertake simulated fire drills at-least once in every month to study promptness of response and effective tactics; examine at least once in every quarter all devices and equipment of fire detection and fire-fighting systems in the mine and report any defects in the same to the manger; exercise a general supervision and co-ordination during control and extinguishment of any fire in the mine; assist the manager or other officials so authorized, to conduct enquiry into the causes and circumstances of all fires with a view to prevent reoccurrence in the mine; maintain detailed record of work performed by him every day.

2.13.2.12 Precautions during loading and unloading of petroleum tankers (Regulation 85)

Every tanker while it is being loaded or unloaded and until its valves have been shut and filling pipe and discharge faucets closed, shall be attended by a competent person authorized for the purpose. Loading and unloading of tankers carrying petroleum shall be performed during day light hours. In the loading and unloading area all pipe-lines, fittings and delivery hoses or metal pipes, metallic loading arms, swivel joints, tanks, chassis of tankers shall be electrically continuous and be efficiently earthed. On land, no mechanically propelled tankers shall be loaded or unloaded until its engine has been stopped and battery isolated from electrical circuit and the engine shall not be restarted and the battery shall not be connected to the electrical circuit until all tanks, and valves have been securely closed.

2.13.2.13Emergency shut system and safety valves on off shore wells (Regulation 87)

A surface controlled sub-surface safety valves and a well head surface safety valve shall be provided and maintained at every well in accordance with approved standards which shall be in addition to other well head valves. Every process complex shall be provided with an emergency shutdown system and fire shut down system. Emergency shutdown system shall be capable of shutting down all wells and all activities on process complex, except those which may be required for dealing with the emergencies; bleeding off petroleum from the flow lines. The fire shut down system shall be capable of activating the automatic fire fighting system at the affected areas in addition to the activities specified.

2.13.2.14 Establishment of safety zones (Regulation 98)

The Chief Inspector may declare any geographical area around and above the facilities with the exception of sub-sea facilities, pipelines and cables as safety zone, if it is considered necessary in the interest of safety.

2.13.2.15 Establishment and revocation of specified safety zones in emergency (Regulation 99)

In case of emergency, Chief Inspector may extend the existing safety zone or establish new safety zone to the extent as may be considered necessary in the interest of safety of persons employed therein, prevention of loss of property or damage to environment and the same may be revoked when the situation no longer warrants.

2.13.2.16 Monitoring of safety zones (Regulation 100)

The owner, agent or manager, shall monitor all activities inside the safety zones; alert any intruding vessels or object which are about to enter the safety zone and intimate other vessels outside the safety zone if the vessels may constitute danger to the safety of the petroleum activities; and if the situation so warrants, refuse or prevent the entry of such vessels and also intimate the coast guard and other competent authority.

2.13.2.17 Notification of establishment and revocation of safety zones (Regulation 101)

The owner, agent, manager or installation manager shall notify the establishment and the movement of off shore installations to the concerned agencies and the competent authorities.

2.13.2.17 Control in the safety zone (Regulation 102)

The master of the attendant vessel or off take tanker or helicopter shall comply with instructions of the installation manager when in a safety zone. The master of the vessel or tanker or helicopter shall take adequate precautions for its safe operation and be responsible for safety of their crew, the safe operation of vessel or tanker or helicopter and for avoiding collision with the installation or associated facilities.

2.13.2.18 Storage and use of flammable material (Regulation 103)

No flammable material shall be stored within 30 metres of any well. Safety cans shall be used for handling and use of flammable liquids. Drainage from any fuel storage shall be in a direction away from the well and equipment. Any flammable liquid having a flash point of less than 65 degree Celsius shall not be used for cleaning purposes without prior permission in writing of the manager, deputy manager or an installation manager.

2.13.2.18 Precaution against noxious and flammable gases (Regulation 104)

No person shall enter or be permitted to enter any cellar, sump, pit or any confined space or Zone '0' hazardous area or the area where a flare has become accidentally extinguished unless a test therein by a competent person indicates that the confined space is gas free.

2.13.2.19 Safe distances (Regulation 105)

No person shall smoke or be permitted to smoke within 30 metres of any well, separator, petroleum storage tank or other source of flammable gases. In every mine 'no smoking' areas shall be clearly demarcated. No naked light or open flame or spark shall be permitted within 30 metres of any well or any place where petroleum is stored. No flame type treater, crude oil treater or other flame-type equipment shall be placed or located within 30 metres of any well, separator, petroleum storage tank, except where such flame type equipment is fitted with a flame arrestor. Flare stack shall be sited not less than 90 metres from any part of a production installation or petroleum storage tanks.

2.13.2.20 Precautions against fire (Regulation 106)

Dead leaves or dry vegetation shall not be allowed to accumulate or remain, and combustible materials other than materials required for use within a period of 24 hours shall not be stored, within a distance 15 meters from any oil or gas well or fuel tank storage area. Where an

internal combustion engine is located within 30 metres of any well, separator or storage tank, its exhaust pipe shall be insulated or sufficiently cooled and the end of the exhaust pipe shall be directed away from the well head; and its exhaust manifold shall be shielded to prevent its contact with liquids or gases which might otherwise fall on it. Where a diesel engine is located within 30 metres of a well, it shall be provided with an air intake shut-off valve with readily accessible remote control arrangement. Water bath treator, heater treator and flare line shall be provided with suitable device for remote ignition.

2.13.2.21 Firefighting equipment (Regulation 109)

At every drilling rig, following fire fighting arrangement and equipment shall be provided adequate water storage, pumping facilities, hoses and nozzles; adequate number of appropriate portable fire extinguishers at the derrick floor, main engine area, electrical machinery, mud tank area, diesel storage area and other vulnerable places; and adequate number of appropriate portable fire extinguishers at the derrick floor, main engine area, electrical machinery, mud tank area, diesel storage area and other vulnerable places.

2.13.2.22 Use of firefighting equipment (Regulation 110)

Every person employed at any drilling - rig, work-over rig, well head installation, group gathering station, storage tank or on such work where firefighting equipment may be required to be used, shall be trained in the use of such equipment by holding regular fire drills for this purpose.

2.13.2.23 Emergency plan (Regulation 111)

The manager shall frame an emergency plan and submit a copy thereof to the Regional Inspector who may approve it either in the form submitted or with such additions or alterations as he may deem fit. Emergency plan shall be prepared after carrying out risk assessment of the activities in the mines in respect to following emergencies - fire; blowout, explosion, ignition, influx of inflammable or noxious gases; bursting of equipment, pipeline or uncontrolled escape of petroleum; failure of structures; accident involving boat, helicopter etc; chemical spillage; natural calamities; medical evacuation, man over board; and any other emergencies. The emergency plan shall contain the action to be taken in the event of any major accident including when and how the said action is to be taken; organization plan clearly stating the line of command and the responsibilities of each person involved in case of

emergency situations; equipment plan viz., make, type, capacity, location, field of operation, and operating procedure in respect of every equipment; and strategy plan specifying the number of steps to be taken in any particular case of emergency. Action plan shall clearly stipulate –

(i) Alarm and communication system, (ii) system of notifying the authorities, (iii) the duties and responsibilities of each key personnel including measures to be adopted to avert or minimize the consequences of the emergency,

(iv) When and how the equipment shall be used and when and how the action shall be carried out, (v) help or information that would be available from associated and external agencies including government agencies,

(vi) Guidelines for terminating the action; and (vii) plan for training of personnel and for mock-drills.

2.13.2.24 Safety management plan (Regulation 112)

The owner , agent or manager shall prepare safety management plan in respect of all the operations of the mine in such a manner that the requirements of the Act and of these regulations, bye-laws and orders made are complied with in relation to any activity or in connection therewith ; an organizational structure is in place with the aim of ensuring safety and health performance; the risks to safety and health are evaluated and measures are taken to reduce the risk to persons and damage to machinery or equipments likely to be affected; appropriate controls are in place to ensure that the decisions for ensuring and promoting safety and health are implemented; it is comprehensive and integrated; it provide for the identification of hazards and assessment of risks; it provide for measures to eliminate the hazards or control the risks; it provides for inspection, testing and maintenance of the equipment and machinery; it provides for adequate communication; it provides for any other matter that is necessary to ensure safety; it provides for monitoring, audit, review, training and continual sustainable improvement; and it provide for any other activity or operation which the Chief Inspector may specify in writing. The owner, agent or manager shall prepare a manual for safety management plan and a copy of the manual shall be made available at the office of the mine.

2.13.2.25 Prevention of fire and explosion at an offshore installation (Regulation 121)

The owner, agent or manager shall submit to the Regional Inspector a fire risk analysis of the installation 30 days before its operation. Fire and explosion protection shall be integrated in

the design of installations as active and passive fire protection measures or a combination of the two which shall be assessed on the totality of the measures taken including minimization of petroleum inventory, drainage of spills of flammable liquids, installation layout to separate vulnerable targets from high risk areas, ventilation to disperse leaks, elimination of ignition sources, system to provide early detection of gas and fire, localization of fire by fire and explosion resistant walls, floors and ceilings, reduction of over pressures by equipment layout, venting and minimization of missiles.

2.13.2.26 Emergency shutdown system and fire shut down system (Regulation 122)

Every process complex shall be provided with an emergency shutdown system and a fire shut down system.

2.13.2.26 Classification of hazardous area (Regulation 137)

The areas in the mine shall be classified into different zones according to the degree of probability of the presence of hazardous atmosphere by the Chief Inspector or an Inspector assisted by such assistants and after such investigations as he may consider necessary.

2.13.2.27 Use of electrical equipment in hazardous area (Regulation 138)

No electrical appliance, equipment, or machinery including lighting apparatus shall be used in zone ‘O’ hazardous area.

2.13.2.28 General lighting (Regulation 147)

Adequate general lighting arrangements shall be provided during working hours where the natural lighting is insufficient; derrick floor; driller’s stand and control panel; monkey board; every engine and pump house; derrick sub-structure near blowout preventer controls; every place where persons are to work; every means of escape, access or egress.

2.13.2.29 Supply and use of protective footwear (Regulation 151)

No person shall go into work or be allowed to go into work in a mine unless he wears a protective footwear of such type as may be approved by the Chief Inspector who may specify by a general or special order in writing.

The owner, agent or manager shall at all times maintain a sufficient stock of protective footwear in order to ensure immediate supply as and when need for the same arises.

2.13.2.30 Supply and use of protective helmet and footwear (Regulation 152)

No person shall go into or work or be allowed to go into work in a drilling rig or work-over rig or rig building or rig dismantling or at such other place of work where there is a hazard from flying or falling objects unless he wears a helmet of such type as may be approved by the Chief Inspector by a general or special order in writing.

2.13.2.31 Protective equipment (Regulation 153)

Every person engaged in the operations and every other person who may be exposed to the risk of injury, poisoning or disease arising from the operations shall be provided with depending upon the risk, suitable protective equipment including respiratory protective equipment, eye protectors, gloves, coverall and aprons; and suitable protective outer clothing for use in rain and extreme weather conditions. All the protective equipment shall be provided free of charge. Every person provided with protective equipment shall use the same while at work.

2.13.2.32 Personal survival and escape equipment for off shore installations (Regulation 154)

Each individual on board an installation shall be provided with a personal survival (or immersion) suit; a life jacket; a smoke hood of a simple filter type to exclude smoke and provide protection for at least 10 minutes during escape to or from the Temporary Safety Refuse; a torch; and fire-resistant gloves.

2.13.2.33 Protection against noise (Regulation 155)

The owner, agent or manager shall take steps to reduce the noise level and to reduce the exposure of work persons to noise. No person shall be allowed to work without appropriate ear protection in an area if he is exposed to an equivalent continuous noise level exceeding 90 dB (A). No person shall enter or be allowed to enter an area in which the sound level is 140dB (A) or more.

2.13.2.34 Precautions against toxic dusts, gases and ionising radiation (Regulation 138)

The emission of toxic dust, gases fumes and ionising radiation shall be prevented or controlled at source as far as reasonably practicable. Every person liable to be exposed to

toxic dust, gases, fumes and ionising radiation shall be instructed in the safe working methods and techniques, by a competent person appointed for the purpose.

2.13.2.35 Safety warning signs (Regulation 159)

Storage area and containers of toxic, corrosive, flammable, poisonous and radioactive material shall be properly labeled and appropriately stored according to content. Warning signs shall be posted to denote any hazardous situation. Warning signs shall be posted in areas where the use of personal protective equipment is required. Identification signs shall be conspicuously posted to locate emergency equipment and directions of escape route. Pipelines carrying steam or fluid at high pressure shall be conspicuously identified.

2.13.2.36 Protection against pollution of environment (Regulation 160)

Any oil discharged from a well during its completion, testing and repairs shall be collected in suitably constructed and adequately fenced disposal pits or burnt in case of off shore operations through a special type of oil burners. No disposal pits shall be constructed within 45 metres of any railway, public road or of any public works or of other permanent structure not belonging to the owner. Untreated sewage, formation water, oil, drilling fluid, waste, chemical substances or refuse from a well, tank or other production installation shall not be permitted to create hazard to public health and safety; to run into or contaminate any fresh water structure or body of water or to remain in a place from which it might contaminate any fresh water or body of water; to run over or damage any land, highway or public road; and to be disposed off in the sea. No scrap, surplus or unused material shall be permitted to be dumped or disposed off in the sea or in the vicinity of any installation.

2.13.2.37 General Safety (Regulation 163)

No person shall negligently or willfully do anything likely to endanger life or limb in the mine or negligently or willfully omit to do anything necessary for the safety of the mine or of the persons employed therein.

2.13.2.38 Safety and health education and instructions (Regulation 164)

In every mine, safety and health education and instruction programmes shall be organized regularly to make the workers safety conscious and instill an awareness of occupational safety and health at every level.

2.13.2.39 Place of accident not to be disturbed (Regulation 165)

Whenever there occurs in or about a mine an accident causing loss of life or serious bodily injury to any person, the place of accident shall not be disturbed or altered before the arrival or without the consent of the Chief Inspector to whom notice of the accident is required to be given.

2.14.0 INSTANCES OF SOME TRAGEDIES THAT ARE OUTSIDE THE SCOPE OF AFOREMENTIONED LEGISLATION:

1. **Avinash Mehrotra v. Union of India and Others(2009 6 SCC 398)**

The Supreme Court in the case *Avinash Mehrotra* v. *Union of India and Others (2009 6 SCC 398)* issued guidelines to ensure fire safety standards. The issue involved in the case is whether right to education involves right to study in quality school which does not pose threat to child's safety.

The present case was a public interest litigation filed by Mr. Avinash Mehrotra praying to the court to protect against tragedies resulting from eruption of fire and similar causes, by improving the conditions of the schools in our country. A fire swept through the Lord Krishna Middle School in District Kumbakonam in the city of Madras, Tamil Nadu. The fire started in the school's kitchen while cooks were preparing mid-day meal. Lord Krishna Middle School is one of the thousands of private schools that have sprung up in response to drastic cuts in government spending on education. This building houses more than 900 students in a crowded, thatched-roof building with a single entrance, a narrow stairway, windowless classrooms and only one entrance and exit. The fire had sparked by dry coconut leaves used as firewood in a nearby makeshift kitchen with thatched-roof. The fire had started when the cooks were preparing mid-day meal under a Mid-day meal scheme popular in Tamil Nadu. The ventilation of the entire school building was extremely poor with only cement-perforated windows It took sufficient time for the fire fighters on a crane to break these windows and rescue the few children they could with severe burn injuries. The kitchen fire rose so high that the thatched roof of the classrooms caught fire and the blazing roof supported by bamboo poles collapsed on the school children and most of them died on the spot. The nearby residents started dousing the flames and trying to rescue children. The

school's narrow, steep stairs and few exists apparently hampered those efforts. The crowd of volunteer rescuers ended up blocking the main door as they tried to help.

According to rules, a government-certified engineer is supposed to visit these schools once every two years and issue a "stability certificate" if the building is found to be in good condition and all safety precautions are met. The engineer can refuse to issue the certificate if he finds the safety measures inadequate, losing the school its license to operate. The investigations have revealed that the school in Kumbakonam was last inspected three years ago. The school had a thatched roof in severe violation of building laws. It even had a thatched kitchen close to the thatched classrooms. The fire officials had described the school as a death trap. They said that the victims had no chance of escape when the fire erupted as they were doing their lessons on the top floor.

The judgment of the court was delivered by Dalveer Bhandari J. and Lokeshwar Singh Panta J. The Court observed that in view of the importance of Article 21A, it is imperative that the education which is provided to children in the primary schools should be in the environment of safety. It has become imperative that each school must follow the bare minimum safety standards, in addition to the compliance of the National Building Code of India, 2005, in particular Part IV – Fire & Life Safety and the Code of Practice of Fire Safety in Educational Institutions (IS 14435:1997) of the Bureau of Indian Standards. The said safety standards are enumerated herein below:

1. FIRE SAFETY MEASURES IN SCHOOLS:

i. Provision of adequate capacity and numbers of fire extinguishers of ISI marks to be provided in eye- catching spots in each block of the school.

ii. First Aid kits and necessary medicines should be readily available in the school.

iii. Provision of water tank and separate piping from the tank with hose reel to the ground floor and first floor.

iv. Fire fighting training to all teachers and students from X to XII standards.

v. Fire Task Force in every school comprising of Head of the institution, two teachers / staff members and one member from the Fire and Rescue Department should be constituted. The

Fire & Rescue Department member shall monitor and make fire safety plan and conduct inspections once in every three months.

vi. Display of emergency telephone numbers and list of persons to be contacted on the notice board and other prominent places.

vii. Mock drills to be conducted regularly. Fire alarm to be provided in each floor and for rural schools separate long bell arrangement in case of emergency.

viii. All old electrical wiring and equipment shall be replaced with ISI mark equipments and routine maintenance conducted by the School Management in consultation with the Fire and Rescue Department.

ix. No High Tension lines should run inside or in close proximity to the school. Steps must be taken to shift them if they are already there.

x. The Fire and Rescue Department shall frame guidelines with "DOS and DON'Ts' for schools and issue a fitness certificate, which shall be renewed periodically.

2. TRAINING OF SCHOOL TEACHERS & OTHER STAFF:

i. The teachers along with other staff shall be trained to handle safety equipment, initiate emergency evacuations and protect their students in the event of fire and other emergencies by the Fire and Rescue Department.

ii. They shall also be trained in providing emergency first-aid treatment.

iii. There shall be a School Safety Advisory Committee and an Emergency Response Plan drafted by the Committee in approval and consultation with the concerned Fire & Rescue Department.

iv. Emergency Response Drills conducted at regular intervals to train the students as well as the school staff v. All schools to observe Fire Safety Day on 14th of April every year with awareness programs and fire safety drills in collaboration with the Fire and Rescue Department.

3. SCHOOL BUILDING SPECIFICATIONS:

i. The school buildings shall preferably be a `A' Class construction with brick / stone masonry walls with RCC roofing. Where it is not possible to provide RCC roofing only non-combustible fireproof heat resistance materials should be used.

ii. The nursery and elementary schools should be housed in single storied buildings and the maximum number of floors in school buildings shall be restricted to three including the ground floor.

iii. The School building shall be free from inflammable and toxic materials, which if necessary, should be stored away from the school building.

iv. The staircases, which act as exits or escape routes, shall adhere to provisions specified in the National Building Code of India 2005 to ensure quick evacuation of children.

v. The orientation of the buildings shall be in such a way that proper air circulation and lighting is available with open space all round the building as far as possible.

vi. Existing school buildings shall be provided with additional doors in the main entrances as well as the class rooms if required. The size of the main exit and classroom doors shall be enlarged if found inadequate.

vii. School buildings have to be insured against fire and natural calamities with Group Insurance of school pupils.

viii. Kitchen and other activities involving use of fire shall be carried out in a secure and safe location away from the main school building. ix. All schools shall have water storage tanks.

4. CLEARANCES & CERTIFICATES:

i. Every School shall have a mandatory fire safety inspection by the Fire and Rescue Services Department followed by issuance of a `no objection certificate' to the School as a mandatory requirement for granting permission for establishing or continuation of a School.

ii. An Inspection Team consisting of experts like a Civil Engineer, a Health Officer, a Revenue Officer, a Psychologist, a Fire Officer, a local body officer and a development officer besides the educational authorities shall carry inspection and assessment of infrastructural facilities before the commencement of each academic year. The Team shall submit its Inspection Report to the concerned district Chief Educational Officer.

iii. The building plans for schools shall be prepared only by a Government certified engineer and the PWD Executive Engineer concerned should inspect the building and award a structural stability certificate. Stability Certificates shall be issued by the State or Central Government Engineers only and shall be mandatory for granting permission for establishing or continuation of a School.

iv. In every district, one Recognition Committee headed by a retired judge shall be constituted. Officials from Revenue Department, Public Works Department, Fire Service, Electricity Board, Health and Education Department, a reputed NGO shall be members. They shall visit the schools periodically or at least the erring institutions as listed by the Chief Education Officer.

v. Conditional recognition / approval shall never by resorted to for any school.

It is the fundamental right of each and every child to receive education free from fear of security and safety. The children cannot be compelled to receive education from an unsound and unsafe building. Therefore the apex court directed that safety measures as prescribed by the National Building Code of India, 2005 be implemented by all government and private schools functioning in our country which are as follows:-

(i) Before granting recognition or affiliation, the concerned State Governments and Union Territories are to ensure that the buildings are safe and secured from every angle and they are constructed according to the safety norms incorporated in the National Building Code of India.

(ii) All existing government and private schools shall install fire extinguishing equipments within a period of six months.

(iii) The school buildings be kept free from inflammable and toxic material. If storage is inevitable, they should be stored safely.

(iv) Evaluation of structural aspect of the school may be carried out periodically. The concerned engineers and officials must strictly follow the National Building Code. The safety certificate be issued only after proper inspection. Dereliction in duty must attract immediate disciplinary action against the concerned officials.

(v) Necessary training to be imparted to the staff and other officials of the school to use the fire extinguishing equipments.

2. In Re: Death of 25 Chained Inmates ... v. Union of India And Ors. on 5 February, 2002, AIR 2002 SC 979, 2002 (50) BLJR 961

Court took suo moto notice of a news item published in all leading national dailies about a gruesome tragedy in which more than 25 mentally challenged patients housed in a mental asylum at Ervadi in Ramanathapuram district were charred to death, the patients could not escape the blaze as they had been chained to poles or beds. Court found that the Mental Health Act, 1987 was not at all implemented by the concerned authorities and there was failure on the part of Central/State Governments to implement the 1987 Act. The Court issued a number of guidelines. Some of the guidelines are as follows:-

(i) Every State and Union Territory must undertake a district-wise survey of all registered/unregistered bodies, by whatever name called, purporting to offer psychiatric mental health care. All such bodies should be granted or refused license depending upon whether minimum prescribed standards are fulfilled or not.

(ii) The Chief Secretary or Additional Chief Secretary designated by him shall be the nodal agency to coordinate all activities involved in implementation of the Mental Health Act, 1987, The Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995 and The National Trust for Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities Act, 1999.

(iii) Formation of a National Trust.

(iv) Setting up at least one Central Government run mental hospital in each State and Union Territory.

(v) Establishment of full- fledged State Government run mental hospital in the State/Union Territory.

(vi)Central and State Governments shall undertake a comprehensive awareness campaign with a special rural focus to educate people as to provisions of law relating to mental health, rights of mentally challenged persons, the fact that chaining of mentally challenged persons is

illegal and that mental patients should be sent to doctors and not to religious places such as Temples or Dargahs.

3. Carlton Towers in Bengaluru

The fire accident in high-rise commercial Carlton Towers in Bengaluru on 23rd February, 2010 is another incident of fire which originated in electrical system. The fire broke out at the electrical arcing presumably due to fracture in electrical conductor or deterioration of conductor. The fire however did not spread beyond the vertical cable shaft but it was the thick smoke that spread fast which caused panic reaction among some of the users/visitors who jumped from the top floors. The building in its original version has had all the required fire prevention and fire fighting measures and adequate exits as pointed out by the Technical Committee which investigated the cause of fire. However, at the time of the incident, the passages were either blocked or the fire exit doors were kept locked. At the 2nd, 3rd and 4th floors, the common corridor had been blocked by a make shift construction by the occupants. The smoke detectors did not work and the fire sprinklers at ground and first floor level were found removed. It was noticed by the Committee that the fire accident was avoidable if the intervention in the original electrical wiring had been handled professionally instead of cut and paste work. There were no sketches or indicators showing the location of the fire exit doors. The most serious lapse was to have kept the exit doors locked and to have permitted blocking of the corridor in three floors. There was no warning system and there was no timely communication about the fire that broke out between the first and second floor in electrical shaft. The Committee stressed the need for mandatory re-inspection of high rise buildings by various authorities. It was found that no fire officer or any other official inspected the building after it was cleared for occupation in 1999. The undertaking to train at least 40% of the employees/occupants in fire prevention and fire fighting operations was breached. Further, it was noticed that there were no adequate number of fire fighting vehicles suited for high-rise structures.

4. AMRI Hospital in Kolkata

In AMRI Hospital in Kolkata fire started in the basement of the hospital where waste and combustible material was kept. The fire spread to the upper floors through AC ducts. Ninety people – mostly patients sleeping at that time died on account of suffocation and burns. Alarm bells were found switched off. The fire extinguishing pumps were non-functional as

no water was filled up. There was no A/C mechanic on duty. People were not aware how to use the fire-fighting kits. There was delay in fire fighting operations and in rescuing the trapped persons.

5. Venus Circus Fire Tragedy

The **1981 Bangalore circus fire** occurred on 8 February 1981 at Venus Circus in Bangalore, India, where more than 92 lives were lost, the majority of them being children.

The fire swept the main tent of the circus, which crashed down in flames onto a crowd of about 4,000 people, setting off a stampede towards the exits. The fire disaster claimed 92 lives and 300 others were injured. 56 of those killed, and many of those hurt, were school children. More children were killed in the stampede than by the fire. 21 adults who died were mothers and teachers who had brought the children to the special Saturday matinee for kids. Several of the burn victims were charred beyond recognition. A total of 119 patients were treated in the Burns centre at Victoria Hospital. Fourteen patients with more than 80 percent burns died within 48 hours of the disaster. 32 patients were operated by skin grafting or flap procedures.

The cause of the fire was speculated to be a discarded cigarette or an electric short circuit. The blaze erupted at the back gate as a three-hour matinee had ended and the spectators were moving towards the exits. Apart from the spectators inside, another huge crowd was waiting outside the tent for the next show. The flames quickly spread through the canvas top and wooden bleachers,[1] whipped by strong winds. It took only 15 minutes for the fire to consume the tent, long before the first fire engines arrived. The 4000-seater spectator gallery was also destroyed during the fire. Help could not be sought immediately as the telephone lines were dead. Many of the female performers ran into the fire to save the children.

6. Bangalore-Nanded Express Train Fire

In a tragic fire incident recently in Andhra Pradesh, an AC coach of Bangalore City-Nanded Express was engulfed in fire claiming 26 lives. This recent fire tragedy questions the correctness of the policy and legislation relating to fire.

CHAPTER THREE
EXPLOSIVE

An explosive is a substance or a device that produces a volume of rapidly expanding gas that exerts sudden pressure on its surroundings. An explosive substance is a solid, liquid or gaseous substance (or mixture of substances) which is in itself capable by chemical reaction of producing gas at such a temperature and pressure and at such a speed as to cause damage to the surroundings. Pyrotechnic substances are included even when they do not evolve gases.

A pyrotechnic substance is a substance or mixture of substances designed to produce an effect by heat, light, sound, gas or smoke or a combination of these as the result of non-detonative self-sustaining exothermic chemical reactions.

The use of the word "explosive" can have different meanings and interpretations. Reference to "an explosive" or "explosives" is commonly understood to mean substances or articles in Class 1 of the scheme of the UN Recommendations on the Transport of Dangerous Goods that is those which are intentional explosives or have properties which when assessed under the test procedure of the Manual of Tests and Criteria place them in UN Class 1. The description "explosive" can, however, be used to describe a property and as such it encompasses a wider range of substances than just those in UN Class 1. However, in the above definition "explosive" refers to explosion hazard of substances and articles and is not limited to those which would be placed in Class 1 of the UN scheme.

2. The class of explosives comprises:

(a) Explosive substances;

(b) Explosive articles

(c) Substance and articles not mentioned under (a) and (b) above which are manufactured with the view to producing a practical explosive or pyrotechnic effect.

There are three common types of explosives: chemical, mechanical, and nuclear. Mechanical explosions are physical reactions, for example the effects of compressed air.

The history of explosives seeks short mention at this stage.

Black Powder is widely reckoned as the first explosive known in modern world. Black powder also known as gunpowder is a mixture of saltpeter (potassium nitrate), sulfur, and charcoal (carbon). It originated in China around the tenth century and was used in fireworks and signals. Being a mechanical explosive that is messy, black powder was eventually replaced by cleaner smokeless powder explosives.

In 1831, William Bickford an English leather merchant invented the first safety fuse. Using a safety fuse made black powder explosives more practical and safer.

In 1846, Italian chemist Ascanio Sobrero discovered Nitroglycerin which is a chemical explosive. Nitroglycerin is a mix of nitric acid, sulphuric acid, and glycerol.

In 1846, Chemist Christian Schonbein discovered nitrocellulose or guncotton when he accidently spilled an acid mixture on a cotton apron and the apron exploded.

In 1863, TNT or Trinitrotoluene was invented by German chemist Joseph Wilbrand. It is considered a high explosive. PETN stands for pentaerythritol and is more powerful than TNT. It is capable of exploding small devices and so is used as the core of detonating caps and fuses. TNT and PETN mixed together is known as pentolite.

In 1865, Albert Nobel invented the blasting cap. The blasting cap provided a safer and dependable means of detonating nitroglycerin.

Dynamite was invented by Alfred Nobel in 1867. Nobel developed Straight dynamite and blasting gelatin. Dynamite is an important industrial explosive used in blasting out dam sites, canal beds, mines, quarries, and the foundations of large buildings. It's also used for demolition in warfare.

In 1888, Albert Nobel invented a dense smokeless powder explosive called ballistite.

In 1889, Sir James Dewar and Sir Frederick Abel invented smokeless gunpowder called cordite. Cordite was made of nitroglycerin, guncotton, and a petroleum substance gelatinized by addition of acetone.

Picric acid, known chemically as trinitrophenol, is an industrial chemical best known for its use as an explosive. Picric acid is no longer used in shells because it corrodes the metal casings. When combined with metals it forms salts known as picrates. Picrates are unstable and are used to set off more stable explosives.

In 1955, modern high explosives were developed. Explosives such as nitrate-fuel oil mixtures or ANFO and ammonium nitrate-base water gels now account for seventy percent of the explosive market. Modern day plastic explosives are putty-like substances that can be moulded into any shape. They are made up of either RDX or a mix of RDX and PETN combined with a "plasticizer" to make the substance flexible. Only a powerful detonator can set it off. Their flexibility makes them easy to hide, which makes plastic explosives a favourite for terrorists and secret agents.

The legislations to maintain safety standards and punish violators of rules and regulations are adequately put in place by the Government of India. In order to administer the responsibilities delegated under the Explosives Act 1884 and Petroleum Act 1934 and the rules made there under related to manufacture, import, export, transport, possession, sale and use of Explosives, Petroleum products and Compressed gases, Petroleum and Explosives Safety Organization (PESO) was set up by the Government of India. PESO is currently involved in regulation of over 2, 56,000 premises all over India. Despite precautions, accidents do happen. Explosives cause wide spread damage and destruction. These may be accidental (due to negligence) or intentional (like terrorist or anti social activities). The following legal enactments go a long way to curb the harm caused or threatened to be caused by use of explosive for destructive purpose.

3.1.0 THE EXPLOSIVES ACT, 1884

3.1.1 OBJECTIVE AND SCOPE:

The Indian explosives Bill having been passed by the Legislature received its assent on 26th February, 1884 and came in the statute Book as the Indian Explosives act, 1884. By section 3 0f the Indian explosives (Amendment) Act, 1978 the word "Indian" was omitted and now it stands as THE EXPLOSIVES ACT, 1884. This act contains eighteen sections. The Act was enacted to regulate the manufacture, possession, use, sale, transport and importation of explosives. It extends to the whole of India.

In Ramchandra singh v. State of Bihar (1961) 2 CrLJ391 (Pat) it was observed by the Court that when an offence falls under the Explosives Act and Explosives substance Act, accused cannot be convicted under both the Acts. Thus failure to obtain a license for possession of explosive and explosive substance brings an accused under the mischief of both Acts, but conviction under both Acts simultaneously is improper.

3.1.2 RELEVANT PROVISIONS OF THE ACT

3.1.2.1 Definitions (Section 4)

a) "District Magistrate", in relation to any area for which a Commissioner of Police has been appointed, means the Commissioner of Police thereof and includes -

(i) Deputy Commissioner of Police, exercising jurisdiction over the whole or any part such area, as may be specified by the State Government in this behalf in relation to such area or part; and

(ii) An Additional District Magistrate;

b) "explosives" means gunpowder, nitrogycerine, nitroglycol, gun-cotton, di-nitro-toluenetri-nitrotoluene, picric acid, di-nitor-phenol, tri-nitor-resorcinol (styphnic act), cyclotrimethylenetrinitramine, penta-erythritol-tetranitrate, tetry1, nitorguanidine, lead azide, lead styphynate, fulminate of mercury or any other metal, diazo-di-nitor-phenol, coloured fires or any other substance whether a single chemical compound or a mixture of substances, whether solid or liquid or gaseous used or manufactured with a view to produce a practical effect by explosion or pyrotechnic effect; and includes fog-signals, fireworks, fuses, rockets, percussion caps, detonators, cartridges, ammunition of all descriptions and every adaptation or preparation of an explosive as defined in this clause.

In ***Kifayatullah v. Emperor AIR 1931 All 17*** Patakhas is not explosive, no license is required for its sale or manufacture.

3.1.2.2 Power for Central Government to Prohibit the Manufacture, Possession or Importation of Specially Dangerous Explosives. (Section 6)

The power of Central Government has been exercised to prohibit the manufacture, keeping, importation conveyance and sale of some explosives which is dangerous in character, expedient for the public safety except with the consent of and subject of conditions approved by the Government Inspector and of others unless specially licensed by the secretary of State for manufacture and importation and named and defined in the list of authorized explosives.

In Lopchand Naruji v. State Of Gujarat (2004)7SCC 566 the court observed that the prior sanction or consent as contemplated by s. 7 of the Explosives Substances Act 1908 is not required for prosecuting a person under the Explosives Act 1884. So the accused cannot take

the plea that prosecution of the accused under the Explosives Act 1884 without prior sanction of the Central Government is not maintainable.

3.1.2.3 Notice of Accidents. (Section 8)

It is incumbent on-

a) The occupier of the place, or

b) The master of the aircraft or vessel, or

c) The person in charge of the carriage,

To give notice of the accident(s) to

(i) Chief Controller of Explosives

(ii) The officer in charge of the nearest police station.

3.1.2.4 Inquiry into Accidents. (Section 9)

a) Any inquiry into accidents shall be held in accordance with the rules to be made by the Central Government.

b) Where any accident occur as referred in Section 8 in connection with any place, aircraft, carriage or vessel under the control of the Armed forces of the Union an inquiry into the causes of the accident shall be held by the naval, military or air force authority concerned.

c) Any other circumstances, in cases attended by loss of human life the District Magistrate, A commissioner of Police or a Magistrate subordinate to a District Magistrate holds an inquiry.

d) The person holding an inquiry under this section shall make a report to the Central Government stating the causes of the accident and its circumstances.

3.1.2.5 Punishment of Certain Offences.(Section9-B)

Any person who contravenes the provision of Section 8 shall be punishable,-

a) with fine which may extend to five hundred rupees, or

b) If the accident is attended by loss of human life, with imprisonment for a tern which may extend to three months or fine or with both.

In State v. Ismail Shakur AIR 1958 Bom 103 It was observed by the court that *Mens rea* is not necessary for the offence under the Act. Thus stocking of prohibited explosives is punishable, no matter there is *mens rea* or not.

3.2.0 THE EXPLOSIVE SUBSTANCES ACT, 1908(AS AMENDED BY THE AMENDMENT ACT OF 2001)

3.2.1OBJECTIVE AND SCOPE:

This Act was enacted to amend the law relating to explosive substances and for punishing the persons who contravene the provisions of this Act.

3.2.2 RELEVANT LEGAL PROVISIONS OF THE ACT:

3.2.2.1 Definitions

i. "Explosive substance" shall be deemed to include any materials for making any explosive substance; also any apparatus, machine, implement or material used, or intended to be used, or adapted for causing, or aiding in causing, any explosion in or with any explosive substance; also any part of any such apparatus, machine or implement;

In *Gamdoor Singh v. State of Punjab 1981 CrLJ 1912 (Punj)* the court observed that the definition of the term 'explosive substance' is not exhaustive. Any contravention by itself, or which with the help of another would go to make explosives substance is covered by the definition. Thus a hand- grenade not fitted with igniter set is an explosive substance.

ii. "Special category explosive substance" shall be deemed to include research development explosive (RDX), penta erythritol tetra nitrate (PETN), high melting explosive (HMX), tri nitro toluene (TNT), low tempera¬ture plastic explosive (LTPE), composition exploding (CE) (2, 4, 6 phenyl methyl nitramine or tetryl), OCTOL (mixture of high melting explosive and tri nitro toluene), plastic explosive kirkee-1 (PEK-1) and RDX/TNT compounds and other similar type of explosives and a combination thereof and remote control devices causing explosion and any other substance and a combination thereof which the Central Government may, by notification in the Official Gazette, specify tor the purposes of this Act.

3.2.2.2 Punishment for Causing Explosion Likely to Endanger Life or Property (Section 3)

a) Any person who unlawfully and maliciously causes by any explosive substance an

explosion of a nature likely to endanger life or to cause serious injury to property shall, be punished with imprisonment for life, or with rigorous imprisonment of which shall not be less than ten years, and shall also be liable to fine.

b) Any special category explosive substance an explosion of a nature likely to endanger life or to cause serious injury to property shall, be punished with death, or rigorous imprisonment for life, and shall also is liable to fine.

3.2.2.3 Punishment for Attempt to Cause Explosion, or for Making or Keeping Explosive With Intent to Endanger Life or Property (Section 4)

Any person who attempt to cause explosion, or for making or keeping explosive with intent to endanger life or property shall, be punished,--

(i) In the case of any explosive substance, with imprisonment for life, or with imprisonment of either description for a term which may extend to ten years, and shall also be liable to fine;

(ii) In the case of any special category explosive substance, with rigorous imprisonment for life, or with rigorous imprisonment for a term which may extend to ten years, and shall also be liable to fine.

Use of explosives and fire arms - In case of terrorist attack in the Parliament by use of explosives and fire arms, the appellant being a member of the conspiracy in respect of the said attack procured materials for and being aware of the conspiracy in respect of the said attack procured materials for and being aware of preparation of explosives meant to be used in the said attack would be guilty under section 4 and not under section 3 of the Explosives Substance Act 1908- ***State (NCT of Delhi) v. Navjot Sandhu (2005)11 SCC600***

3.2.2.4 Punishment for Making or Possessing Explosives Under Suspicious Circumstances (Section 5)

Any person who makes or possessing explosives under suspicious circumstances shall, be punished,--

(a) in the case of any explosive substance, with imprisonment for a term which may extend to ten years, and shall also be liable to fine;

(b) In the case of any special category explosive substance, with rigorous imprisonment for life, or with rigorous imprisonment for a term which may extend to ten years, and shall also be liable to fine.

Possession of explosives. For charge under section 5, the prosecution is to prove: (1) that the substance in question is an explosive substance; (2) that the accused makes or knowingly has in his possession or under his control any explosive substance; and (3) that he does so under such circumstances as to give rise to a reasonable suspicion that he was not doing so far a lawful object. The burden to prove those ingredients is on the prosecution. On prosecution discharging the burden, it lies upon the defense to prove he was making or possessing the explosive substance for lawful object- *Mohammad Usman V. State Of Maharastra* AIR 1981 SC 1602.

3.2.2.5 Punishment of Abettors (Section 6)

Any person who by the supply of or solicitation for money, the providing of premises, the supply of materials, or in any manner whatsoever procures, counsels, aids, abets, or is accessory to, the commission of any offence under this Act shall be punished with the punishment provided for the offence.

3.2.2.6 Restriction on Trial of Offences. (Section 7)

No Court shall proceed to the trial of any person for an offence against this Act except with the consent of District Magistrate.

Consent- Prior to amendment of the section by the Amendment Act 54 of 2001, the prosecution of the offence under the State required the sanction of the State Government when power has been so delegated by the Central Government to the State Government. So it was held Prior to this amendment sanction for prosecution accorded by the District Magistrate was not valid consent- ***Jarnil Singh v. State of Punjab 2002 Cr LJ (NOC) 16 (P&H)***.

After this amendment with effect from 1st February 2002 the consent given by the District Magistrate shall be valid when Central Government has delegated its power of giving consent to the District Magistrate and not to the State Government, it is enough. It is not necessary for the State Government when its power under section 7 of the Act has been delegated to the State government to further delegate the power to the Addl. District Magistrate and the

central government has already delegated its power under section 7 of the Act to the District magistrate directly- ***State of M.P. v. Bhupendra Singh Air 1968 Sc 1273.***

3.3.0 PETROLEUM ACT, 1934

3.3.1 OBJECTIVE AND SCOPE:

The Indian Petroleum Act, 1899, was passed at the time when the use of petroleum, particularly of dangerous petroleum or petrol was limited and with the rapid developments in the use of petroleum that took place in subsequent years it become unsuitable in several ways. In the year 1903, the attention of the Government of India was drawn to the inconvenience arising from the existence of separate set of rules to regulate the importation, possession, and transfer of petroleum in the different provinces of India existing then. Thus in order to secure the uniformity the Central Government was empowered to frame rule applicable throughout India.

The Petroleum Bill, 1934 was passed by Indian Legislature in the year 1934, which received the assent of the Governor- General on 6th September, 1934. It came into force with effect from 30th March, 1937 as THE PETROLEUM ACT, 1934.

The Act was enacted to consolidate and amend the law relating to the import, transport, storage, production, refining and blending of petroleum. It extends to whole of India.

3.3.2 SAILENT PROVISIONS OF THE ACT

3.3.2.1 Notice of accidents with petroleum (Section 27)

This section makes it incumbent-

a) On the person whether he is the occupier of the place or in charge of the petroleum or in charge of the carriage or the master of the vessel.
b) to inform as the earliest to the nearest Magistrate or to the officer in charge of the nearest police station and also to the Chief Controller of Explosives in India, of the occurrence of any accident by explosion or fire involving loss of human life or serious injury to person or property or of a nature involving such things in the usual course, relating to places connected with refining, blending, storage or any carriage or vessel whether carrying or loading or unloading petroleum.

3.3.2.2 Inquiries into Serious Accidents with Petroleum (Section 28)

- Section 176 of the Code of Criminal Procedure, 1973 empowers inquiry to be made by the magistrate into the cause of death either instead of police or in addition to, the

investigation held by the police officer under section 174 0f the Code of Criminal Procedure and if he does so, he shall have all powers in conducting, it which he would have in holding an inquiry into an office.

- The magistrate holding such an inquiry shall record the evidence taken by him in connection therewith according to the circumstances of the case.

3.3.2.3 Power to Limit Powers of Local Authority over Petroleum (Section 31)

Where any enactment confers powers upon any local authority in respect of the transport or storage of petroleum, the Central Government may, by notification in the Official Gazette,-

(a) limit the operation of such enactment or

(b) Restrict the exercise of such powers, in any manner it deems fit.

In ***Indian Oil Corporation Ltd. V. Executive officer (1998) 9 SCC 384*** the Court observed that a plain remedy of the provision of section 31 establishes that the provision can be employed to limit the operation of an enactment of the kind or restrict the exercise of the powers conferred on a local authority under it in respect of the transport and storage of petroleum.

3.4.0 THE ATOMIC ENERGY ACT 1962

3.4.1 OBJECTIVE AND SCOPE:

The Atomic Energy Bill 1948, which Pandit Jawaharlal Nehru moved in the Constituent Assembly of India (Legislative) on April 6, 1948, ensured the state control of atomic minerals. The control over the development of atomic energy was being exercised under the Atomic Energy Act, 1948. Since the enactment of the Atomic Energy Act, 1948 rapid developments in the field of atomic energy have taken place. In order to implement the future programme of expansion, it became necessary to revise the Act of 1948. Accordingly, the Atomic Energy Bill was introduced in the Parliament. The Bill was passed by both the Houses of Parliament and received the assent of the President on 15th September, 1962. Parliament repealed the Atomic Energy Act 1948 by passing the Atomic Energy Act 1962.

The new Act is quite comprehensive on the discovery of uranium or thorium , mining control or the concentration of substances containing uranium , disposal of uranium, power to obtain information regarding materials, plant or processes , power of entry and inspection , power to do work for discovering minerals , compulsory acquisition of rights to work minerals , compulsory acquisition of prescribed substances, minerals and plants, compulsory acquisition

not sale, compensation in case of compulsory acquisition of a mine, and the substitution of certain contracts .

The Act provides for the development, control and use of atomic energy for the welfare of the people of India and for other peaceful purposes and for matters connected thereto.

3.4.2 RELEVANT PROVISIONS OF THE ACT:

3.4.2.1 Definition

ii. "Atomic energy" means energy released from atomic nuclei as a result of any process, including the fission and fusion processes.

iii. "Radiation" means gamma rays, X-rays, and rays consisting of alpha particles, beta particles, neutrons, protons and other nuclear and sub-atomic particles, but not sound or radio waves, or visible, infrared or ultraviolet light.

iv. "Radioactive substance" or "radioactive material" means any substance or material which spontaneously emits radiation in excess of the levels prescribed by notification by the Central Government.

3.4.2.2 General Powers of the Central Government (Section 3(e))

Central Government shall have power to provide for control over radioactive substances or radiation generating plant in order to —

(i) Prevent radiation hazards;

(ii) Secure public safety and safety of persons handling radioactive substances or radiation generating plant; and

(iii) Ensure safe disposal of radioactive wastes.

In ***People's Union for Civil Liberties & Anr v. Union of India & Ors***. *(2004)2 SCC 476,* while upholding the *vires* of section 18 read with section 3 of the Act, the Apex Court observed that the Atomic Energy Act, 1962 deals with a sensitive subject. Section 18 and 3 of the Atomic Energy Act had to be enacted by the Parliament as in wrong hands the information can possess danger not only to the security of the State but also to the public at large.

3.4.2.3 Control over radioactive substances (Section 16)

The Central Government may prohibit

- the manufacture, possession, use, transfer by sale, export and import and
- in an emergency, transport and disposal

- of radioactive substances without its written consent.

3.4.2.4 Special provisions as to safety (Section 17)

The Central Government may make provision-

Regarding premises or places, in which radioactive substances are manufactured, produced, mined, treated, stored or used or any radiation generating plant, equipment or appliance is used-

(a) To prevent injury being caused to the health of persons employed at such premises or places or other persons either by radiations, or by the ingestion of any radioactive substance;

(b) To secure that any radioactive waste products resulting from such manufacture, production, mining, treatment, storage, or use as aforesaid is disposed of safely;

(c) To prescribe qualifications of the persons for employment at such premises or places and the regulation of their hours of employment, minimum leave and periodical medical examination and the rules may, in particular and without prejudice to the generality of this subsection provide for imposing requirements as to the erection or structural alterations of buildings or the carrying out of works.

A. Regarding transports of any radioactive substance being dangerous to health and make such rules that are necessary to prevent injury caused by such transport to the health of persons engaged therein and other persons.

Rules made under this section may provide for imposing requirements, prohibitions and restrictions on employers, employed persons and other persons.

In the event of any contravention of the rules made under this section, the Central Government has the right to take measures as it may deem necessary-

- to prevent further injury to persons or
- damage to property arising from radiation or
- contamination by radioactive substances
- the right to take further action for the enforcement of penalties under section 24,
- the sealing of premises, vehicle, vessel, or aircraft, and
- The seizure of radioactive substances and contaminated equipment.

In ***G. Sundarrajan v. Union of India & Ors*** *[(2013) 6 SCC 620]* the appellants opposed the nuclear power plant at Kudankulam in Tamil Nadu (KKNPP) on the grounds of safety and environmental protection.

The Supreme Court while observing that it is not for Courts to determine whether a particular policy or a particular decision taken in fulfillment of a policy, is fair or reasonable, noted that the Act deals with a sensitive subject. The Court underlined that *section 17* of the Act envisages present and future safety of our Nuclear Power Plants and the lives and environment around. While rejecting the petitioner's contention that the establishment of nuclear power plant at Kudankulam will make an inroad into the right to live guaranteed under Article 21 of the Constitution the Apex Court held that it will only protect the right to life guaranteed under Article 21 of the Constitution for achieving a larger public interest and will achieve the object and purpose of the Atomic Energy Act.

The Court concluded that the expert teams were unanimous in their opinion of the safety and security of KKNPP both to life and property of the people and the environment which includes marine life. The Court observed that it had to respect national nuclear policy of the Country reflected in the Act and the same had to be given effect to for the welfare of the people and the Country's economic growth and with these objectives in mind, KKNPP was set up.

3.4.2.5 Administration of Factories Act, 1948 (Section 23)

Not being affected by anything contained in the Factories Act, 1948 the authority to administer the Act shall vest in the Central Government in relation to

- any factory owned by the Central Government or
- any authority or
- corporation established by it or
- a Government Company

engaged in carrying out the purposes of this Act.

3.4.2.6 Offences and Penalties (Section 24 (b) (c))

Whoever contravenes any rules made under section 17 obstruct any person authorized by the Central Government under sub-section (4) of section 17 in the exercise of powers under

that section shall be punishable with imprisonment for a term which may extent to five years, or with fine, or both.

3.5.0 THE STATIC AND MOBILE PRESSURE VESSELS (UNFIRED) RULES 1981

3.5.1 OBJECTIVE AND SCOPE:

Compressed gases filled in metallic container pose potential hazard and the container explodes. Hence, the Govt. of India vide Notification No.M-1272(1) dated 28/09/1938 has declared compressed gas filled in a metallic container to be deemed to be an explosive under Section 17 of the Explosives Act, 1884. Subsequently, in exercise of powers vested in Section 5 & 7 of the Act, the Govt. framed the Static & Mobile Pressure Vessels Rules, 1981 to regulate filling, possession, transport and import of compressed gases in pressure vessels.
The *Static and Mobile Pressure Vessels (unfired) Rules 1981* prescribe: separate licenses for storage and transportation of compressed gases. It also list safety in the design, manufacture and location of pressure vessels, safety during filling and during transportation, safety status of the vehicles transporting the vessels and certificate of safety etc.

3.5.2. RELEVANT PROVISIONS OF THE RULE:

3.5.2.1 Definition

i. "Chief Controller" means the Chief Controller of Explosives;

ii. "Competent person" means a person or an organisation recognised by the Chief Controller, for such gases and for such period as may be specified as competent for carrying out tests, examination, inspections and certification for installations and transport vehicles as stipulated in these rules, if such a person or organization possesses the qualifications, experience and other requirements as set out in Appendix II to these rules and is recognized as per procedure laid down in rule 11-A: Provided that the Chief Controller may relax the retirements of qualifications in respect of a competent person if such a person is exceptionally experienced and knowledgeable but not the requirements in respect of the facilities at his command;

iii. “Compressed Gas” means any permanent gas, liquefiable gas or gas dissolved in liquid, under pressure or gas mixture which in a closed pressure vessel exercise a pressure exceeding two atmosphere (gauge) at the maximum working temperature and includes Hydrogen Fluoride. In case of vessel without insulation or refrigeration, the maximum working temperature shall be considered as 550 C.;

iv. “Controller of Explosives” includes Jt. Chief Controller of Explosives, the Deputy Chief Controller of Explosives, Deputy Controller of Explosives and Assistant Controller of Explosives;

v. “cylinder” or “gas cylinder” means any closed metal container intended for storage and transport of compressed gas having the same meaning as assigned to it in clause (xvi) of rule 2 of the Gas Cylinder Rules, 1981,”construction;

vi. “District authority” means—(i) in towns having a Commissioner of Police, the Commissioner or a Deputy Commissioner of Police; and (ii) in any other place, the District Magistrate;

vii. “flammability range” means the difference between the minimum and maximum percentage by volume of the gas in mixture with air that forms a flammable mixture at atmospheric pressure and ambient temperature’

viii. “flammable compressed gas” means gas 13 percent or less of which when mixed with air forms a flammable mixture or whose flammable range with air is greater than 12 percent;

ix. “safety relief device” means an automatic pressure relieving device actuated by the pressure upstream of the valve and characterized by fully opened pop action, intended to prevent the rupture of a pressure vessel under certain conditions of exposure ;

x. “Source of ignition” means naked lights, fires, exposed incandescent materials, electric welding arcs, lamps, other than those specially approved for use in flammable atmosphere, or a spark or flame produced by any means;

3.5.2.2 Prohibition of Employment of Children and Intoxicated Persons (Rule 8)

Children under the age of eighteen years and any person who is in a state of intoxication shall not be employed in-charge of loading or unloading or transport of any compressed gas or in any premises licensed under these rules.

3.5.2.3 Prohibition of Smoking, Fires, Lights, Etc. (Rule 9)

Persons shall not smoke and fires, or other substances of flammable nature or substances which can ignite spontaneously or spread fire or explosion shall not be allowed near a place where any compressed gas is being filled, stored or transported in a vessel.

3.5.2.4 Special precautions against accidents (Rule 10)

(1) Persons shall not commit or attempt to commit any act which may tend to cause a fire or explosion in or about any place where any compressed gas is stored, handled of transported in a vessel.

(2) All empty vessels which had contained, any flammable or toxic gases, shall, except when they are opened for the purposed of filling or cleaning, or for rendering the gas free, but kept securely closed until they have been cleaned or freed or the gas, as the case may be.

(3) Persons storing compressed gas in a vessel and persons in charge of, or engaged in the storage, handling and transport of such gas in vessels, shall at all times—

(i) Comply with the provisions of these rules and the conditions of any license issued there under;

(ii) Observe all precautions for the prevention of accident by fire or explosion;

And

(iii) Prevent any person from committing any act referred in sub-rule (1).

3.5.2.5General Provisions as to Storage of Compressed Gas (Rule 21)

(1) All vessels meant for storage of compressed gas shall be installed entirely above ground, that is to say, no part of the vessel shall be buried below the ground level.

(2) Vessels and first stage regulating equipment shall be located in the open.

(3) Vessels shall not be installed one above the other.

(4) Vessels within a group shall be so located that their longitudinal axes are parallel to each other.

(5) No vessel shall be located within the bonded area of petroleum or other flammable liquid storages.
(6) Sufficient space shall be provided between two vessels to permit fire-fighting operations.
(7) Two or more vessels installed in batteries shall be so installed that the top surface of the vessels are on the same plane.
(8) Vessels with their dished ends facing each other shall have screen walls in between them.
(9) The underground vessels shall be placed within concrete or brick masonry pit with a gap of 1.0 metre between the walls of the pit and the vessel as well as in between the vessels.

3.5.2.6 Fencing (Rule 24)

The area where vessels pumping equipment, loading and unloading facilities and direct fired vaporisers are provided, shall be enclosed by an industrial type fence at least 2 metres high along the perimeter of the safety zone.
Every fence shall have at least two means of exit and the gates of such exits hall open outwards and shall not be self-locking.

3.5.2.7 Cleanliness (Rule 25)

An area of three meters around the vessel shall be kept free from readily ignitable materials, such as weeds and long dry grass.

3.5.2.8 Earthing (Rule 26)

All vessels used for storage of flammable liquefiable gases shall be electrically connected with the earth in an efficient manner.
Pipelines conveying flammable liquids shall be adequately prepared for electrical continuity and connected with the earth in an efficient manner.

3.5.2.9No Smoking (Rule 27)

A permanent notice with letters at least 5 cms in height prohibiting smoking and naked lights shall be fixed to the fence surrounding the area where flammable or oxidising gases are stored and the notice shall be visible from outside.

3.5.2.10Fire protection (Rule 28)

All vessels used for the storage of flammable compressed gases shall be protected against fire hazards as under,--

(i) Provision shall be made for an adequate supply of water and fire protection in the storage area in accordance with the provision of the rules and the regulation applicable in that area. The application of water may be by hydrants, hoses and mobile equipments, fixed monitors or by fixed spray systems which may be automatic. Control of water flow should be possible from outside any danger area. The fire water system shall be designed with medium velocity sprinklers for above ground storage vessels, filling sheds, loading or unloading area, and pump the single largest risk area and with additional requirements for hydrant points.

(ii) Hydrants, where provided, shall be readily accessible at all times and so spaced as to provided for the protection of all vessels;
(iii) Sufficient length of fire hose shall be provided and be readily available. The outlet of each hose line shall be equipped with a combination jet and fog nozzle. The hoses should be maintained well and periodically inspected;

(iv) mobile equipment , fixed monitors or fixed spray systems shall be designed to discharge water at a rate sufficient to maintain an adequate film of water over the surface of the vessel and supports under fire conditions;

(v) Consideration shall be given to the provision of mobile or fixed water spray systems giving suitable and effective protections for vehicle loading and unloading areas;

(vi) At least two dry chemical powder type fire extinguishers of 9 kg. Capacity each shall be installed at each point of access to the installations.

(vii) In liquefied Petroleum Gas dispensing station for fuelling motor vehicles, having only underground or earth covered (mounded) liquefied petroleum gas storage vessels, two numbers seventy kilograms dry chemical type fire extinguishers shall be provided. In dispensing stations having above ground liquefied petroleum gas storage vessels, hydrants with minimum water pressure of seven kilograms per square centimeter shall be provided at convenient positions for all-round coverage's of storage vessels and handling area, and water sprinklers with spray density of ten liters per minute per square metre shall be provided. The fire water pump shall be preferably diesel engine driven with capacity to deliver water at the rate and pressure specified above. The minimum fire water storage at the premises shall be that needed for fighting fire at least for one hour."

3.5.2.11 Electrical apparatus and installations (Rule 31)

(1) No electrical wire shall pass over any storage vessel.

(2) All electrical wires installed within the safety zone of any storage vessel for the storage of flammable compressed gases shall consist of insulated cables of approved type. The cables shall be mechanically continuous throughout and effectively earthed away from the vessels.

(3) For pump rooms used for pumping flammable compressed gases –

(i) All electrical meters, distribution boards, switches, fuses, plugs and sockets shall be of flame-proof construction complying with the requirements of IS:2148 : 1968 and the frames shall be effectively earthed;

(ii) All electrical fixed lamps shall be enclosed in a well glass flameproof fitting conforming to IS: 2206 (Part I) : 1962.

(4) All electrical portable hand lamps shall be of a type approved by the Chief Controller.

3.5.2.12 Vehicles for Transport of Compressed Gas (Rule 35)

Every vehicle for the transport of compressed gas shall be of a type approved, in writing, by the Chief Controller.

.

3.5.2.13 Fire Protection (Rule 41)

(1) Two serviceable fire extinguishers of suitable size and type shall be provided on each vehicle, one on each side and should be accessible from outside the cab.

(2) A person, while in, or attending, any vehicle conveying flammable gas, shall not smoke or use matches or lighters.

(3) No fire, artificial light or article capable of causing fire or explosion shall be taken or carried on any vehicle carrying flammable gas.

3.5.2.14Notice of accident (Rule 66)

(1) The notice of an accident required to be given under sub-section (1) of section 8 of the Act shall be given to the :

- *Chief Controller or Controller*:

under whose jurisdiction the area falls by Fax, E-mail or telegram (Telegraphic Address – Explosives, Nagpur, E-mail explosives@explosives.gov.in) followed by a letter giving particulars of the occurrence within 24 hours;

- *District Magistrate* concerned and
- *officer-in-charge of the nearest Police Station* by the quickest route.

(2) Pending visit or instruction from the Chief Controller or Controller that he does not wish to make any further investigation or inquiry, all wreckage and debris shall be left untouched. Only such debris shall be removed as is necessary for the rescue of the persons injured and for recovery of the bodies of any persons killed by the accident or in the case of railway or road for the restoration of communication or traffic.

3.5.2.15 Inquiry into accidents (Rule 67)

(1) Whenever a

- District Magistrate or
- Commissioner of Police or
- Magistrate subordinate to a District Magistrate (hereinafter in this rule referred to as the Magistrate)

holds an inquiry under sub-section (1) of section 9 of the Act, he shall adjourn such an inquiry *unless* the

- Chief Controller or
- Controller or
- an officer nominated by him

is present to watch the proceedings or the Magistrate has received *written information* from the Chief Controller or Controller that he *does not wish* to send a representative.

(2) In case of holding an adjourned inquiry, the Magistrate shall, at least fourteen days before holding such inquiry, send to the Chief Controller or Controller notice in writing of the time and place of holding the adjourned inquiry.

(3) Where human life has been lost in any accident, the Magistrate, may before the inquiry is adjourned under sub-rule (1) take evidence to identify the bodies and may order the internment thereof.

(4) The Chief Controller or Controller or his representative shall be at liberty at any such inquiry to examine any witness.

(5) Where evidence is given at an enquiry

- of any neglect

  being the cause of an explosion or accident or

- of any defect

  in or about or in connection with any installation or any vehicle

appearing to the Magistrate to require a remedy and the

- Chief Controller or
- Controller or
- the officer nominated by him

is not present at the enquiry, the Magistrate shall send to the Chief Controller notice in writing of the neglect or defect.

3.5.2.16 Inquiry into More Serious Accidents (Rule 68)

(1) An inquiry under section 9A of the Act shall be held in

- open court
- in such manner

as they may think most effectual for ascertaining the causes and circumstances of the accident, and enabling them to make the report under this rule.

However, in case the Central Government so directs, the inquiry may be held in camera.

(2) Persons attending as witnesses before the enquiry court shall be allowed such expenses as would be allowed to witnesses for attending before a Civil Court subordinate to the High Court. Any disputes regarding such expenses shall be referred to the local Magistrate, who, on a request made by the enquiry officer, shall ascertain and certify the proper amount of such expenses.

3.6.0 ATOMIC ENERGY (WORKING OF THE MINES, MINERALS AND HANDLING OF PRESCRIBED SUBSTANCES) RULES, 1984

3.6.1 OBJECTIVE AND SCOPE

The Atomic Energy Act 1962 was enacted by repealing the Atomic Energy Act 1948. The comprehensive Act provides for the development, control and use of atomic energy for the welfare of the people of India and for other peaceful purposes and for matters connected therewith.

The Atomic Energy Act, 1962 vests the *AERB* (Atomic Energy Regulatory Board) with "jurisdiction over all the units of the *DAE* (Department of Atomic Energy) and all radiation installations of the country". The Atomic Energy Act also appoints the AERB Chairman as the Competent Authority under other safety- related rules such as Radiation Protection Rules, 1971; Atomic Energy (Safe Disposal of Radioactive Waste) Rules; Atomic Energy (Factories) Rules, 1984; and Atomic Energy (Working of Mines, Minerals and Handling of Prescribed Substances) Rules, 1984. These Rules are framed under section 14 read with clauses (e), (g) and (1) of sub-section (2) of section 30 of the Atomic Energy Act, which gives powers to the government to enact suitable rules in discharging safety-related functions. The Atomic Energy (Working of Mines, Minerals and Handling of Prescribed Substances) Rules, 1984 regulates the safety of workers mining or handling prescribed substances. It specifies the safety norms to be followed by the license holders and the consequence in case they violate the same.

3.6.2 THE RELEVANT PROVISIONS OF THE RULE

3.6.2.1 Definitions

i. “Adequate protection” means protection against radiation, and other physical and chemical agents, such that the operational limits of levels of radiation or contamination or concentration of radioactive as well as non-radioactive toxic substances are not exceeded.
ii. “Competent authority” means any officer or authority appointed by the Central Government by notification for the purpose of these rules.
iii. “Occupational hazard” means the risk in the occupation which, if not controlled, may affect the health, safety and well being of the employees.
iv. “Radiation monitoring” means periodic or continuous determination of the amount of radiation or contamination for the purpose of health protection.
v. “Safety officer” means any person duly qualified and employed for the purpose of carrying out duties as prescribed under these rules.

vi. "Toxic gas" means any gas the inhalation of which may result in adverse health conditions.

vii. "Toxic substance" means any substance the intake of which may result in adverse health conditions.

3.6.2.2 License for Mining, Milling, Processing and/or Handling of Prescribed Substances (Rule 3)

Persons shall not be allowed to mill, process and/ or handle any ore mineral or other material from which any one or more of the prescribed substances can be extracted, without obtaining a license from the Licensing Authority. After obtaining of such license, he shall not violate the terms of such license.

In case the person was already engaged in mining before these rules came to life, he shall apply to the Licensing Authority for the issue of the requisite license. He may carry on mining till the Licensing Authority comes to a final decision.

3.6.2.3Duties and responsibilities of the licensee (Rule 7)

(a) A licensee shall not employ any person under the age of 18 years in an installation.

(b) He shall ensure that the operation of the installation is carried out strictly in accordance with the terms and conditions of the license.

(c) He shall ensure that the general requirements of radiation and industrial safety are complied with.

(d) He shall not modify the installation/process/flow sheet without prior approval from the Licensing Authority.

(e) He shall confine his operations only to the licensed installation.

(f) He shall provide adequate staff at all time in order to ensure safety of normal operations, for dose evaluation, for management of accidents, if any, and for medical care and attention of the employees.

(g) He shall ensure that adequate protection is provided at all time to safeguard the health and safety of the employees.

(h) He shall ensure that regular radiation monitoring of the installation as well as of radiation workers is carried out and their records maintained.

(i) He shall ensure that adequate precautions are taken to prevent environmental pollution due to the operation of the installation, beyond permissible limits as may be specified by the Licensing Authority from time to time.

(j) He shall arrange for pre-employment and post-termination/retirement medical examination of all employees. The pre-employment medical examination in the case of radiation workers and workers in mine shall include a comprehensive documentation of the respective employee's medical history, history of previous employment, radiation exposure and chronic exposure to any specific environment such as silica dust. A person shall be employed only after such pre-employment medical examination and after being found fit for the employment. He shall arrange for annual medical examination of such workers during their service which shall include chest X-ray at least once in five years, general laboratory investigations such as examination of blood and excreta, and special investigation such as examination of skin, hands, fingers, finger nails, ears and eyes.

(k) He shall maintain complete and update records of personal, medical and occupational histories of radiation workers and workers in mines in such form as may be prescribed by the Competent Authority.

(l) He shall send relevant excerpts from the records maintained by him, on demand, to the Licensing Authority in a form as may be specified by the Licensing Authority.

(m) He shall ensure that all employees are properly instructed as to the hazards involved in their work and the precautions to be taken by them for their safety and the safety of their fellow workers. He shall prepare necessary operating instructions for each unit.

(n) He shall in consultation with the Safety Officer and the Radiological Safety Officer chalk out an emergency plan which will lay down instructions for the guidance of the employees in the event of emergency and/or accident conditions and shall get the plan approved by the Competent Authority. He shall conduct periodic training and drills to ensure that all employees are familiar with the emergency plan. The emergency plan and the result of the drills shall be reviewed from time to time.

(o) He shall obtain reports on unusual occurrences and accidents from the radiological safety officer and the safety officer and send them to the Licensing Authority and the Competent Authority in Form C appended to these rules.

(p) He shall notify any theft or loss of prescribed substances from his custody to the Licensing Authority as soon as the loss is discovered.

(q) He shall employ a qualified Safety Officer and a Radiological Safety Officer and be guided by them in all matters of industrial and radiological safety of the staff and the installation. He shall provide them with staff and facilities to carry out their duties effectively. The safety officer and radiological safety officer may be one and the same person, if he possesses the required qualifications to carry out the duties of both the posts.

(r) He shall provide the facility of periodic inspection of the installation to the Licensing Authority or his representatives.

3.6.2.4 Duties and responsibilities of the Radiological Safety Officer (Rule 8)

The Radiological Safety Officer shall-

- advise the employer on all matters connected with radiological safety of the employees
- the public residing in the vicinity of the installation

In doing so he shall be guided, by the provisions of the Radiation Protection Rules, 1971.

3.6.2.5 Duties and responsibilities of the Safety Officer (Rule 9)

(a) The Safety Officer shall advise the employer on all matters connected with industrial safety and industrial hygiene.

(b) He shall periodically inspect the places of work to ensure that the equipment are adequate and in good working order and that safe procedures are adopted by the employees during work. He shall ensure that unsafe conditions do not prevail in the places of work.

(c) He shall periodically inspect personal protective equipment (like hand gloves, helmets, goggles etc.) to ensure that they are fit for use.

(d) He shall periodically inspect emergency safety kits and ensure that they are fit for use in an emergency.

(e) He shall investigate all accidents, near accidents including those in which no person is involved, and recommend to the employer, measures of preventing recurrence of such accidents.

(f) He shall collect accident statistics and analyze them according to standard procedures, for reviewing the safety status of the installation.

(g) He shall conduct periodic ventilation survey in the installation to ensure that the ventilation is satisfactory.

(h) He shall carry out noise level survey, illumination survey, survey for airborne toxic substances and any other survey relating to industrial hygiene and ensure that the employees work in a safe atmosphere.

(i) He shall ensure that the provisions of Factories (Atomic Energy) Rules, 1983 are complied with.

3.6.2.6 Compensation (Rule 10)

If any employee suffers-

- an injury,
- disease or
- disablement

- arising out of the mining, milling, processing or handling of prescribed substance the employer shall be liable for the payment of compensation in accordance with and to the extent of the provisions of the Workmen's Compensation Act, 1976

3.7.0 HAZARDOUS WASTES (MANAGEMENT AND HANDLING) RULES, 1989

3.7.1OBJECTIVE AND SCOPE

Hazardous wastes are considered highly toxic and therefore disposal of such wastes needs proper attention so as to reduce possible environmental hazards. Industrial growth has resulted in generation of huge volume of hazardous wastes in the country. In addition to this, hazardous wastes sometimes get imported mainly from the western countries for re-processing or recycling. Inventorisation of hazardous wastes generating units in the country is not yet completed. Scientific disposal of hazardous wastes has become a major environmental issue in India. In exercise of the powers conferred by sections 6, 8 and 25 of the Environment (Protection) Act, 1986, the Central Government framed the Hazardous Wastes (Management and Handling) Rules, 1989 to deal with the hazardous wastes related environmental problems that may arise in the near future. These rules were amended in 2000 and 2003, to bring the Rules in line with the requirements of the Basel Convention and also to improve the applicability and implementation aspects with regard to imports of hazardous waste.

3.7.2 RELEVANT PROVISIONS OF THE RULES:

3.7.2.1 Applications

These rules shall apply to hazardous wastes as specified in Schedule and shall not apply to –

(a) Waste water and exhaust gases as covered under the provisions of the Water (Prevention and Control of Pollution) Act. 1974 (6 of 1974) and the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981).

(b) Wastes arising out of the operation from ships beyond five kilometers as covered under the provisions of the Merchant Shipping Act, 1958.

(c) radio-active wastes as covered under the provisions of the Atomic Energy Act, 1962

(d) bio-medical wastes covered under the Bio-Medical Wastes (Management and Handling) Rules, 1998 made under the Act.

(e) Wastes covered under the Municipal Solid Wastes (Management and Handling) Rules, 2000 made under the Act and

(f) The lead acid batteries covered under the Batteries (Management and Handling) Rules, 2001, made under the Act.

3.7.2.2 Definitions

a) **"Disposal"** means deposit, treatment, recycling and recovery of any hazardous wastes.

"Environmentally sound management of hazardous wastes" means taking all steps required to ensure that the hazardous wastes are managed in a manner which will protect health and the environment against the adverse effects which may result from such wastes.

b) **"Facility"** means any location wherein the processes incidental to the waste generation, collection, reception, treatment, storage and disposal are carried out.

c) **"Hazardous waste"** means any waste which by reason of any of its physical, chemical, reactive, toxic, flammable, explosive or corrosive characteristics causes

danger or is likely to cause danger to health or environment, whether alone or when in contact with other wastes or substances, and shall include-

i. Wastes listed in cloumn (3) of Schedule-1.

ii. wastes having constituents listed in Schedule-2 of their concentration is equal to or more than the limit indicated in the said Schedule; and

iii. wastes listed in Lists 'A' and 'B' of Schedule-3 (Part-A) applicable only in case(s) of import or export of hazardous wastes in accordance with rules 12, 13 and 14 if they possess any of the hazardous characteristics listed in Part-B of Schedule-3.

Explanation: For the purposes of this clause-

(i) all wastes mentioned in column (3) of Schedule-1 are hazardous wastes irrespective of concentration limits given in Schedule-2 except as otherwise indicated and Schedule-2 shall be applicable only for wastes or waste constituents not covered under column (3) of Schedule-1;

(ii) Schedule-3 shall be applicable only in case(s) of import or export;

d) **"Hazardous waste site"** means a place for collection, reception, treatment, storage and disposal of hazardous wastes which has been duly approved by the competent authority.

e) **"Operator of facility"** means a person who owns or operates a facility for collection, reception, treatment, storage or disposal of hazardous wastes.

3.7.2 .3 Disposal Site (Rule 8)

(1) The occupier shall be responsible for identifying sites for establishing the facility for

treatment, storage and disposal of hazardous wastes.

(2) The State Government, operator of a facility or any association of occupiers shall jointly and severally be responsible for and identify sites for common facility for treatment, storage and disposal of hazardous wastes in the State.

(3) The operator of a facility, occupier or any association of occupiers shall undertake an environmental impact assessment (EIA) of the selected site(s) and shall submit the EIA report to the State Pollution Control Board or Committee.

(4) The State Pollution Control Board or Committee shall on being satisfied with the EIA report, cause a public notice for conducting a public hearing as per the procedure contained in the Environmental Impact Assessment Notification, 1994 published vide S.O. 60(E) dated 27th January, 1994 as amended from time to time.

(5) The State Pollution Control Board or Committee shall forward to the State Government or Union territory Administrator, as the case may be, the project report including EIA report and details of public hearing along with its recommendations within a period of 30 days from the last date of public hearing.

(6) The State Government shall complete the assessment within a period of thirty days from the date of receipt of the documents mentioned in sub-rule (5) and convey the decision of its approval of site(s) or otherwise within 30 days thereafter to the concerned operator of the facility, occupier or any association of occupiers.

(7)After approval of the site or sites, the State Government shall acquire the site or inform the occupiers to acquire the site(s) for settling up the facility for treatment, storage and disposal of hazardous wastes. The State Government shall simultaneously notify such site(s). The State Government shall also compile and publish periodically an inventory of such hazardous wastes disposal sites and facilities.

(8) Setting up of an on-site facility for treatment, storage and disposal of hazardous wastes for captive use shall be governed by the authorisation procedure laid down in rule 5.

3.7.2 .4 Design and setting up of disposal facility (Rule 8)

The occupier any association or operator of a facility, as the case may be shall design and set up disposal facility as per the guidelines issued by the Central Government or the State Government as the case may be.

3.7.2 .5 Operation and closure of landfill site (Rule 8 B)

(1) The occupier or the operator as the case may be, shall be responsible for safe and environmentally sound operation of the facility as per design approved under Rule 8A by the State Pollution Control Board.

They will also ensure that the closure of the landfill is as per the design approved under Rule 8A by the State Pollution Control Board.

3.7.2 .6 Accident reporting and follow-up (Rule 10)

Where an accident occurs at the facility or on a hazardous waste site or during transportation of hazardous waste, the occupier or operator of a facility shall report immediately to the State Pollution control Board or Committee about the accident in Form 5.

3.7.2.7 Import and Export of Hazardous Wastes for dumping and disposal (Rule11)

Under Rule 11 (2) and (3) of Hazardous Wastes Rules, a country which wants to export hazardous waste to India must apply to the MoEF to get permission for the proposed trans-boundary movement of hazardous wastes. After examining the communication received and being satisfied that the import of such hazardous wastes is for processing or reuse as raw materials, the Central Government grants permission for the import of such wastes. The Central Government may specify various conditions to the exporter of hazardous wastes, as and if required. The MoEF is also responsible to oversee safe-handling of hazardous wastes at the time of off-loading through appropriate communications to the port authorities under Rule 11(6) of the said Rule. The Central Government may refuse permission to import such hazardous wastes, if the government does not satisfy with the communication.

3.8.0 THE GAS CYLINDER RULES 2004

3.8.1 OBJECTIVE AND SCOPE

The Gas Cylinder Rules (GCR) of 2004 was framed under sections 5 and 7 the Explosives Act (1884). These Rules were first published in 1940 following Government notification no. M-1272 dated 28/9/1938 declaring any gas contained in a metal container in a compressed or liquefied state to be an explosive within the meaning of the Explosives Act (1884). The 1940 rules were replaced by the Gas Cylinder Rules (1981) after a comprehensive review of the development of the gas industry after independence. The 80s and 90s witnessed massive expansion in gas and related industries triggered by economic liberalisation, the spread of CNG and LPG as environmentally friendly automotive fuels, as well as by the entry of many new technologies etc. necessitating another review and the formulation of the new Gas Cylinder Rules (2004).

Major activities covered under these Rules include the approval of any unit manufacturing cylinders, valves and LPG regulators, or designing such equipment ; licensing of gas filling plants, CNG fueling stations, cylinder storage premises and import of cylinders/valves; grant of permission for filling cylinders; recognition of cylinder testing stations etc. Petroleum and Explosives Safety Organization (PESO) also plays a crucial role in the formulation of safety standards for cylinders, valves, regulators etc. PESO regularly undertakes safety audits of gas installations, filling plants, CNG fuelling stations, cylinder, valve and regulator manufacturing units etc. which have been approved under these Rules to ensure compliance and inculcate awareness of safety.

Bureau of Indian Standards has issued a number of standards pertaining to the design, transportation and handling of compressed gases. The specifications of colour codes for industrial gas cylinders are dealt in IS4379. Specifications for LPG are dealt in IS 4576. The test methods of LPG are dealt in IS 1448. The flameproof electrical fittings to be used in the filling area is as per specification of IS 2148. The methods for Hydrostatic stress testing are dealt in IS 5844. Periodical inspection interval for gas cylinders in use are dealt in IS 8868. The colour specifications of selected industrial gas cylinders (non-medical) as per IS-4379-1967

3.8.2. RELEVANT PROVISIONS OF THE RULE:

3.8.2.1 Definitions-

"Chief Controller" means the Chief Controller of Explosives, Government of India;

i. "Controller" includes the Joint Chief Controller of Explosives, the Deputy Chief Controller of Explosives, the Controller of Explosives and the Deputy Controller of Explosives;

ii. **"**Compressed Natural Gas (CNG)" means mixtures of hydrocarbon gases and vapours, consisting mainly of Methane in gaseous form, which has been compressed for use as automotive fuel;

iii. "District authority" means-

(a) a Commissioner of Police or Deputy Commissioner of Police in any town having a Commissioner of Police; and

(b) in any other place, the District Magistrate;

iv. "District Magistrate" includes an Additional District Magistrate, and in the States of Punjab and Haryana and in the Karaikal, Mahe and Yanam areas of the Union Territory of Pondicherry, also includes a Sub-Divisional Magistrate;

v. "Flammable gas" means any gas which, if either a mixture of 13 per cent or less (by volume) with air forms a flammable mixture or the flammability range with air is greater than 12 per cent regardless of the lower limit and these limits shall be determined at atmospheric temperature and pressure;

Explanation.-"flammability range" means the difference between the minimum and maximum percentages by volume of the gas in mixture with air that forms a flammable mixture;

vi. **"**Gas Cylinder" or "Cylinder" means any closed metal container having a volume exceeding 500 ml but not exceeding 1000 litres intended for the storage and transport of compressed gas, including any liquefied petroleum gas (LPG) container/compressed natural gas (CNG) cylinder fitted to a motor vehicle as its fuel tank but not including any other such container fitted to a special transport or under-carriage and includes a composite cylinder, however, the water capacity of cylinders used for storage of CNG, nitrogen, compressed air, etc. may exceed 1000 litres up to 2500 litres provided the dia meter of such cylinder does not exceed 60 cm;

vii. "poisonous (toxic) gas" a gas which has a maximum allowable concentration in air for human respiration not exceeding 100 mg/m^3 at 15°C and 1 kgf/cm^2 absolute pressure;

viii. "Manufacture of gas" means filling of a cylinder with any compressed gas and also includes transfer of compressed gas from one cylinder to any other cylinder.

ix. "Transport" means the moving of a cylinder filled with any compressed gas from one place to another.

3.8.2.2 Filling, possession, import and transport of cylinders (Section 3)

No person shall fill any cylinder with any compressed gas or import, possess or transport any cylinder so filled or intended to be filled with such gas unless:-

(a) such cylinder and its valve have been constructed to a type and standard specified in Schedule I as amended from time to time by an order issued by the Chief Controller;

(b) The test and inspection certificates issued by the inspecting authority in respect of cylinder and its valve are made available to the Chief Controller and prior approval of the said authority is obtained.

(3) The test and inspection certificates required to be obtained from the inspecting authority in respect of cylinders and valves inspected and certified by it in accordance with the approved design and specification or code shall give the information included in Schedule II.

3.8.2.3 Safety Relief Devices (Rule 5)

Cylinders manufactured in India, fitted with safety devices shall have such safety devices manufactured and maintained in accordance with IS:5903.

Cylinders manufactured outside India and approved for use in this country, fitted with safety relief devices shall have these devices fully maintained in accordance with the requirements of the specification to which they were originally made.

The rule further states that cylinders containing obnoxious or poisonous gases shall not be provided with any safety device.

3.8.2.4Labelling of cylinders (Section 9)

Every cylinder shall be labeled with the name of the gas and the name and address of the person by whom the cylinder was filled with gas. A warning shall be attached to every cylinder containing permanent or liquefiable gas.

3.8.2.5 Restriction on delivery or dispatch of cylinders (Section 10)

No person shall deliver or dispatch any cylinder filled with any compressed gas to any other person in India who is not the holder of a license to possess such compressed gas cylinders or his authorized agent unless he is exempted under these rules to possess such compressed gas cylinders without a license.

3.8.2.6 Repairing of seamless gas cylinders during use (Section 11):

No person shall repair or cause to repair any leakage in the body of a seamless gas cylinder.

3.8.2.7 Repairing of welded or brazed cylinders (Section 12):

Welded or brazed cylinder showing leaks at any place other than the welded or brazed seams shall not be repaired and shall be rendered unserviceable.

3.8.2.8 Prohibition of Employment of Children and Intoxicated Persons (Rule 13)

Children under the age of eighteen years and any person who is in a state of intoxication shall not be employed in-charge of loading or unloading or transport of any compressed gas cylinder or in any premises licensed under these rules.

3.8.2.9 Prohibition of Smoking, Fires, Lights and Dangerous Substances (Rule 14)

Persons shall not smoke and fires, other than blow pipe flames for repairs or other substances of flammable nature or substances which can ignite spontaneously or spread fire or explosion shall not be allowed near a place where any cylinder for flammable gases is being filled, stored or handled.

Also, persons shall not posses any matches, fuses, mobile phones or any other appliances for producing ignition or explosion when they are in or near any place where cylinders containing flammable gases are filled, stored or handled.

3.8.2.10 General Precautions (Rule 15)

(1) Cylinders shall together with their valves, other fittings and the identification colours under these rules, always be maintained in good condition.

(2) Oils or similar lubricants shall not be used on any valves or other fittings of any cylinder.

(3) No cylinder, subject only to Rules 12 and Clause B 2(1) (b) of Schedule IV, shall undergo heat treatment or be exposed to a high temperature or to the Sun or stored with any other flammable or explosive material.

(4) Every cylinder containing compressed gas shall have its valve securely closed so as to prevent leakage. Valves fitted to the cylinders containing Liquefied Petroleum Gas and highly toxic gases shall be provided with security nut on the outlet to act as a secondary means of safeguard against leakage of gas.

(5) If a leak in the valve cannot be rectified by tightening the gland nut or the spindle, the cylinder shall be removed to an open space where it is least dangerous to life

and property and the filler shall be informed. In the case of LPG cylinder, the safety cap shall be fixed to stop the leak and the cylinder shall be moved to an open space.

3.8.2.11 Special Precautions against Accidents (Rule 16)

(1) Persons shall not commit or attempt to commit any act, which may tend to cause a fire or explosion in or about any place where gas under pressure in a cylinder is stored, handled or transported.

(2) Persons storing compressed gas cylinders and persons in charge of or engaged in the storage, handling and transport of such gas cylinders, shall at all times-

(a) Comply with the provisions of these rules and the conditions of any license relating thereto;

(b) Undertake all precautions for the prevention of accident by fire or explosion;

(c) Prevent any person from committing any act referred to in sub-rule (1).

3.8.2.12 Competent person to be in charge of operations (Section 17):

Every person holding or acting under a license granted under these rules, shall, whenever cylinders are filled, loaded, unloaded, examined or tested, depute a competent and experienced person to be present and to conduct any of the said operations in accordance with provisions of these rules and the name, qualification and experience of such personnel deputed in each shift shall be furnished to the Chief Controller or Controller for considering filling permission round the clock.

(3) The cylinders shall be handled carefully and not be allowed to fall upon one another or otherwise subjected to any undue shock.

(4) Sliding, dropping or playing with cylinders is prohibited.

(5) Liquefied petroleum gas cylinders and cylinders containing liquefiable gases shall always be kept in an upright position and shall be so placed that they cannot be knocked over.

(6) Cylinders used in horizontal position shall be so secured that they cannot roll.

(7) Open flames, lights, mobile phones, lighting of fires, welding and smoking shall be prohibited in close proximity to any cylinder containing flammable gases except those while in use for welding, cutting or heating.

(8) Working places shall not be classified as storage places for the purpose of licensing.

3.8.2.13 Handling and Use (Rule 18)

(1) Cylinders shall be adequately supported during handling.

(2) Conveyors, trolleys and cradles of adequate strength shall, as far as possible, be used when moving the cylinders.

(3) The cylinders shall be handled carefully and not be allowed to fall upon one another or otherwise subjected to any undue shock.

(4) Sliding, dropping or playing with cylinders is prohibited.

(5) Liquefied petroleum gas cylinders and cylinders containing liquefiable gases shall always be kept in an upright position and shall be so placed that they cannot be knocked over.

(6) Cylinders used in horizontal position shall be so secured that they cannot roll.

(7) Open flames, lights, mobile phones, lighting of fires, welding and smoking shall be prohibited in close proximity to any cylinder containing flammable gases except those while in use for welding, cutting or heating.

(8) Working places shall not be classified as storage places for the purpose of licensing.

3.8.2.14Restrictions on filling (Section 19)

Welded cylinders shall not be used for filling any permanent or high pressure liquefiable gas or highly toxic gases like Boron trifluoride, Carbonyl chloride (Phosgene), Chlorine trifluoride, Cyanogen, Cyanogen chloride, Hydrogen cyanide, Hydrogen sulphide. No cylinder, which has once been used for storage and transportation of coal gas, carbon monoxide or methane shall be used for filling with any other gas except mixture of these gases with inert gases. No cylinder shall be filled with any gas that is capable of combining chemically so as to endanger its serviceability.

3.8.2.15 Loading, unloading and transport of cylinders (Section 20)

Cylinders filled with any compressed gas shall be transported duly complying with the provisions laid down in Schedule VI and also observing the relevant provisions of other statutes as applicable.

3.8.2.16 Storage of Cylinders (Rule 21)

(1) Cylinders shall be stored in a cool, dry, well ventilated place under cover, away from boilers, open flames, steam pipes or any potential sources of heat and such place of storage shall be easily accessible.

(2) The storage room or shed shall be of fire resistant construction.

(3) Thin wall cylinders such as liquefied petroleum gas cylinders and dissolved gas cylinders shall not be stacked in a horizontal position.

(4) Cylinders containing flammable gases and toxic gases shall be kept separated from each other and from cylinders containing other types of gases by an adequate distance or by a suitable partition wall.

(5) Cylinders shall not be stored under conditions, which will cause them to corrode.

(6) Cylinders shall not be stored along with any combustible material.

(7) Empty cylinders shall be segregated from the filled ones and care shall be taken that all the valves are tightly shut.

3.8.2.17 Electrical Installations (Rule 22)

All electric meters, distribution boards, switches, fuses, plugs and sockets, all electric fittings, fixed lamps, portable hand lamps and motors, in the premises for filling and storing flammable gases in cylinders shall be flame proof and shall be in accordance with IS:2148 or such other specification as approved by the Chief Controller and shall be effectively earthed.

3.8.2.18 Purity of Gas (Rule23)

(1) Compressed gases shall be free from impurities, which are likely to corrode the metal of the cylinder or form an explosive substance with it or cause the gases to decompose or explode.

(2) The gases shall be as dry as possible and in no instance shall the aqueous phase separate when a liquefied gas is cooled to 0^{0}C.

(3) Before filling any cylinder with gases like carbon monoxide, coal gas, hydrogen or methane, the gas shall be free from hydrogen sulphide and other sulphurous impurities as far as practicable. The moisture shall be less than 0.02 g/m^{3} of gas at normal temperature and pressure.

3.8.2.19 Cylinder Subjected To the Action of Fire (Rule 24)

A cylinder exposed to fire shall not be used. The only way it can be used is if it has undergone proper examination and hydrostatic test or hydrostatic stretch test and has proved to be safe.

In case it is suspected that the cylinder has been damaged due to heat, it shall be subjected to proper heat treatment, followed by hydrostatic test or hydrostatic stretch test, as the case may be, before the cylinder is taken into use.

Cylinders which have been damaged by fire shall not be used and the same shall be condemned and destroyed by an experienced and competent person.

3.8.2.20 Ownership of cylinder (Section 25)

A cylinder shall not be filled with a compressed gas and transported unless it was charged by or with the written consent of the owner of the cylinder.

3.8.2.21 Owner's record (Section 27)

The owner of a cylinder shall keep for the life of each cylinder, a record containing the following information regarding each cylinder, namely:-

(i) Cylinder manufacturer's name and the rotation number;

(ii) The specification number to which the cylinder is manufactured;

(iii) Date of original hydrostatic test or hydrostatic stretch test;

(iv) Cylinder manufacturer's test and inspection certificates;

(v) Number and date of letter of approval granted by the Chief Controller.

3.8.2.22 Conversion of cylinders (Section 28)

(1) Gas cylinders designed and approved for filling with a particular gas shall not be used for filling with any other gas unless specific approval is obtained from the Chief Controller

3.8.2.23 License for import of gas cylinders (Section 29):

No person shall import any cylinder filled or intended to be filled with any compressed gas except under and in accordance with the conditions of a license granted under these rules and the relevant provisions of Foreign Trade (Development and Regulation) Act, 1992.

3.8.2.24 Permission of the Commissioner of Customs (Section 32)

No imported cylinder shall be landed except with the permission of the Commissioner of Customs.

3.8.2.25 Importation by land (Section 33)

No gas cylinder filled with any compressed gas, shall be imported by land save with the previous sanction in each case, of the Central Government and under such conditions and restrictions as it may impose.

3.8.2.26 Importation by air (Section 34)

No cylinder filled with any compressed gas shall be imported by air save with the previous sanction in each case of the Director General of Civil Aviation.

3.8.2.27 Condemning of cylinders (Section 36)

Any cylinder which fails to pass periodic examination or test or which loses in its tare weight by over 5 per cent or which for any other defect is found to be unsafe for use or after expiry of the service life of the cylinder, shall not be filled with any compressed gas and shall be destroyed by flattening it as a whole or after being cut into pieces in such a manner that the pieces cannot again be joined together by welding or otherwise to form a cylinder, under intimation to the owner of the cylinder, as specified in IS:8198

3.8.2.28 License for filling and possession (Section 43)

No person shall fill any cylinder with compressed gas and no cylinder filled with compressed gas shall be possessed by anyone except under and in accordance with the conditions of a license granted under these rules.

The licensee shall be responsible, for all operations connected with the filling and possession of cylinders in the licensed premises.

3.8.2.29 No Objection Certificate (Section 48): –

(1) An applicant for a new license in Form 'G', for a CNG dispensing station shall apply to the District Magistrate with two copies of site plan showing the location of the premises proposed to be licensed under these rules for a certificate to the effect that there is no objection to the applicant's receiving a license for a CNG dispensing station at the site proposed, and the District Magistrate, if satisfied, shall grant no objection certificate to the applicant who shall forward it to the Chief Controller or Controller with his application.

(2) Every certificate issued by the District Magistrate under sub-rule (1) above shall be accompanied by a copy of the plan of the proposed site duly endorsed by him under official seal.

(3) The Chief Controller or Controller may refer an application not accompanied by a certificate granted under sub-rule (1) to the District Magistrate for his observation.

(4) If the District Magistrate, either on a reference being made to him or otherwise, intimates to the Chief Controller or Controller that any license which has been applied for should not, in his opinion, granted, such license shall not be issued without the sanction of the Central Government.

3.8.2.30 Procedure on death or disability of licensee (Section 60)

If a licensee dies or becomes insolvent or mentally incapable or is otherwise disabled, the person carrying on the business or legal heir of such licensee shall not be liable to any penalty or confiscation under the Act or these rules for exercising the powers granted to the licensee during such time as may reasonably be required to allow him to make an application for a new license or transfer of the existing license in his own name.

3.8.2.31 Production of license on demand (Section 62)

Every person holding or acting under a license granted under these rules shall produce it, or an authenticated copy of it, at the place to which the license applies, when called upon to do so by any of the officers specified in rule 71.

3.8.2.32 Notice of Accidents (Rule 67)

(1) The notice of an accident required to be given under sub-section (1) of section 8 of the Act shall be given to the:

- *Chief Controller or Controller*:

under whose jurisdiction the area falls by Fax, E-mail or telegram (Telegraphic Address – Explosives, Nagpur, E-mail explosives@explosives.gov.in) followed by a letter giving particulars of the occurrence within 24 hours;

- *District Magistrate* concerned and
- *officer-in-charge of the nearest Police Station* by the quickest route.

(2) Pending visit or instruction from the Chief Controller or Controller that he does not wish to make any further investigation or inquiry, all wreckage and debris shall be left untouched. Only such debris shall be removed as is necessary for the

rescue of the persons injured and for recovery of the bodies of any persons killed by the accident or in the case of railway or road for the restoration of communication or traffic.

3.8.2.33 Inquiry into Accidents (Rule 68)

(1) Whenever a

- District Magistrate or
- Commissioner of Police or
- Magistrate subordinate to a District Magistrate (hereinafter in this rule referred to as the Magistrate)

holds an inquiry under sub-section (1) of section 9 of the Act, he shall adjourn such an inquiry *unless* the

- Chief Controller or
- Controller or
- an officer nominated by him

is present to watch the proceedings or the Magistrate has received *written information* from the Chief Controller or Controller that he *does not wish* to send a representative.

(2) In case of holding an adjourned inquiry, the Magistrate shall, at least fourteen days before holding such inquiry, send to the Chief Controller or Controller notice in writing of the time and place of holding the adjourned inquiry.

(3) Where human life has been lost in any accident, the Magistrate, may before the inquiry is adjourned under sub-rule (1) take evidence to identify the bodies and may order the internment thereof.

(4) The Chief Controller or Controller or his representative shall be at liberty at any such inquiry to examine any witness.

(5) Where evidence is given at an enquiry

- of any neglect

  being the cause of an explosion or accident or

- of any defect

  in or about or in connection with any installation or any vehicle

appearing to the Magistrate to require a remedy and the

- Chief Controller or

- Controller or
- the officer nominated by him

is not present at the enquiry, the Magistrate shall send to the Chief Controller notice in writing of the neglect or defect.

3.8.2.34 Inquiry into More Serious Accidents (Rule 69)

(1) An inquiry under section 9A of the Act shall be held in

- open court
- in such manner

as they may think most effectual for ascertaining the causes and circumstances of the accident, and enabling them to make the report under this rule.

However, in case the Central Government so directs, the inquiry may be held in camera.

(2) Persons attending as witnesses before the enquiry court shall be allowed such expenses as would be allowed to witnesses for attending before a Civil Court subordinate to the High Court. Any disputes regarding such expenses shall be referred to the local Magistrate, who, on a request made by the enquiry officer, shall ascertain and certify the proper amount of such expenses.

3.8.2.35 Dangerous Practices (Rule70)

In case the Controller finds any compressed gas filling station or a storage place, where a cylinder or any part is being filled or possessed or the practice of handling or transporting such cylinders is dangerous or defective and in his opinion endangers public safety or the bodily safety of any person, such Controller may by an order in writing require the occupier of such filling station or storage place or the owner of the cylinder to remedy the same within such time as may be specified in the order, and the said occupier shall carry out the orders within the specified time.

3.9.0 THE PETROLEUM AND NATURAL GAS REGULATORY BOARD ACT, 2006

3.9.1 OBJECTIVE AND SCOPE:

The Act provides for the establishment of Petroleum and Natural Gas Regulatory Board to regulate the refining, processing, storage, transportation, distribution, marketing and sale of petroleum, petroleum products and natural gas excluding production of crude oil and natural gas so as to protect the interests of consumers and entities engaged in specified activities relating to petroleum, petroleum products and natural gas and to ensure uninterrupted and adequate supply of petroleum, petroleum products and natural gas in all parts of the country and to promote competitive markets and for matters connected therewith or incidental thereto.

It applies to refining, processing, storage, transportation, distribution, marketing and sale of petroleum, petroleum products and natural gas excluding production of crude oil and natural gas.

3.9.2 RELEVANT PROVISIONS OF THE ACT:

3.9.2.1 Definitions

i. "Board" means the Petroleum and Natural Gas Regulatory Board established under sub-section (1) of section 3;

ii. "Bureau of Indian Standards" means the Bureau of Indian Standards established under section 3 of the Bureau of Indian Standards Act, 1986 (63 of 1986);

3.9.2.2 Establishment and Incorporation of the Board (Section 3)

The Central Government may, by notification establish, a Board to be called the Petroleum and Natural Gas Regulatory Board for the purpose of this Act

The Board shall consist of a Chairperson, a Member (Legal) and three other members to be appointed by the Central Government.

The head office of the Board shall be at New Delhi and regional offices at such places as the Board may deem necessary having regard to public interest and magnitude of the work.

3.9.2.3 Functions of the Board (Section 11)

The Board shall among other function lay down, by regulations, the technical standards and specifications including safety standards in activities relating to petroleum, petroleum products and natural gas, including the construction and operation of pipeline and infrastructure projects related to downstream petroleum and natural gas sector.

3.10.0 THE EXPLOSIVES RULES, 2008

3.10.1 OBJECTIVE AND SCOPE:

Explosives Act 1884 was passed to regulate the manufacture, possession, use, sale, transport, import and export of Explosives. The Draft of Explosives Rules, 2006 were published vide notification of the Government of India in the Ministry of Commerce & Industry (Department of Industrial Policy & Promotion) in the Gazette of India, inviting objections and suggestions from all persons likely to be affected thereby. Objections and suggestions were received from the public on the said draft rules and in exercise of powers conferred by Sections 5 and 7 of the Explosives Act, 1884 and in supersession of the Explosives Rules, 1983 the Central Government made the rules.

3.10.2 RELEVANT LEGAL PROVISION OF THE ACT:

3.10.2.1 Definition

i. “authorized explosive” means an explosive included in the list of authorized explosives referred to in rule 6 and published by the Central Government from time to time in the Official Gazette;

ii. “competent person” means a person recognized by the Chief Controller who is adequately experienced and well conversant in safe manufacture, storage, transportation, handling, as the case may be of explosive.

iii. “Departmental Testing Station” means the testing station of the Petroleum and Explosives Safety Organization;

iv. “Explosive limit” means the maximum quantity of explosives permitted by the licensing authority to be stored or processed in particular premises;

v. “foreman's certificate” means certificate of competence issued by the Controller to a person who is conversant with the process of manufacturing fireworks or safety fuse, as the case may be, and associated hazards for the purpose of supervision of such activities by him;

vi. “high explosive” means explosive which is characterized by a very high rate of reaction, development of high pressure, and presence detonation wave, but does not include fireworks and safety fuse;

vii. “Licensing authority” means authority empowered to issue license or certificate or permit specified in Part 1 of Schedule IV; Division 4 under Class 7 given under the said Part;

viii. “man-limit” means the maximum number of individuals permitted by the licensing authority to work inside particular premises for manufacture or processing of explosives;

ix. “Occupier”, in relation to premises means a person who has the control and is responsible for managing the affairs of the premises, and includes, in relation to any explosives, the person in possession of the explosives.

x. “permitted explosive” means authorized explosive which is permitted by the Director General of Mines Safety to be used in underground coal mines.

xi. “Prohibited explosive” means explosive which is prohibited by the Central Government under Section 6 of the Act;

xii. “protected works” includes buildings or structures in which persons dwell, work or assemble, college, school, hospital, theatre, cinema house, shop, market, factory, place of worships, place of storage of hazardous substances, highway or public road, railway line, navigable waterways, cross country above ground pipelines, dams or reservoirs, overhead high tension power lines, but does not include cart tracks not in regular use, agricultural wells and pump sets connected therewith.

3.10.2.2 Classification of explosives (Section 4)

The explosives shall be classified in the manner specified in Schedule I. The dual system of classification shall be retained for five years from the date of commencement of these Rules; hereafter only UN classification shall be applicable. If any explosive falls within the limits of more than one class as defined in Schedule I, it shall be deemed.

3.10.2.3 Safety distance categories of explosives (Section 5)

Explosives are divided into four categories according to the risks which they present when initiated, namely:—

(a) Category X—Those explosives, which have a fire or a slight explosion risk or both but the effect of which will be local.

(b) Category Y—Those explosives, which have a mass fire risk or a moderate explosion risk, but not the risk of mass explosion.

(c) Category Z—Those explosives, which have a mass explosion risk and major missile effect.

(d) Category ZZ—Those explosives, which have a mass explosion risk and minor missile effect.

(2) If any question arises as to whether any explosive belongs to Category X, Category Y, Category Z or Category ZZ, the matter shall be referred to the Chief Controller whose decision shall be final.

(3) The safety distances shall be followed as per tables specified in Schedule VIII.

3.4.2.4 Authorization of explosives (Section 6)

No person shall manufacture, import, export, transport, possess, sell or use any explosive unless it has been declared as an authorized explosive, by an order issued by the Chief Controller and published by the Central Government in the Official Gazette.

3.10.2.5 Control over manufacture, import, export, transport, possession for sale or use of explosives (Section 7)

No person shall manufacture, import, export, transport, possess for sale or use an explosive except as authorized or licensed under these rules.

3.10.2.5 Pre-requisite for grant of license (Section 8)

No license shall be granted unless otherwise all the relevant provisions laid down under these rules are complied with and all conditions which are contained in the license forms under Part 3 or Part 4 of Schedule V are satisfied.

3.10.2.6 General Restrictions (Section 10)

No explosives shall be manufactured at any place except at a licensed factory with manufacturing process duly approved by the licensing authority. No person shall manufacture any plastic explosive without adding marking agent as per the International Civil Aviation Organization Resolution A 27-8 based on United Nations Security Council Resolution 635 of 14th June, 1989 and United Nation General Assembly Resolution 44/29 of 4th December,

1989. No person shall import or export any explosive except under and in accordance with the conditions of license granted under these rules. No explosive shall be imported or exported except at its ports notified by the Central Government

3.10.2.7 Employment of competent person (Section 11)

All operations associated with handling of explosives shall be carried out under supervision of competent person. No explosive shall be manufactured in any building or part thereof except under the supervision of a competent person employed by the licensee who shall be fully conversant with the process of manufacture of explosives, hazards connected therewith and the provisions of these rules.

3.10.2.8 Protection from lightning and thunderstorm (Section 12)

Every magazine or process building shall have attached thereto one or more efficient lightning conductors designed and erected in accordance with specification laid down by Bureau of Indian Standards.

3.10.2.9 Repair and maintenance of the premises (Section 13)

The interior of every building or room used for storage of explosives and the benches, shelves and fittings in such building or room shall be so constructed or so lined or covered as to prevent the exposure of any iron or steel and the detachment of any grit, iron, steel or similar substance so as to come into contact with explosive in such building and such interior benches, shelves and fittings shall, so far as is reasonably practicable, be kept clean and free from grit.

3.10.2.10 Packing of explosives (Section 14)

No person shall import, export, tender for transport, cause to be transported, possess or sell any explosive unless -

(a) It is packed in the manner laid down in Schedule II;

(b) The container or package is marked in accordance with rule 15;

(c) The packages conform to the relevant standard of Bureau of Indian Standards or other standards accepted and approved by the Chief Controller;

(d) Packages of explosives for export or import conform to the requirements of the tests as specified for various classifications under International Maritime Dangerous Goods Code

(e) The firecrackers for export purpose shall have different colour packing and shall carry a declaration printed thereon. “Not for sale in India. Only for export”.

3.10.2.11 Marking on explosives and packages (Section 15)

The outer package shall be marked in conspicuous indelible character, by means of a stamping, embossing or painting with—

(a) The word “EXPLOSIVES”;

(b) The name of authorized explosive;

(c) The number if any of the Class and the Division including sub-division to which it belongs;

(d) The safety distance category of explosive;

(e) The name of the manufacturer;

(f) Identification number of the package;

(g) The net weight of explosives;

(h) Gross weight of the package;

(i) Date of manufacture and batch number;

(j) UN Classification and UN Identification number (for export packages);

(k) In case of plastic explosives, the words “marking agent added as per International Civil Aviation Organization Resolution A 27-8” referred in sub-clause (iv) of clause (c) under sub-rule (2) of rule 10; and

(l) A paper slip containing the above details shall be kept inside the package:

3.10.2.12 Split explosive to be destroyed (Section 17)

If any explosive escapes from the package in which it is contained, or is split, such explosive shall immediately be carefully collected and destroyed in a safe manner as provided in these rules.

3.10.2.13 Precautions against danger from water, heat or pollution (Section 18)

In the case of any explosive which is liable to be dangerously affected by water, due precautions shall at all times be taken to prevent water from coming in contact with such explosive. Packages containing explosives shall not be allowed to remain in the sun or exposed to excessive heat.

3.10.2.14 Special precautions against accident (Section 19)

No person shall commit or attempt to commit any act which may tend to cause a fire or explosion in or about any place where an explosive is manufactured, stored or transported. Every person possessing explosives and every person in charge of or engaged in the import, export, manufacture, sale, transport or handling of explosives shall at all times comply with the provisions of these rules and the conditions of the license relating thereto and observe all due precautions for the prevention of thefts or accidents by fire or explosion.

3.10.2.15 Records of accidents (Section 25)

Records of all accidents occurring within the licensed premises shall be maintained and shall be made available to the inspecting authority.

3.10.2.16Approval of manufacturing process (Section 26)

No new explosive after its inclusion in the list of authorized explosives shall be manufactured unless the process of manufacture is approved by the licensing authority and his permission obtained in writing.

3104.2.17 Submission of safety management plan to District Magistrate (Section 27)

The applicant shall submit a copy of the safety management plan to the District Magistrate

3.10.2.18 Restriction of articles liable to spontaneous ignition (Section 30)

Oiled cotton, oil rags and oil waste and any other article liable to spontaneous ignition shall not be taken into any building where explosives are kept except for the purpose of immediate supply and work or immediate use in such building and upon cessation of such work or use, shall forthwith be removed.

3.10.2.19 Particulars to be exhibited on process building (Section 32)

The particulars mentioned hereunder shall be prominently marked or exhibited in every process building, namely:—

(1) **Outside the building—**

(a) The name and identification number of the building as per plan approved by the licensing authority; and

(b) Man - limit and explosives limit.

(2) **Inside the building—**

(a) Man limit and explosives limit;

(b) General safety instructions;

(c) Operating instructions; and

(d) Safe process details.

3.10.2.20 Removal of foreign matter from ingredients (Section 33)

No ingredient shall be made or mixed into an explosive unless it has been thoroughly treated by sifting or other effective means for the detection and removal of all foreign objects or matters that might cause danger.

3.10.2.21 Removal of explosives and materials expeditiously (Section 34)

All explosives processed in a process building shall immediately be removed to the next process building or a licensed magazine or storehouse, as the case may be, and no explosive shall be allowed to accumulate in any process building. Where the process in the manufacture of explosive in a process building has been completed, all substances that have been brought into the building for use in that process but not used, and that are not immediately required for use in another process in the same building, shall immediately be removed from the building.

3.10.2.22 Training to personnel (Section 35)

Every person engaged in the manufacturing factory shall be imparted training in safety by competent person periodically during manufacture, handling, transportation and storage of explosives and records of such trainings shall be maintained.

3.10.2.23 Use of vehicles (Section 36)

Every vehicle and every trolley or receptacle in which finished or partly finished explosives are transported in a licensed factory area shall—

(a) Unless otherwise approved, have no exposed iron or steel in its interior;

(b) Be closed or covered while the explosives or its ingredients are being transported.

3.10.2.24 Maintenance and repairs of building, plant and equipment (Section 37)

Every building in the licensed premises shall always be maintained in a fit condition. All plants and equipments in a licensed factory shall be regularly serviced and maintained in a proper and fit condition by the licensee.

3.10.2.25 Stoppage of manufacture of explosives (Section 40)

If at any time any operation in the process of manufacture of an explosive is no longer found to be safe or behavior of the explosives during the course of storage, transport or use is no longer found to be safe due to change in the nature and composition of explosives, or due to any other reason, the licensing authority may issue an order in writing directing the licensee to stop forthwith the manufacture of such explosive till such time the operation or the composition is rectified to the satisfaction of the licensing authority.

3.10.2.26 Disposal of waste explosives (Section 42)

The laboratories, process buildings and machineries therein shall be swept and cleaned at the end of each shift or earlier if necessary, and the sweepings and waste explosives shall be properly collected and stored in a safe place and safely disposed of. Adequate facilities for safe destruction under the supervision of a person adequately competent and at a place approved by the licensing authority in the licensed premises shall be provided by the licensee for the materials collected under sub-rule (1).

3.10.2.27 Import or export by land (Section 43)

No license for import or export of explosives by land shall be granted without the previous sanction of the Central Government in each case, wherein the Central Government may impose conditions and restrictions in consultation with the Chief Controller.

3.10.2.28 Export of explosives (Section 46)

The exporter or his authorized agent shall give the conservator of the port not less than forty eight hours' notice of his intention to bring explosives to port for export and shall not bring the explosives to any part of the port without prior permission in writing from the said officer.

3.10.2.29 Procedure to be followed during transportation (Section 47)

Every consignment of explosives transported under license shall be accompanied by a pass issued by the consignor in Form RE-12 under Part 5 of schedule V. Such pass shall be attached to the way-bill, invoice or dispatch note as the case may be. A copy of every pass issued shall be sent by the consignor to the licensing authority who issued the license of the consignor; the Controller and the District Superintendent of Police in whose jurisdiction the place from which the consignment is sent is situated; the Controller and the District Superintendent of Police in whose jurisdiction the place to which the consignment is sent is situated.

3.10.2.30 Transport in passenger carriages and vessels (Section 49)

Save as otherwise expressly provided in these rules, no explosive shall be transported in any carriage vessel or aircraft plying for or carrying passengers on hire.

3.10.2.31 Dispatch of explosives to carriers for transport (Section 52)

No person shall dispatch any explosives except fireworks to a carrier other than the Indian Railways for the purpose of transport. No person shall dispatch any explosive to the Indian Railways for the purpose of transport unless he has given the Station Master a notice in writing of his intention to tender such explosives; certifying that the explosives have been packed and marked in accordance with rules 14 and 15; stating the true name, description and quantity of explosives to be transported. No person shall bring, send or forward to, or upon any railway any explosives which the Indian Railways have by any notice of regulation for the time being in force notified that it will not receive.

3.10.2.32 Place and time of loading and unloading (Section 53)

Every explosive shall be loaded and unloaded at a safe distance from the station buildings, passenger platforms, dwelling houses, factories, public buildings and other buildings or places where persons assemble or any flammable or other hazardous goods are stored or handled. Every explosive intended for transport by road whether under a license or otherwise shall be loaded only near a licensed magazine, licensed store house or other licensed premises.

3.10.2.33 Carriage or vessel or aircraft to be in readiness for loading (Section 54)

No explosive shall be brought to any place of loading until the carriage or vessel or aircraft into which it is to be loaded is at that place in readiness to receive it.

3.10.2.34 Delay in transit to be avoided (Section 55)

The person or persons in charge of carriage or vessel carrying explosives shall, not stop or delay at any place for a longer time than may be reasonably necessary, not stop unnecessarily at any place where such stopping would reasonably be dangerous to public.

3.10.2.35 Repairs to conveyance (Section 56)

Before any repairs or alterations are commenced in any part of a carriage or vessel in which explosives are being, or have been transported, all due precautions should be taken to remove all such explosives, or any remnants thereof, and the space in such carriage or vessel in which such explosives have been carried shall be thoroughly washed out to ensure that no remnants of explosives remain therein.

3.10.2.36 Prohibition of transport within Streets, Public places and other specified areas (Section 62)

No person shall transport or cause to be transported any explosives on any road within the limits of a municipality or cantonment where such a road is specifically prohibited for plying vehicles carrying explosives.

3.10.2.37 Restriction on transport of explosives except fireworks and safety fuse by vehicles other than road vans or compressor mounted motor truck or tractor (Section 63)

No explosive other than fireworks or safety fuse shall be transported by any carriage, which is not a road van or compressor mounted motor truck or tractor.

3.10.2.38 Loading of explosives (Section 64)

The person in charge of loading explosives into a vehicle or aircraft for carriage shall ensure that the explosives are stowed in such a manner that during normal course of transport they will not move and will be protected against friction and bumping; and should it become necessary to unload any of the explosives, those remaining can be restored with as little disturbance as possible. No person shall load or unload explosives onto or from a licensed vehicle, except when the engine of the vehicle is stopped, the wheels choked and the hand brake applied.

3.10.2.39 Carriage of explosives with other substance prohibited (Section 66)

No other goods shall be carried with explosives in any vehicle.

3.10.2.40 Loading, unloading, maintenance and operation of road vans (Section 67)

After the loading or unloading of explosives in or from any such vehicle is commenced, the operation shall not be stopped until completed and shall be completed as expeditiously as possible. No bale hooks or other metal tools shall be used for the loading, unloading or handling of packages containing explosives nor shall any package or container of explosives be thrown or dropped during such operation. The vehicle shall be maintained in safe working condition suitable for transport of explosives. The driver or operator of a vehicle carrying or containing an explosive shall not stop unnecessarily or for a longer period than is reasonably required, and shall avoid stops or places where public safety is in danger. The driver or operator of any vehicle carrying or containing an explosive shall not drive or conduct the same in a dangerous or reckless manner. Routes passing through centre's of dense habitation shall, as far as possible, be avoided. A road van while transporting explosives shall always be attended to by two armed guards at the expense of the licensee. If the consignment of explosives is likely to pass through sensitive areas notified by the Ministry of Home Affairs, it should be escorted by armed police escort or guard, provided by the District Police Administration. When there is a convoy of two or more vehicles transporting explosives,

where applicable, a space of at least 300 metres shall be maintained between each such vehicle. Road van transporting explosives shall not be driven past fires of any kind on or near the highway or other thorough fare. The driver of the road van while transporting explosives shall, before crossing any unmanned railway crossing or before crossing any main highway, bring the road van to a full stop and proceed only when the way is safely clear. The original license for van granted under these rules or attested copy of the same shall always be carried

3.10.2.41 lighting of stationary vehicles (Section 68)

Where a road van carrying explosives is stationary on a public road at night, otherwise than by reason of delay incidental to the flow of traffic, driver or the licensee of the van shall keep the parking lights on throughout the stay and if necessary shall also provide reflectors or use blinking lights in such position as to convey an effective warning of the presence of the road van to the drivers of other vehicles.

3.10.2.42 Accident to the vehicle (Section 69)

Where a vehicle transporting explosives is involved in an accident, fire or any other occurrence that causes a significant delay in the delivery of explosives or damage to the vehicle or explosives, the driver or any other authorized person accompanying the vehicle shall comply with all requirements of law relating to road accidents; inform the nearest police station; inform the licensee who shall-inform the Chief Controller and the Controller in whose jurisdiction the accident has taken place giving the full details of explosives carried and accident; arrange for safe storage and custody of explosives till examination by the Controller if required, and then arrange for transport to the destination or place designated by the Controller.

In case of a breakdown of road van, the driver or the person in charge of the vehicle shall make or permit to be made minor repairs if the repairs can be made without hazard; where major repairs are required, prevent such repairs being made until the explosives are transferred to another vehicle or are removed from the vehicle and stored under proper security at a safe distance from the highway and at least three hundred metres from any inhabited premises; inform the licensee who shall in turn inform the Chief Controller and the Controller in whose jurisdiction the vehicle is broken down giving full details of the explosives and the circumstances attending the breakdown.

3.10.2.43 Fire extinguishers to be provided (Section 70)

Every road van shall be provided with two fire extinguishers of minimum two kilograms capacity. One of the extinguishers shall be capable of dealing with fire involving electric circuits and the other, with other inflammable components. The fire extinguishers shall always be kept in good working condition. The fire extinguishers shall be located where they will be convenient and ready for immediate use. The fire extinguishers shall be examined and recharged according to the manufacturers' recommendations.

3.10.2.44 Possession in licensed premises (Section 71)

A person holding license for possession of explosives granted under these rules shall store the explosives only in premises specified in the license. The licensed magazine or store house shall be kept securely closed or locked at all times except when goods are being placed in or taken from it or when it must be kept open for some other purpose in connection with the management of such premises.

3.10.2.45 Repacking or opening of packages (Section 72)

An explosive shall, as far as practicable, be sold in original packages. If the quantity sold to any person is less than the quantity of explosives packed in the original packing, such quantity shall be packed in a safe and proper manner in a substantial package which shall be clearly marked with following markings, namely :—

(a) Name of the explosive;

(b) Class, Division and sub-division as per to Schedule I;

(c) Quantity of explosive packed;

(d) Name of licensee with license number of the magazine from where the explosive is being supplied and packed;

(e) Date of packing;

(f) Name and address of the consignee.

(2) No repacking shall be carried out in a magazine or storehouse.

(3) Repacking of explosives shall be done, where necessary, in an approved open sided shed having smoothly finished dust-free floor at a distance as approved by the licensing authority.

3.10.2.46 Explosives not to be kept in damaged boxes (Section 73)

The licensee of every magazine or storehouse shall ensure that the explosives are always kept in their original outer package and if the outer package gets damaged in a manner that the explosives contained therein cannot be stored or transported, such explosives shall be

repacked after giving prior intimation well in advance to the Controller having jurisdiction over the area with all necessary details.

3.10.2.47 Storage of explosives in excess of the licensed quantity (Section 74)

The quantity of any kind of explosives kept in any licensed magazine or storehouse shall not exceed the quantity entered in the license against such kind of explosives. The licensing authority may issue a permit for a period not exceeding fifteen days, on receipt of such fees as prescribed to a licensee for storage of explosives in excess of the licensed quantity when such authority is satisfied that such excess storage is essential and unavoidable due to circumstances beyond the control of the licensee. The licensing authority may refuse to grant a permit for excess storage of explosives if such excess storage is of a repeated nature.

3.10.2.48 Permit for temporary possession of manufactured fireworks in excess of the licensed quantity (Section 75)

A permit for a period not exceeding thirty days may be granted by the licensing authority to a licensee for fireworks shop to possess one-third in excess of the licensed quantity on receipt of fees as prescribed.

3.10.2.49 Quantity of explosives to be purchased in a given period of time (Section 76)

A licensee for possession, sale or use of explosives in and from a magazine licensed shall purchase only such quantity of explosives in a given period as may be specified in the license.

3.10.2.50 Accountability and transaction of explosives (Section 77)

All licenses granted under these rules shall bear the photograph of the licensee or occupier.

3.10.2.51 Magazine, store house, or shop to be at ground level (Section 78)

A magazine, store house, or shop shall be constructed at ground level only. A magazine or storehouse shall be a single storey building.

3.10.2.52 Stacking of packages (Section 79)

Packages shall be stacked in magazine or store house in such a manner so as to facilitate inspection of the condition of all packages stored and to read the marking particulars of each package and in the manner provided under Schedule VII.

3.10.2.53 Storage of compatible explosives (Section 80)

Detonators or gunpowder or fireworks shall be stored only in separate rooms or compartments meant for each in a magazine. Paper caps or colour or star matches shall be stored in separate compartments.

3.10.2.54 Specification for construction of a magazine (Section 81)

Magazine used for storage of explosives shall be constructed as per Specification 2 of Schedule VII.

3.10.2.55 Store house for fireworks or safety fuse (Section 82)

Store house shall be used only for possession of fireworks not exceeding five thousand kilograms or safety fuse not exceeding fifty thousand meters and not for sale. A person holding license for possession and sale of fireworks or safety fuse from a shop shall be eligible for a license for one store house per shop. The store house shall be constructed as per Specification 3 of Schedule VII.

3.10.2.56 Explosives permitted for possession and sale from shop (Section 83)

No explosives, other than fireworks, gun powder, small arm nitro compound and safety fuse, permitted in license shall be stored in a shop for possession and sale. The shop shall be constructed of a brick, stone or concrete and the shop shall be closed and secured so as to prevent unauthorized person from having access thereto. The premises shall have storage area not less than nine square meters and not more than twenty five square meters. The shop shall be located on the ground floor of a building completely separated from other parts of the building by substantial walls having independent entrance and emergency exit from open air and having doors opening outwards, if applicable; not be situated in the sub-level or basement or mezzanine floor; not be situated under the upper floor used for the purpose of dwelling; not be situated under or nearby any staircase or lift; be accessible for firefighting; and have no electrical apparatus or battery or oil lamp or similar equipments capable of producing spark or ignition and all electrical wiring in the shop be fixed and effectively sealed or conducted or mechanically protected; the main switch or circuit breaker be provided at the immediate accessible position outside the premises.

3.10.2.57 Temporary shops for possession and sale of fireworks during festivals (Section 84)

During festivals, the District Magistrate may issue temporary licenses for possession and sale of fireworks in a temporary shop subject to the following conditions namely:—

(1) The fireworks shall be kept in a shed made of non-flammable material, which is closed and secured so as to prevent unauthorized persons having access thereto.

(2) The sheds for possession and sale of fireworks shall be at a distance of at least three metres from each other and fifty metres from any protected work.

(3) The sheds shall not face each other.

(4) No oil burning lamps, gas lamps or naked lights shall be used in the shed or within the safety distance of the sheds. Electrical lights, if used, shall be fixed to the wall or ceiling and shall not be suspended by flexible wire. Switches for each shop shall be fixed rigidly to the wall and a master switch shall be provided for each row of sheds.

(5) Display of fireworks shall not be allowed within fifty metres of any shed.

(6) In one cluster not more than fifty shops shall be permitted.

3.10.2.58 Special precautions to be observed for fireworks (Section 85)

Fireworks shall not be placed or kept in a shop window used for display of goods. Fireworks in the shop shall be kept in a spark proof receptacle or the original outer packet in which they were received if that package is effectively sealed and in good order and condition. A receptacle or package containing fireworks shall be kept in a position away from and clear of shop traffic and to be separated from all articles of a flammable or combustible nature. Where a package containing fireworks is opened for sale, the fireworks shall immediately be placed in a clean, dust free and spark proof receptacle.

3.10.2.59 Safety distances to be maintained (Section 86)

The factory licensed for manufacture or magazine licensed for possession, sale or use of explosives shall maintain safety distance specified in Schedule VIII and condition of license, as the case may be. The store house licensed for possession of fireworks or safety fuse shall maintain safety distance of three metres from protected works and minimum fifteen metres from any such premises or any other premises used for storage of similar explosives, flammable or hazardous materials. The shop licensed for storage and sale of small arms nitro-compound, fireworks or safety fuse shall be at a distance of minimum fifteen metres from any such premises or any other premises used for storage of similar explosives, flammable or hazardous materials.

3.10.2.60 Sale of other article prohibited (Section 87)

The premises in which small arms nitro-compound or fireworks or gun powder or safety fuse is kept shall be used only for possession and sale of such explosives and for no other purposes when small arms nitro-compound or fireworks or gun powder or safety fuse is stored.

3.10.2.61 Fireworks to be sold from licensed premises (Section 88)

No person shall sell fireworks from any premises other than those licensed under these rules.

3.10.2.62 Restriction on preparation of charges (Section 89)

An explosive of one description shall not be converted into an explosive of another description. The explosives of Class 2 or Class 3 shall be used in their original cartridge packing and such cartridges shall not be cut to remove explosives for making cartridges of different sizes.

3.10.2.63 Restriction on conveyance of explosives to or at the blasting site (Section 90)

Explosives shall only be conveyed from the licensed storage premises to near the site in original unopened packages or in closed containers used solely for that purpose and securely locked. No manufacturer shall directly supply the cartridge explosives for charging of boreholes at the blasting site. Explosives shall not be taken to a point nearer than fifty metres from any site until such site is ready for charging. Explosives shall not be conveyed in any vehicle with any other materials, tools or implements other than that required for the purpose of blasting. Explosives left over after the day's work shall be returned to the licensed premises from which the same was taken. The carrying box used for carrying explosives from original packages shall be maintained thoroughly cleaned and dried and shall be kept closed when not in use. The containers shall be provided with either handles or carrying straps of adequate strength and shall be conspicuously marked with the word “Explosives”. Detonators shall be conveyed in special containers constructed of non metal or non conductive material and these shall not be carried with other explosives. Batteries, dry cells and other sources of

electric energy shall not be carried in the vehicle carrying detonators. No detonator shall be taken out from a case or container unless it is required for immediate use.

3.10.2.64 Explosives to be examined before use (Section 91)

Explosives before use shall be visually examined for any visible defects and any defective explosive shall not be used. Any explosive showing signs of deterioration of any kind should be reported immediately to the licensing authority and such explosive set-aside for examination by such authority. (3) Gunpowder, which is found to be caked owing to the moisture, shall not be used. Frozen nitro-glycerine explosives shall not be used until thawed under the supervision of experienced persons. Where freezing is likely to occur only low freezing explosives shall be used.

3.10.2.65 Precautions to be observed at site (Section 92)

The electric power at the blasting site shall be discontinued as far as practicable before charging the explosives. No work other than that associated with the charging operations shall be carried out within fifteen metres of the holes unless otherwise specified to the contrary by the licensing authority. When charging is completed, any surplus explosives, detonators or fuses shall be removed from the vicinity of the hole and stored at a distance which would prevent sympathetic detonation in the event of a charge detonating in any hole. The holes, which have been charged with explosives, shall not be left unattended till the blasting is completed.

3.10.2.66 Precautions to be observed while firing (Section 94)

The end of the safety fuse should be freshly cut before being lighted. The exploders shall be regularly tested and maintained in a fit condition for use in firing. An exploder shall not be used for firing a circuit above its rated capacity. The electric circuit shall be tested for continuity before firing. All persons other than the shot firer and his assistants, if any, shall be withdrawn from the site before testing the continuity. For the purpose of joining, the ends of all wires and cables should have the insulation removed for a maximum length of 5 centimeters and should then be made clean and bright for a minimum length of 2.5 centimeters and the ends to be joined should be twisted together so as to have a positive metal contact.

3.10.2.67 Precautions against stray currents (Section 95)

Where electrically operated equipment is used in locations having conductive ground or continuous metal objects, tests shall be made for stray currents to ensure that electrical firing can proceed safely.

3.10.2.68 Person in charge to be responsible (Section 96)

The licensee or a shot firer employed by him to be in-charge of blasting operations shall take all precautions against fire, accident, loss, pilferage etc., of explosives and will be personally held responsible for any contravention of the relevant provisions of the Act or Rules thereof.

3.10.2.69 Blasting operations in mines (Section 97)

Blasting operations in mines shall be carried out as per the Mines Act, 1952 and such operations shall be carried out according to regulations framed under that Act. The shot firer employed for blasting operations shall take all precautions against fire, accident, loss, pilferage etc., of the explosives and personally be held responsible for any contravention of the provisions of the Explosives Act, 1884 and the rules thereof.

3.10.2.70 Blasting operation by shot firer in areas other than mines (Section 98)

Blasting operation shall be carried out by a shot firer holding valid certificate issued by the Controller. A copy of the certificate shall be carried by the shot firer during blasting operations. The shot firer shall take all due precautions in handling or charging or blasting operations.

3.10.2.71 Power of officers to prevent dangerous practices (Section 127)

If in any matter which is not provided for by any express provision of, or condition of a license granted under these rules and a Controller or District Magistrate finds any factory, magazine or place where an explosive is being manufactured, possessed or sold, or used or any part thereof, or anything or practice therein or connected therewith or with the handling or transport of explosives to be unnecessarily dangerous or defective so as, in his opinion, to tend to endanger the public safety or the bodily safety of any person, such Controller or District Magistrate may, by an order in writing, require the occupier of such factory magazine, store house or place or the owner of the explosive, to remedy the same within such time as may be specified in the order.

3.10.2.72 Notice of accident (Section 131)

The notice of an accident required to be given under section 8 of the Act shall be given within twenty four hours of the happening of the accident by telephone, telegram, E-mail, fax or in any other electronic mode or by special messenger followed by a written report signed by the occupier or authorized person to the same authorities giving particulars of circumstances leading o accident, loss of human life, injury to persons, damage to property, emergency action taken etc, to the—

(a) Chief Controller;

(b) Controller in whose jurisdiction accident has taken place;

(c) District Magistrate; and

(d) Officer-in-charge of the nearest police station.

3.10.2.73 Inquiry into more serious accidents (Section 134)

Whenever an inquiry is held under section 9A of the Act, the persons holding such inquiry shall hold the same in open court in such manner and under such conditions as they may think most effectual for ascertaining the causes and circumstances of the accidents and enabling them to make the report under this rule .

3.11.0 HAZARDOUS WASTES (MANAGEMENT, HANDLING AND TRANSBOUNDARY MOVEMENT) RULES, 2008.

3.11.1 OBJECTIVE AND SCOPE:

Till now the management, handling and disposal of Hazardous Waste were regulated by the Hazardous waste (Management and Handling) Rules 1989 (HWM Rules) published through Ministry of Environment & Forests (MoE&F). The rules had the objective of controlling generation, collection, treatment, import, storage and disposal of hazardous waste. The HWM Rules were amended by MoE&F mainly through its two notifications: (i) *HWM Amendment Rules 2000* and (ii) HWM *Amendment Rules 2003*. The later has been effective till recently.

On 28th September, 2007, the MoE&F in exercise of powers conferred to it by sub-section (1) and clause(v) of subsection (2) of section (3) of the EPA 1986 and in suppression of the *Hazardous Wastes (Management and Handling) Rules 1989,* had published the *Draft notification* on *the Hazardous Material (Management, Handling and Transboundary Movement) Rules 2007* inviting objections and suggestions on the proposal contained in the Notification, in writing, within a period of 60 days from the date of issue of the *Draft Notification.*

Now, through its Notification #S.O. 2265 dated 24th September 2008, in exercise of the owners conferred by EPA 1986 and in supersession of the *HWM Rules 1989,* the MoE&F has issued the *Hazardous Waste (Management, Handling and Transboundary Movement) Rules 2008.*

These rules shall apply to the handling of hazardous wastes as specified in Schedules and shall not apply to-

(a) waste-water and exhaust gases as covered under the provisions of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) and the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981) and the rules made there under;

(b) wastes arising out of the operation from ships beyond five kilometres of the relevant baseline as covered under the provisions of the Merchant Shipping Act, 1958 (44 of 1958) and the rules made there under;

(c) radio-active wastes as covered under the provisions of the Atomic Energy Act, 1962 (33 of 1962) and the rules made there under;

(d) bio-medical wastes covered under the Bio-Medical Wastes (Management and Handling) Rules, 1998 made under the Act; and

(e) Wastes covered under the Municipal Solid Wastes (Management and Handling) Rules, 2000 made under the Act;

3.11.2 RELEVANT PROVISIONS OF THE RULE:

3.11.2.1 Definitions

i. "Central Pollution Control Board" means the Central Pollution Control Board constituted under sub-section (1) of section 3 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974);

ii. "environmentally sound management of hazardous wastes" means taking all steps required to ensure that the hazardous wastes are managed in a manner which shall protect health and the environment against the adverse effects which may result from such waste;

iii. "hazardous waste" means any waste which by reason of any of its physical, chemical, reactive, toxic, flammable, explosive or corrosive characteristics causes danger or is likely to cause danger to health or environment, whether alone or when in contact with other wastes or substances, and shall include-

   a) waste specified under column (3) of Schedule-I,
   b) wastes having constituents specified in Schedule-II if their concentration is equal to or more than the limit indicated in the said Schedule, and
   c) wastes specified in Part A or Part B of the Schedule-III in respect of import or export of such wastes in accordance with rules 12, 13 and 14 or the wastes other than those specified in Part A or Part B if they possess any of the hazardous characteristics specified in Part C of that Schedule;

iv. treatment, storage or disposal of hazardous wastes;

v. "State Pollution Control Board means the State Pollution Control Board or the Pollution Control Committee constituted under sub-section (1) of section 4 of the Water(Prevention and Control of Pollution) Act, 1974 (6 of 1974);

vi. "transport" means off-site movement of hazardous wastes by air, rail, road or water;

3.11.2.2 Responsibilities of the Occupier for Handling of Hazardous Wastes (Rule 4)

(1) The occupier shall be responsible for safe and environmentally sound handling of hazardous wastes generated in his establishment.

(2) The hazardous wastes generated in the establishment of an occupier shall be sent or sold to a recycler or re-processor or re-user registered or authorized under these rules or shall be disposed of in an authorized disposal facility.

(3) The hazardous wastes transported from an occupier's establishment to a recycler for recycling or reuse or reprocessing or to an authorized facility for disposal shall be transported in accordance with the provisions of these rules.

(4) The occupier or any other person acting on his behalf who intends to get his hazardous wastes treated and disposed of by the operator of a Treatment, Storage and Disposal Facility shall give to the operator of a facility, such information as may be determined by the State Pollution Control Board.

(5) The occupier shall take all adequate steps while handling hazardous wastes to:

(i) Contain contaminants and prevent accidents and limit their consequences on human beings and the environment; and

(ii) Provide persons working on the site with the training, equipment and the information necessary to ensure their safety.

3.11.2.3 Storage of Hazardous Waste (Rule 7)

The occupiers, recyclers, re-processors, re-users, and operators of facilities may store the hazardous wastes for a period not exceeding ninety days and shall maintain a record of sale, transfer, storage, recycling and reprocessing of such wastes and crake these records available for inspection.

3.11.2.4 Treatment, Storage and Disposal-Facility for hazardous wastes (Rule 18)

(1) The rule states that the

- State Government,
- occupier,
- operator of a facility or
- any association of occupiers shall
    - individually or
    - jointly or
    - severally

be responsible for, and identify sites for establishing the facility for

- treatment,

- storage and

disposal of the hazardous wastes in the State.

(2) The operator of common facility or occupier of a captive facility, shall design and set up the

- Treatment,
- Storage and
- Disposal Facility

as per technical guidelines issued by the Central Pollution Control Board and shall obtain approval from the State Pollution Control Board for design and layout.

(2) The State Pollution Control Board shall monitor the setting up and operation of the

- Treatment,
- Storage and
- Disposal Facilities regularly.

(3) The operator of the

- Treatment,
- Storage and
- Disposal Facility

shall be responsible for safe and environmentally sound operation of the abovementioned and its closure and post closure phase, as per guidelines issued by the Central Pollution Control Board.

(5) The operator shall maintain records of hazardous wastes handled by him.

3.11.2.5 Packaging and Labeling (Rule 19)

The occupier or operator of the Treatment, Storage and Disposal Facility or recycler shall ensure that the hazardous waste are packaged and labeled, based on the composition in a manner suitable for safe handling, storage and transport as per the guidelines issued by the Central Pollution Control Board from time to time.

The labeling and packaging shall be easily visible and be able to withstand physical conditions and climatic factors.

3.11.2.6 Transportation of Hazardous waste (Rule20)

The transport of the hazardous wastes shall be in accordance with the provisions of these rules and the rules made by the Central Government under the Motor Vehicles Act. 1988 and other guidelines issued from time to time in this regard.

3.11.2.7 Accident Reporting and Follow-Up (Rule 24)

Where an accident occurs at the facility or on a hazardous waste site or during transportation of the hazardous waste, the occupier or operator of the facility or the transporter, shall report immediately to the State Pollution Control Board about the accident.

3.11.2.8 Liability of occupier, transporter, operator of a facility and importer (Rule 25)

The occupier, importer, transporter and operator of the facility shall be liable for all damages caused to the environment or third party due to improper handling of the hazardous wastes or disposal of the hazardous wastes.

The occupier and the operator of the facility shall be liable to pay financial penalties as levied for any violation of the provisions under these rules by the State Pollution Control Board with the prior approval of the Central Pollution Control Board.

CHAPTER FOUR

FLOOD, DAM BURST, TSUNAMI AND CYCLONE

Floods have been a recurrent phenomenon in India and cause huge losses to lives, properties, livelihood systems, infrastructure and public utilities. India's high risk and vulnerability is highlighted by the fact that 40 million hectares out of a geographical area of 3290 lakh hectares is prone to floods. On an average every year, 75 lakh hectares of land is affected, 1600 lives are lost and the damage caused to crops, houses and public utilities is Rs. 1805 crores due to floods. Cyclones, cyclonic circulations and cloud bursts cause flash floods and lead to huge losses. The fact that some of the rivers causing damage in India originate in neighboring countries adds another complex dimension to the problem. Continuing and large scale loss of lives and damage to public and private property due to floods indicate that we are still to develop an effective response to floods.

The word 'Tsunami' is a Japanese term meaning "harbour wave", derived from the characters "tsu" meaning harbour and "nami" meaning wave, to describe a system of ocean gravity waves having a long wave length and period (time between crests), formed as a result of large-scale disturbance of the sea caused by an earthquake. Most Tsunamis are caused by earthquakes (of magnitude more than 6.5 on the Richter Scale), with a vertical disruption of the water column generally caused by a vertical tectonic displacement of the sea bottom along a zone of fracture in the earth's crust which underlies or borders the ocean floor. Tsunamis are also generated by volcanic eruptions and submarine landslides, nuclear explosions, and even due to impact or fall of large size meteorites, asteroids, and comets from outer space. Tsunamigenic zones that threaten the Indian Coast have been identified by considering the historical tsunamis, earthquakes, their magnitudes, location of the area relative to a fault, and also by tsunami modeling. Both the east and west coasts of India and the island regions are likely to be affected by tsunamis from the five potential source regions, viz., the Andaman-Nicobar- Sumatra island arc, Indo-Burmese zone, Nascent Boundary (in the central Indian Ocean), Chagos archipelago and the Makran subduction zone. Cyclonic storms form far away from the sea coast and gradually reduce in speed as they approach the sea coast. Cyclonic storms generally extend up to about 60 km after striking the coast. Cyclones associated with high speed winds followed by heavy rains and accompanied by surge have been causing untold misery to the populace and wide spread devastation of

properties in the coastal belts of India. The frequency of cyclonic storms is more along the East coast as compared to the West coast of India. The coastal regions of Tamil Nadu, Andhra Pradesh, Orissa and West Bengal on the East coast and Gujarat on the West coast are cyclone prone. Damage to houses is most responsible for loss of life and thus the need to have greater emphasis on the safety of houses. Due to this, need has been felt to evolve national standard for design and construction of cyclone resistant structures so as to ensure desirable level of safety.

4.1.0 DAM SAFETY BILL:

The Govt. of India constituted the National Committee on Dam Safety (NCDS) in October, 1987 under the Chairmanship of Chairman, CWC to oversee dam safety activities in various States and suggest improvements to bring dams safety practices in line with the latest state-of-art practices. Guidelines for Preparation of Emergency Action Plan, approved in the 27th meeting of NCDS, which was held on 27th September 2005, were circulated to dam owning States/Agencies. The 29 the meeting of NCDS was held on 12th December, 2008 in which major dam safety issues, the necessity of Dam Safety Act, preparation of Emergency Action Plan, setting up of hydrological study units etc. were discussed. Government of India constituted a Standing Committee in 1982, under the Chairmanship of Chairman, Central Water Commission to review the existing practices and to evolve unified procedures of dam safety for all dams in India. The Standing Committee submitted its report titled "Report on Dam Safety Procedures" in July 1986. One of the recommendations of Committee was the 'enactment of Dam Safety Legislation '. As a follow up, a draft "Dam Safety Act (1987)" was prepared by CWC and circulated to National Committee on Dam Safety (NCDS) members in 1988. Comments/ suggestions were received from 12 states. Accordingly, modified Bill (2000) was prepared by CWC, approved by Ministry of Water Resources (MOWR) and vetted by Ministry of Law. It was circulated to four Dam Safety Assurance and Rehabilitation Project (DSARP) participating states (Madhya Pradesh, Orissa, Rajasthan & Tamil Nadu) for adoption as Bill. This modified Draft Bill- as per suggestions of Tamil Nadu & Madhya Pradesh - discussed in 23rd NCDS (March 2002) meeting. Subsequently, a Draft Bill- 2002, approved by MOWR, circulated to all states. The States have responded well to the Draft Bill. The Government of Bihar has passed the Dam Safety Act 2006 on line with the Draft Bill circulated by MOWR / CWC, and the same was published in the Bihar Gazette on 4.5.2006. The Government of Andhra Pradesh has adopted a Resolution on 24th March 2007

that the Dam Safety Resolution should be regulated in the State of Andhra Pradesh by Parliament by Law. The Government of West Bengal has also passed a similar Resolution on 24 th July 2007 empowering the Parliament of India to pass the necessary Dam Safety Act. Government of Madhya Pradesh, Maharashtra, Orissa and Uttar Pradesh are in the process of adopting similar resolution. Draft Dam Safety Bill 2002, was renamed as Dam Safety Bill-2007(without any other modification). The same was circulated by MOWR for fresh comments. In February 2008, copies of Draft Bill were circulated to Prime Minister's Office, Planning Commission, Ministry of Power, Ministry of Finance (Dept. of Expenditure), Ministry of Law & Justice, Ministry of Home Affairs, National Disaster Management Authority and Central Water Commission (CWC) for their comments. In response, CWC in June 2008 furnished a modified version of the Draft Bill. The Draft Bill modified by CWC was then sent by MOWR to the Ministry of Law and Justice for their concurrence. Subsequently, and after detailed discussion with CWC officials, Ministry of Law and Justice finalized the Dam Safety Bill 2009. The comments of Ministry of Finance (Dept. of Expenditure), National Disaster Management Authority and Ministry of Home Affairs were also received. The Ministry of Law and Justice, Govt. of India has given their concurrence on the Dam Safety Bill 2009 on 22 and August 2009 and presently the Bill is under the purview of MOWR for getting the approval of the Cabinet before its placement to the Parliament.

Besides these, the NDMA has come up with guidelines on management of tsunami, flood and cyclones.

4.2.0 THE COASTAL REGULATION ZONE NOTIFICATIONS

4. 2.1 SCOPE OF THE NOTIFICATION:

The Notifications have been issued in exercise of the power conferred by Clause (d) of sub-rule (3) of Rule 5 of the Environment (Protection) Rules, 1986. As per the notification, the Central Government declared the coastal stretches of seas, bays, estuaries, creeks, rivers and backwaters which are influenced by tidal action (in the landward side) up to 500 metres from the High Tide Line (HTL) and the land between the Low Tide Line (LTL) and the HTL as Coastal Regulation Zone and imposed a number of restrictions on the setting up and expansion of industries, operations or processes, etc., in the said Coastal Regulation Zone (CRZ). Apart from codifying the 25 amendments that were made to CRZ notification

between 1991-2009, the CRZ notification (2011) has special provisions for Goa, Kerala, Greater Mumbai and critically vulnerable coastal areas (CVCAs) like Sunderban mangrove area, Chilka and Bhitarkanika (Orissa), Gulf of Khambat and Gulf of Kutch (Gujarat), Malwan (Maharashtra), Karwar and Kundapur (Karnataka), Vembanad (Kerala), Coringa, East Godavari and Krishna Delta (Andhra Pradesh), Gulf of Mannar (Tamil Nadu). Clear procedures for obtaining CRZ approval with time-lines have been stipulated along with post-clearance monitoring and enforcement mechanisms. Water area up to 12 nautical miles in the sea and the entire water area of a tidal water body such as creek, river, estuary etc., would now be included in the CRZ areas, without imposing any restrictions of fishing activities. The concept of a Coastal Zone Management Plan (CZMP), to be prepared with the fullest involvement and participation of local communities, has been introduced. The concept of a hazard line to be demarcated over the next five years has been introduced to protect life and property of local communities and infrastructure along coastal areas.

i. RELEVANT LEGAL PROVISIONS OF THE NOTIFICATION

4.2.2.1Prohibited Activities

Following activities are declared as prohibited within the Coastal Regulation Zone namely:

(i) Setting up of new industries and expansion of existing industries except,-

(a) Those directly related to waterfront or directly needing foreshore facilities;

(b) Projects of Department of Atomic Energy;

(c) facilities for generating power by non-conventional energy sources and setting up of desalination plants in the areas not classified as CRZ-I(i) based on an impact assessment study including social impacts.;

(d) Development of green field Airport already permitted only at Navi Mumbai;

(e) Reconstruction, repair works of dwelling units of local communities including fishers in accordance with local town and country planning regulations.

(ii) Manufacture or handling oil storage or disposal of hazardous substance

(iii) Setting up and expansion of fish processing units including warehousing except hatchery and natural fish drying in permitted areas:

(iv) Land reclamation, bunding or disturbing the natural course of seawater

(v) Setting up and expansion of units or mechanism for disposal of wastes and effluents

(vi) Discharge of untreated waste and effluents from industries, cities or towns and other human settlements.

(vii) Dumping of city or town wastes including construction debris, industrial solid wastes fly schemes for phasing out any existing practice, if any, shall be phased out within a period of one year from date of commencement of this notification.

(viii) Port and harbour projects in high eroding stretches of the coast, except those projects classified as strategic and defence related in terms of EIA notification, 2006 identified by MoEF based on scientific studies and in consultation with the State Government or the Union territory Administration.

(ix) Reclamation for commercial purposes such as shopping and housing complexes, hotels and entertainment activities.

(x) Mining of sand, rocks and other sub-strata materials

(xi) Drawl of groundwater and construction related thereto, within 200mts of HTL

(xi) Construction activities in CRZ-I except those specified in para 8 of this notification.

(xiii) Dressing or altering the sand dunes, hills, natural features including landscape changes for beautification, recreation and other such purpose.

(xiv) Facilities required for patrolling and vigilance activities of marine/coastal police stations.

1. **Regulation of permissible activities in CRZ area**

The following activities shall be regulated

(i)(a) Clearance shall be given for any activity within the CRZ only if it requires waterfront and foreshore facilities;

(b) For those projects which are listed under this notification and also attract EIA notification,

2006, for such projects clearance under EIA notification only shall be required subject to being recommended by the concerned State or Union territory Coastal Zone Management Authority

(c) Housing schemes in CRZ;

(d) Construction involving more than 20,000sq mts built-up area in CRZ-II shall be considered in accordance with EIA notification, 2006 and in case of projects less than 20,000sq mts built-up area shall be approved by the concerned State or Union territory planning authorities in accordance with this notification after obtaining recommendations from the concerned CZMA.

(e) MoEF may under a specific or general order specify projects which require prior public hearing of project affected people.

(f) Construction and operation for ports and harbours, jetties, wharves, quays, slipways, ship construction yards, breakwaters, erosion control measures;

(ii) The following activities shall require clearance from MoEF, namely:-

(a) Those activities not listed in the EIA notification, 2006.

(b) Construction activities relating to projects of Department of Atomic Energy or Defence requirements for which foreshore facilities are essential such as, slipways, jetties, wharves, quays; except for classified operational component of defence projects, Residential buildings, office buildings, hospital complexes, workshops of strategic and defence projects in terms of EIA notification, 2006.

(c) Construction, operation of lighthouses;

(d) Laying of pipelines, conveying systems, transmission line;

(e) Exploration and extraction of oil and natural gas and all associated activities and facilities thereto;

(f) Foreshore requiring facilities for transport of raw materials, facilities for intake of cooling water and outfall for discharge of treated wastewater or cooling water from thermal power plants.

(g) Mining of rare minerals as listed by the Department of Atomic Energy;

(h) Facilities for generating power by non-conventional energy resources, desalination plants and weather radars;

(i) Demolition and reconstruction of (a) buildings of archaeological and historical importance, (ii) heritage buildings; and buildings under public use which means buildings such as for the purposes of worship, education, medical care and cultural activities;

4.2.2.3 **Preparation of Coastal Zone Management Plans.**

The MoEF may obtain the CZMPs prepared through the respective State Government or Union territory.

The draft CZMPs shall be submitted by the State Government or Union territory to the concerned CZMA for appraisal, including appropriate consultations, and recommendations in accordance with the procedure(s) laid down in the Environment (Protection) Act, 1986. The CZMPs already approved under CRZ notification, 1991 shall be valid for a period of twenty four months unless the aforesaid period is extended by MoEF by a specific notification subject to such terms and conditions as may be specified therein.

4.2.2.4 **Enforcement of the CRZ, notification, 2011**

The State Government or the Union territory CZMAs shall primarily be responsible for enforcing and monitoring of this notification and to assist in this task, the State Government and the Union territory shall constitute district level Committees under the Chairmanship of the District Magistrate concerned containing at least three representatives of local traditional coastal communities including from fisher folk.

CHAPTER FIVE

LIGHTNING

Lightning is a massive electrostatic discharge between the electrically charged regions within clouds or between a cloud and the surface of a planet. The charged regions within the atmosphere temporarily equalize themselves through a lightning flash, commonly referred to as a *strike* if it hits an object on the ground. There are three primary types of lightning; from a cloud to itself (intra-cloud or IC); from one cloud to another cloud (CC) and between a cloud and the ground (CG). Although lightning is always accompanied by the sound of thunder, distant lightning may be seen but be too far away for the thunder to be heard.

Lightning is a natural hazard, being the discharge of static electricity generated in parts, called 'cells', of storm clouds, Some of them damage buildings and a few kill or injure people and animals, either directly or indirectly by causing fire and explosions.

Lightning strikes injure humans in several different ways:

1. **Direct**
    - Direct strike – The person is part of the flash channel. Enormous quantities of energy pass through the body very quickly, and this can result in internal burns and organ damage, *explosions* of flesh & bone, and damaged nervous system. Depending on the flash strength and access to medical services, it may be instantaneously fatal or cause permanent injuries and impairments.
    - Contact injury – The person was touching an object, generally a conductor that was electrified by the strike.
    - Side splash – Branches formed *"jumping"* from the primary flash channel, electrifying the person.
    - Blast injuries – Being thrown and blunt force trauma from the shock wave (if very close) or hearing damage from the thunder.
2. **Indirect**
    - Ground Current or *"Step Potential"* – Earth surface charges race towards the flash channel during discharge. Due to the high impedance of the ground, the current *"chooses a better conductor"*, namely a person's legs, passing through the body. The near instantaneous rate of discharge causes a potential (difference)

over distance, which may amount to several thousand volts per linear foot. This phenomenon is responsible for more injuries & deaths than the above three combined. EMPs – The discharge process produces an electromagnetic pulse (EMP) which may damage an artificial pacemaker, or otherwise affect normal biological processes.

In order to prevent the untoward incidents which threaten human life and property because of lightning, a code of practice has been prescribed. The code offers guidance on selection of materials which can withstand lightning and also some recommendations.

1. **INDIAN STANDARD CODE OF PRACTICE FOR PROTECTION OF BUILDINGS AND ALLIED STRUCTURES AGAINST LIGHTNING**[23]

This Code outlines the general technical aspects of lightning, illustrating its principal electrical, thermal and mechanical effects. Guidance is given on how to assess the risk of being struck and it offers a method of compiling an index figure as an aid in deciding if a particular structure is in need of protection.

The Code also offers guidance on good engineering practice and the selection of suitable materials. Recommendations are made for special cases such as explosives stores and temporary structures, for example, cranes, spectator stands constructed of metal scaffolding. Where current carrying conductors are directly associated with structures coming within the scope of this Code, certain recommendations relating to them are included; however, the protection of overhead telephone wires, radar stations, electric traction and supply lines should, on account of their special nature, be referred to the specialists.

[23] Available at, https://law.resource.org/pub/in/bis/S05/is.2309.1989.pdf last visited 15th January 2013.

CHAPTER SIX
EARTHQUAKE, SNOW AVALANCHES/ LANDSLIDE

An earthquake is a series of vibrations on the earth's surface caused by the generation of elastic (seismic) waves due to sudden rupture within the earth during release of accumulated strain energy. Earthquakes are one of the most destructive of natural hazards. Earthquake occurs due to sudden transient motion of the ground as a result of release of elastic energy in a matter of few seconds. The impact of the event is most traumatic because it affects large area, occurs all on a sudden and unpredictable. They can cause large scale loss of life and property and disrupts essential services such as water supply, sewerage systems, communication and power, transport etc. They not only destroy villages, towns and cities but the aftermath leads to destabilize the economic and social structure of the nation.

Typical effects of earthquake are-

A) Physical Damage – Damage occurs to human settlements, buildings, structures and infrastructure, especially bridges, elevated roads, railways, water towers, water treatment facilities, utility lines, pipelines, electrical generating facilities and transformer stations. Aftershocks can do much damage to already weakened structures. Significant secondary effects include fires, dam failures, and landslides, which may block waterways and also cause flooding. Damage may occur to facilities using or manufacturing dangerous materials resulting in possible chemical spills. There may be a breakdown of communications facilities.

Destruction of property may have a serious impact on shelter needs, economic production and living standards of local populations. Depending on the vulnerability of the affected community, large numbers of people may be homeless in the aftermath of an earthquake.

B) Casualties – The casualty rate is often high, especially when earthquakes occur in areas:

a) Of high population density, particularly when streets between buildings are narrow and buildings themselves are not earthquake resistant, and/ the ground is sloping and unstable;

b) Where adobe or dry-stone construction is common with heavy upper floors and roofs.

C) Public health – multiple fracture injuries and number of severely and moderately injured is the most widespread problem, breakdown in sanitary conditions pose a threat and fear of epidemic due to large deaths. The most widespread medical problems are fracture injuries. Other health threats may occur if:

a) There is secondary flooding

b) Water supplies are disrupted and contaminated water is used; or

c) People are concentrated into high-density relief camps.

Although an earthquake is unlikely to cause any new outbreaks, endemic diseases may become virulent if control measures break down and unsanitary conditions develop.

D) Water supply – severe problems due to failure of the water supply and distribution network and storage reservoirs.

Severe problems are likely because:

a) Piped (municipal) water systems may be seriously damaged or become contaminated, especially if sewage systems have also been damaged.

b) Reservoir dams may be broken.

c) Open wells may be blocked by debris.

d) Earthquakes can change levels in the water table with the possible effect of drying up wells and surface springs.

E) Transport network – severely affected due to failure of roads and bridges, turns in railway track alignment, failure of runway.

1.1.0 INDIAN STANDARDS ON EARTHQUAKE ENGINEERING

Bureau of Indian standards, the National Standard Body of India, is a Statutory Organization under the Bureau of Indian Standards Act 1986. One of the activity is formulation of Indian Standards on different subjects of Engineering through various Division Councils. The Civil Engineering Division Council is responsible for standardization in the field of Civil Engineering including Structural Engineering, Building materials and components, Planning Design, Construction and Maintenance of Civil Engineering Structures, Construction Practices, Safety in Building etc. These standards are evolved based on concensus principle through a net work of technical committee comprising representatives from Research and Development Organizations, Consumers, Industry, Testing Labs and Govt. Organizations etc.

Bureau of Indian Standards has produced a number of national standards in the field of Design and Construction of Earthquake Resistant Structures and also in the field of measurement and tests connected therewith. A detail of Indian Standards in the area of mitigation of natural hazard of earthquake is given underneath.

IS 1893:1984 Criteria for Earthquake Resistant Design of Structures

This standard deals with earthquake resistant design of structures and is applicable to buildings; elevated structures; bridges; dams etc. It also gives a map which divides the country into five seismic zones based on the seismic intensity.

Part 1: General provisions and Buildings

Part 2: Liquid Retaining Tanks – Elevated and Ground Supported

Part 3 : Bridges and Retaining Walls

Part 4 : Industrial Structures Including Stack Like Structures

Part 5 : Dams and Embankments

IS 1893(Part 1):2002 `Criteria for Earthquake Resistant Design of Structures : Part 1 General provisions and Buildings'

This standard contains provisions that are general in nature and applicable to all structures. Also, it contains provisions that are specific to buildings only. It covers general principles and design criteria, combinations, design spectrum, main attributes of buildings, dynamic analysis, apart from seismic zoning map and seismic coefficients of important towns, map showing epicenters, map showing tectonic features and lithological map of India.

IS 1893(Part 4):2005 `Criteria for Earthquake Resistant Design of Structures: Part 4 Industrial Structures Including Stack Like Structures

This standard deals with earthquake resistant design of the industrial structures (plant and auxiliary structures) including stack-like structures such as process industries, power plants, textile industries, off-shore structures and marine/port/harbour structures.

IS 4326:1993 Earthquake Resistant Design and Construction of Buildings - Code of Practice

This standard provides guidance in selection of materials, special features of design and construction for earthquake resistant buildings including masonry construction, timber construction, prefabricated construction etc.

Special Construction Features like Separation of Adjoining Structures, Crumple Section, Foundation design, Roofs and Floors and Staircases have been elaborated in the standard. It also covers the details pertaining to the type of construction, masonry construction with rectangular masonry units, masonry bearing walls, openings in bearing walls, seismic strengthening arrangements, framing of thin load bearing walls, reinforcing details for hollow block masonry, flooring/roofing with precast components and timber construction.

IS 13827:1993 Improving Earthquake Resistance of Earthen Buildings – Guidelines

The guidelines covered in this standard deal with the design and construction aspects for improving earthquake resistance of earthen houses, without the use of stabilizers such as lime, cement, asphalt, etc.

IS 13828:1993 Improving Earthquake Resistance of Low Strength Masonry Buildings – Guidelines

This standard covers the special features of design and construction for improving earthquake resistance of buildings of low-strength masonry.

The provisions of this standard are applicable in all seismic zones. No special provisions are considered necessary for buildings in seismic zone II if cement-sand mortar not leaner than 1:6 is used in masonry and through stones or bonding elements are used in stone walls.

IS 13920:1993 Ductile Detailing of Reinforced Concrete Structures Subjected to Seismic Forces – Code of Practice

This standard covers the requirements for designing and detailing of monolithic reinforced concrete buildings so as to give them adequate toughness and ductility to resist severe earthquake shocks without collapse.

IS 13935:2009 Seismic Evaluation, Repair and Strengthening of Masonry Buildings – Guidelines

This standard covers the selection of materials and techniques to be used for repair and seismic strengthening of damaged buildings during earthquakes. It also covers the damageability assessment and retrofitting for upgrading of seismic resistance of existing masonry buildings covered under IS 4326 and IS 13828.

ISS 6922:1973 Criteria for Safety and Design of Structures Subject to Underground Blasts

This standard deals with the safety of structures during underground blasting and is applicable to normal structures like buildings, elevated structures, bridges, retaining walls, concrete and masonry dams constructed in materials like brickwork, stone masonry and concrete.

IS 4991:1968 Criteria for Blast Resistant Design of Structures for Explosions Above Ground

This standard covers the criteria for design of structures for blast effects of explosions above ground excluding blast effects of nuclear explosions.

IS 4967:1968 Recommendations for Seismic Instrumentation for River Valley Projects

This standard covers recommendations for instrumentation for investigation of seismicity, study of micro tremors and predominant period of a dam site and permanent installation of instruments in the dam and appurtenant structures and in surrounding areas.

6.2.0 MODEL TOWN AND COUNTRY PLANNING ACT 1960

6.2.1 OBJECTIVE AND SCOPE

The Town and Country Planning Organisation (TCPO) formulated a Model Town and Country Planning Act in the year 1960. The Model Act provides Provisions for preparation of comprehensive Master Plan for urban areas of various states. It constitutes a board to advise and to coordinate in the matter of planning and plan formulation by the Local Planning Authorities in the State. The model was revised in 1985 by TCPO. TCPO has recommended

for amendment in model town and country planning Act, 1960. As per the amendment the definition of the terms such as “Natural Hazard” and “Natural Hazard Prone Areas, Natural Disaster and Mitigations” are to be added. “Natural Hazard” is defined as ‘The probability of occurrence, within a specific period of time in a given area, of a potentially damaging natural phenomenon’. “Natural Hazard Prone Areas” has been defined as ‘Areas likely to have (i) moderate to very high damage risk zone of earthquakes, OR (ii) moderate to very high damage risk of cyclones OR (iii) significant flood flow or inundation, OR (iv) landslide potential or proneness, OR (v) one or more of these hazards.’ The recommendations also provide guidelines on identification of natural hazard prone areas, Cyclone Prone Areas, Flood Prone Areas and Landslide Prone Areas

6.3.0 MODEL BUILDING BYE-LAWS 2004

6.3.1 OBJECTIVE AND SCOPE

In these 'Model Building Bye-Laws', the Town and Country Planning Organisation (TCPO) under the Ministry of Urban Development (MoUD) has created a guide for State Governments, Urban Local Bodies, Development Authorities to help them enforce the implementation of the master plans.

The 'Model Building Bye-Laws' contains eight chapters:

1. Definitions
2. Jurisdiction and applicability of the building bye-laws
3. Development code pertaining to residential and non-residential premises
4. General building requirements
5. Structural safety and services
6. Special requirements for occupancy/land development
7. Fire protection and fire safety requirements
8. Conservation of heritage sites including heritage buildings, heritage precincts and natural feature areas

Each chapter is broken down to into sections to ensure that the bye-laws cover various aspect of building design, maintenance and safety.

The first chapter provides definitions of various legal, municipal architectural and building terminology. These definitions help in understanding various terms used in the bye-laws and also in ensuring the letter and spirit of the law is followed during its implementation.

The jurisdiction of these bye-laws are dealt with in the second chapter. These laws are applicable to buildings being constructed, change of use/occupancy of building, reconstruction of a building or a part of it. It also details the procedure for obtaining a building permit. In case of a hazardous building, the approval of the Chief Controller of Explosives and Chief Fire Officer is sought.

Third chapter deals with development code pertaining to residential and non-residential premises. It discusses the use, open space, height, number of dwelling units, parking standards for residential premises, resettlement of *jhuggi jhonpri* etc. For parking, a chart is provided which details the Equivalent Car Space (ECS). The chart has ECS for different types of commercial areas, public and semi-public facilities and industries.

Fourth chapter deals with the general building requirements. This chapter deals with space requirements of various parts of the building. A table provides the minimum size of different parts of residential premises for different sizes of plots. In case of building sites, there are recommendations for the distance from building sites, minimum size of sites.

Fifth chapter discusses the structural safety and services. The water requirements for hospitals, different type of train stations, storage facilities, airports etc are provided. The different types of buildings that will need to have solar water heaters are provided here.

Sixth chapter covers provisions on special requirements for occupancy, land development. Requirements for factories, educational buildings, assembly buildings, petrol filling stations, burial and cremation grounds etc are discussed.

Seventh chapter contains measures for fire protection and fire safety requirements. Fire clearance has to be taken from the fire department for which three sets of building plans along with the prescribed fee are to be sent to the Chief Fire Officer.

The last chapter focuses on conservation of heritage sites including heritage buildings, heritage precints and natural feature areas. Chapter discusses the role of the Heritage Committee and its composition. The terms of reference of the committee include advising

Municipal Commissioner on granting development permission, preparing supplementary list of heritage sites and preparing supplementary guidelines on conservation principles.

6.4 NATIONAL BUILDING CODE OF INDIA 2005 (NBC 2005)

The National Building Code of India (NBC), a comprehensive building Code, is a national instrument providing guidelines for regulating the building construction activities across the country. It serves as a Model Code for adoption by all agencies involved in building construction works be they Public Works Departments, other government construction departments, local bodies or private construction agencies. The Code mainly contains administrative regulations, development control rules and general building requirements; fire safety requirements; stipulations regarding materials, structural design and construction (including safety); and building and plumbing services.

The Code was first published in 1970 at the instance of Planning Commission and then revised in 1983. Thereafter three major amendments were issued, two in 1987 and the third in 1997.

Considering a series of further developments in the field of building construction including the lessons learnt in the aftermath of number of natural calamities like devastating earthquakes and super cyclones witnessed by the country, a Project for comprehensive revision of NBC was taken up under the aegis of National Building Code Sectional Committee, CED 46 of BIS and its 18 expert Panels; involving as many as 400 experts.
As a culmination of the Project, the revised NBC has now been brought out as National Building Code of India 2005 (NBC 2005).

The comprehensive NBC 2005 contains 11 Parts some of which are further divided into 26 chapters. The relevant features of the revised NBC include, apart from other changes made, the changes specially in regard to further enhancing our response to meet the challenges posed by natural calamities and reflecting the state-of-the-art and contemporary applicable international practices. The Code has been published in one full volume containing all the Parts and Sections. Besides, five separate groups to cater largely to the interest/agency dealing with different aspects of building activity have also been published. Few important definitions as provided under the Code are:

i. **Building** — Any structure for whatsoever purpose and of whatsoever materials constructed and every part thereof whether used as human habitation or not and includes foundation, plinth, walls, floors, roofs, chimneys, plumbing and building services, fixed platforms, *VERANDAH*, balcony, cornice or projection, part of a building or anything affixed thereto or any wall enclosing or intended to enclose any land or space and signs and outdoor display structures. Tents/ *SHAMIANAHS/PANDALS*, tarpaulin shelters, etc, erected for temporary and ceremonial occasions shall not be considered as building.

ii. **Owner** — Person or body having a legal interest in land and/or building thereon. This includes free holders, leaseholders or those holding a sub-lease which both bestows a legal right to occupation and gives rise to liabilities in respect of safety or building condition. In case of lease or sub-lease holders, as far as ownership with respect to the structure is concerned, the structure of a flat or structure on a plot belongs to the allottee/ lessee till the allotment/lease subsists.

As per the Code, buildings shall be classified as Residential, Educational, Institutional, Assembly, Business, Mercantile, Industrial, Storage and Hazardous in groups and sub-division as classified in Part 4 'Fire and Life Safety'.

RELEVANT FEATURES OF NBC 2005

1) Inclusion of a complete philosophy and direction for successfully accomplishing the building projects through Integrated Multidisciplinary Approach right through conceptual stage to planning, designing, construction, operation and maintenance stages

2) A series of reforms in building permit process

3) Provisions to ensure and certification of safety of buildings against natural disaster by engineer and structural engineer

4) Provision for two stage permit for high rise and special buildings

5) Provision for periodic renewal certificate of occupied buildings from structural, fire and electrical safety point of view

6) Provision for empowering engineers and architects for sanctioning plans of residential buildings up to 500 m2

7) Inclusion of detailed town planning norms for various amenities such as educational facilities, medical facilities, distribution services, police, civil defense and home guards and fire services

8) Revision of parking requirements for metro and mega cities

9) Updation of special requirements for low income housing for urban areas

10) Inclusion of special requirements for low income housing rural habitat planning

11) Inclusion of guidelines for development planning for hilly areas

12) Revision of the provisions for buildings and facilities for physically challenged

13) Fire safety norms completely revamped through detailed provisions on Fire Prevention, Life Safety and Fire Protection

14) Inclusion of new categories of starred hotels, heritage structures and archaeological monuments for fire safety provisions

15) Substitution of halo based fire/extinguishers fire fighting system

16) Promotion to new/innovative building materials/technologies

17) Inclusion of latest provisions for earthquake resistant design and Construction

18) Inclusion of details on multi-disaster prone districts

19) Inclusion of new chapter on design and construction using bamboo

20) Chapter on prefabricated and composite construction for speedier construction

21) Updating of provision of safety in construction

22) Complete revision of provision on building and plumbing services in line with applicable international practices

23) Provisions on rain water harvesting

24) Inclusion of new chapter to cover landscaping needs

Besides these, NDMA has come up with guidelines on earthquakes and management of landslides and snow avalanches.

CHAPTER SEVEN
CHEMICAL/ INDUSTRIAL/ NUCLEAR DISASTERS

Industrial disasters occur by reason of utter indifference on the part of the owner/manager in handling hazardous substances such as toxic gases or other flammable substances enumerated in the Environment Protection Act, 1986 coupled with lack of adequate fire control equipment in the premises and emergency evacuation plans. The storage of combustible material without even enclosing them with fire-proof walls/partition aggravates the problem. The escape of poisonous gases has terrible impact on the safety and health of those living in the vicinity. There is no periodic inspection by the technical personnel of the Government/local bodies at the time of and after issuing/renewing the licenses and certificates.

The growth of chemical industries has led to an increase in the risk of occurrence of incidents associated with hazardous chemicals (HAZCHEM). A chemical industry that incorporates the best principles of safety, can largely prevent such incidents. Common causes for chemical accidents are deficiencies in safety management systems and human errors, or they may occur as a consequence of natural calamities or sabotage activities. Chemical accidents result in fire, explosion and/or toxic release. The nature of chemical agents and their concentration during exposure ultimately decides the toxicity and damaging effects on living organisms in the form of symptoms and signs like irreversible pain, suffering, and death. The Bhopal Gas tragedy of 1984—the worst chemical disaster in history, where over 2000 people died due to the accidental release of the toxic gas Methyl Isocyanate, is still fresh in our memories. Such accidents are significant in terms of injuries, pain, suffering, loss of lives, damage to property and environment. A small accident occurring at the local level may be a prior warning signal for an impending disaster. Chemical disasters, though low in frequency, have the potential to cause significant immediate or long-term damage.

A **nuclear and radiation accident** is defined by the International Atomic Energy Agency as "an event that has led to significant consequences to people, the environment or the facility." Examples include lethal effects to individuals, large radioactivity release to the environment, or reactor core melt." The prime example of a "major nuclear accident" is one in which

a reactor core is damaged and significant amounts of radioactivity are released, such as in the Chernobyl Disaster in 1986. The impact of nuclear accidents has been a topic of debate practically since the first nuclear reactors were constructed. It has also been a key factor in public concern about nuclear facilities. Some technical measures to reduce the risk of accidents or to minimize the amount of radioactivity released to the environment have been adopted. Despite the use of such measures, "there have been many accidents with varying impacts as well near misses and incidents"

7.1.0 ATOMIC ENERGY (SAFE DISPOSAL OF RADIOACTIVE WASTES) RULES, 1987.

7.1.1 OBJECTIVE AND SCOPE: The rules have been made by the Central Government under the Atomic Energy Act, 1962.

RELEVANT PROVISIONS OF THE RULES

7.1.1.1 Definitions (Rule 2)

(i) “Accident condition” means a substantial deviation from normal operating conditions which could lead to release of unacceptable quantities of radioactive materials if the relevant engineered safety features did not function as per design intent;

(ii) “Act” means the Atomic Energy Act, 1962;

(iii) “Adequate protection” means protection against radiation so provided that the prescribed operational limits are not exceeded;

(iv) “Applicant” means a person or an organisation that applies, in Form A , for granting of authorisation to perform specified activities connected with disposal of radioactive wastes;

(v) “Authorization” means permission for disposal of radioactive wastes, granted by the competent authority in Form B;

(vi) “Authorised person” means a person authorised by the competent authority to disposal of radioactive waste in accordance with the provisions of these rules;

(vii) “Competent authority” means any officer or authority appointed by the Central Government by notification under these rules;

(viii) “Conditioning” means those operations, chemical or physical, that transform the radioactive waste into a form suitable for transport, storage or final disposal and may include converting the waste to another form, enclosing the waste in containers and providing additional packaging;

(ix) “Contamination” means the presence of radioactive substance in a material or place that may be specified as excessive by the competent authority by notification for the purposes of these rules;

(x) “Disposal” means release of any material to the environment in a manner leading to loss of control over the future disposition of the radionuclides contained therein and includes emplacement of waste materials in a repository;

(xi) “Disposal limits” means the limits for disposal of radioactive waste, prescribed from time to time by the competent authority under these rules;

(xii) “Effluent” means gaseous, particulate or liquid emission which is discharged from the installation into its environment;

(xiii) “Environment” means the surroundings of an installation that will influence the life, survival and development of human beings and any organisms relevant to man;

(xiv) “Employer” means a person who employs workers or who is self-employed as a worker in an installation;

(xv) “Form” means form attached to these rules;

(xvi) “Installation” or “institution” means any location wherein the processes incidental to the waste generation, conditioning, storage and disposal are carried out;

(xvii) “Institutional control” means controls or actions to preclude unauthorised human contact with radioactive waste and includes controlled access to the installation and to the restricted area around it, periodic inspection and surveillance of the said installation and its restricted area, controlled productive use of the said restricted area and restrictions in the form of titles and deeds for land use;

(xviii) “Operational limits” means operational limits prescribed from time to time under the Radiation Protection Rules, 1971;

(xix) “Packaging” means any container prepared for containing the conditioned waste for handling, transportation, storage or disposal and may be permanent part of the waste package or it may be a reusable cask or overpack;
(xx) “Person” includes,

(i) any individual, corporation, association of persons whether incorporated or not, partnership, estate, trust, private or public institution, group, government agency, or anystate or any political sub-division thereof or any political entity within state, any foreign government or nation or any political sub-division of any such government or nation or other entity; and

(ii) any legal successor, representative or agent of each of the foregoing;

(xxi) “Radiological Safety Officer” means any person who is so designated by the employer and who, in the opinion of the competent authority, is qualified to discharge the duties and functions outlined in rule 13 of these rules;

(xxii) “radioactive waste” means any waste material containing radionuclides in quantities or concentrations as prescribed by the competent authority by notification in the official gazette;

(xxiii) “repository” means an underground geological formation with or without enginenered barriers or an overground vault in which waste may be emplaced for disposal;

(xxiv) “Restricted area” means any area access to which is controlled by the employer and approved as such by the competent authority for purposes of protection of individuals from exposure to radiation and radioactive contamination;

(xxv) “Scheduled” means schedule attached to these rules;

(xxvi) “storage” as distinct from disposal, means containment of the radioactive wastes under controlled conditions and under radiation surveillance in accordance with the provisions of the Radiation Protection Rules, 1971;

7.1.1.2 Restrictions on the disposal of radioactive waste (Section 3)

No person shall dispose of radioactive waste unless he has obtained an authorisation from the competent authority under these rules; in any manner other than in accordance with the terms and conditions specified in the authorisation issued under these rules; in any location different from those specified in the authorisation; in quantities exceeding those specified in the authorisation.

7.1.1.3 Duties of the authorised person (Section 6)

Every authorised person shall ensure that —

(i) Disposal of radioactive wastes is done in accordance with the provisions of these rules, and in accordance with the terms and conditions laid down in the authorisation;

(ii) Records of waste disposal are maintained in Form III for the periods stipulated by the competent authority;

(iii) All the requirements of the Radiation Protection Rules, 1971 are complied with;

(iv) Any operation likely to result in a more hazardous accident than that envisaged in the safety analysis given by the applicant under rule 4(i)(g) are not carried out in the installation;

(v) Personnel monitoring and environmental surveillance is carried out on a continued basis to evaluate the risks and to monitor the environmental impact of the waste disposal operations.

7.1.1..4 Installation for Disposal of Radioactive Waste to be considered as Radiation Installation (Section 8)

Any installation for disposal of radioactive waste shall be considered a radiation installation as defined under the Radiation Protection Rules, 1971.

7.1.1..5 Prevention of Entry into Restricted Areas (Section 9)

The authorised person shall make adequate arrangements to prevent entry of unauthorised members of the public in the restricted areas and shall further ensure that only the essential staff remains in the said areas to perform necessary operations.

7.1.1..6Power to inspect installations (Section 10)

Any person duly authorised by the competent authority under section 17 of the Act, for purposes of inspection and enforcement of these rules may at any time —

(a) inspect any installation where disposal of radioactive waste is carried out;

(b) inspect any equipment (permanently installed or mobile) therein;

(c) make such tests and or measurements as may be necessary for purposes of evaluating radiation hazards;

(d) order disposal of such radioactive wastes as he deems necessary in the interest of radiation protection;

(e) do all such things (including examination of relevant records) as he may consider necessary for purposes of determining the adequacy or otherwise of the methods employed and devices used therein for controlling and monitoring environmental release of radioactive materials.

7.1.1.7Radiological Safety Officer (Section 12)

The authorised person shall designate, with the approval of the competent authority; either himself or a person under his employ as Radiological Safety Officer.

7.1.1.8Accidental release of radioactive waste (Section 14)

In the event of accidental release of any radioactive material resulting in personnel, surface or environmental contamination, the Radiological Safety Officer shall —

(a) take steps to arrange for the immediate decontamination of the affected personnel and areas and other remedial measures as required;

(b) inform immediately the employer and the competent authority; details of the incident, remedial measures initiated and programme for disposal of contaminated material, if any.

7.1.1.9 Special provisions for installations such as Hospitals and Tracer Research Laboratories (Section 15)

Persons using small amounts of radioisotopes of very short effective half life (such as in medical practice and tracer applications) may submit their application in Form V for authorisation to dispose of radioactive waste.

7.2.0 THE BHOPAL GAS LEAK DISASTER (PROCESSING OF CLAIMS) ACT, 1985

7.2.1 OBJECTIVE AND SCOPE : The Act confers certain powers on the Central Government to secure that claims arising out of, or connected with, the Bhopal gas leak disaster are dealt with speedily, effectively, equitably and to the best advantage of the claimants. The Bhopal Gas Tragedy, 1984 was a catastrophe. Forty tons of toxic gas (Methy-Iso-Cyanate, MIC) was accidentally released from Union Carbide's Bhopal plant, which leaked and spread throughout Bhopal city. An estimated 10,000 or more people died. About 500,000 more people suffered injuries with disastrous effects of massive poisoning.

7.2.2 RELEVANT PROVISIONS OF THE ACT:

7.2.2.1 Definitions (Section 2)

i.” Bhopal gas leak disaster" or" disaster" means the occurrence on the 2nd and 3rd days of December, 1984, which involved the release of highly noxious and abnormally dangerous gas from a plant in Bhopal (being a plant of the Union Carbide India Limited, a subsidiary of the Union Carbide Corporation, U. S. A.) and which resulted in loss of life and damage to property on an extensive scale;

ii. " claim" means a claim, arising out of, or connected with, the disaster, for compensation or damages for any loss of life or personal injury which has been, or is likely to be, suffered; a claim, arising out of, or connected with, the disaster, for any damage to property which has been, or is likely to be, sustained; a claim for expenses incurred or required to be incurred for containing the disaster or mitigating or otherwise coping with the effects of the disaster; any other claim (including any claim by way of loss of business or employment) arising out of, or connected with, the disaster;

iii. " Claimant" means a person entitled to make a claim.

7.2.2.2 Representation by Central Government (Section 3)

Central Government shall have the exclusive right to, represent, and act in place of (whether within or outside India) every person who has made, or is entitled to make, a claim for compensation. This includes claims in respect of which suits or other proceedings have been

instituted in or before any court or other authority (whether within or outside India) before the commencement of this Act. In the case of any such suit or other proceeding with respect to any claim pending immediately before the commencement of this Act in or before any court or other authority outside India, the Central Government shall represent, and act in place of, or along with, such claimant.

7.2.2.3 Claimant's right to be represented by a legal practitioner, Power of Central Government (Section 4)

Central Government shall have due regard to any matters which any claimant may require to be urged with respect to his claim and shall, permit a legal practitioner of his choice to be associated in the conduct of any suit or other proceeding relating to his claim.

7.2.2.4 Power of Central Government of, or connected with, the disaster (Section 5)

Central Government shall have the powers of a civil court while trying a suit under the Code of Civil Procedure, 1908 in respect of the summoning and enforcing the attendance of any person from any part of India and examining him on oath; requiring the discovery and production of any document; receiving evidence on affidavits; requisitioning any public record or copy thereof from any court or office; issuing commissions for the examination of witnesses or documents; any other matter which the Central Government may specify.

7.2.2.5 Commissioner and other officers and employees (Section 6)

Government may appoint an officer, to be known as the Commissioner for the welfare of the victims of the Bhopal gas leak disaster. Commissioner shall discharge such functions as may be assigned to him by the Scheme.

7.2.2.6 Power to delegate (Section 7)

Central Government may delegate all or any of its powers under this Act (excepting the power under section 9 to frame a Scheme) to the Government of Madhya Pradesh or an officer of the Central Government not below the rank of a Joint Secretary to that Government or an officer of the Government of Madhya Pradesh not below the rank of a Secretary to that Government or the Commissioner.

7.2.2.7 Power to frame a Scheme (Section 9)

Central Government shall frame a Scheme. This Scheme may provide for registration of the claims under the Scheme; processing of the claims for securing their enforcement; maintenance of records and registers in respect of the claims; creation of a fund for meeting expenses in connection with the administration of the Scheme; amounts which the Central Government may credit to the fund; utilisation, by way of disbursal of any amounts received in satisfaction of the claims; officer who may make such disbursal or apportionment in the event of a dispute; maintenance and audit of accounts with respect to the amounts referred; functions of the Commissioner and other officers and employees appointed.

7.3.0 CALCIUM CARBIDE RULES, 1987

7.3.1 OBJECTIVE AND SCOPE

Compressed gases filled in metallic container pose potential hazard and the container explodes. Hence, the Govt. of India vide Notification No.G.S.R. 105(E) dated 28/09/1938 has declared compressed gas filled in a metallic container to be deemed to be an explosive under Petroleum Act, 1934. Subsequently, in exercise of powers vested in Section 4 of the Petroleum Act, 1934, the Govt. framed the **CALCIUM CARBIDE RULES, 1987** to regulate filling, possession, transport and import of compressed gases in pressure vessels.

7.3.2 RELEVANT PROVISIONS OF THE RULE

7.3.2.1 Definitions

a) "Chief Controller" means the Chief Controller of Explosives;
b) "Controller of Explosives" includes a Joint Chief Controller of Explosives, Deputy Chief Controller of Explosives and Deputy Controller of Explosives;
c) 'District Authority" means—
    (a) a Commissioner of Police or Deputy Commissioner of Police in any town having a Commissioner of Police; and

    (b) in any other place, the District Magistrate;

d) "District Magistrate" includes an Additional District Magistrate and in the State of Punjab and Haryana and in the Karaikal, Mahe and Yanam areas of the Union territory of Pondicherry, also includes a Sub-divisional Magistrate;

e) "Inspector" means an Officer authorized by the Central Government under Sub-section (1) of Section 13 of the Act.

f) "Prescribed receptacle" means a receptacle which—

(i) Is made of steel or any other material approved by the Chief Controller but has no copper in its composition;

(ii) Is hermetically closed at all times except when its contents are being placed within it or withdrawn from it; and

(iii) Bears a stamped embossed, painted or printed warning exhibiting in conspicuous characters the words "Calcium Carbide"— Dangerous if not kept dry" and the following caution :-

"The contents of this package are liable, if brought into contact with moisture, to give off a highly inflammable gas" : Provided that of the containers of carbide imported, the warning shall be according to relevant international Code.

7.3.2.2 Carbide to be packed in prescribed receptacles (Rule 3)

Carbide shall not be imported, transported or stored unless it is packed in prescribed receptacles to avoid any undue hazard.

7.3.2.3 Precautions against contact with water (Rule 5)

Precaution should be taken to prevent carbide coming into contact with water, and where such contact may have occurred to prevent ignition of the gas.

7.3.2.4 Disposal of carbide if wet (Rule 6)

If any carbide becomes wet and the receptacle becomes hot it shall be destroyed by being submerged in deep water. If deep water is not available, the wet carbide, shall be spread out in the open in an isolated place, and all precautions shall be taken to prevent any fire or

artificial light or article capable of igniting acetylene being brought near until the material has given off its gas and the surrounding area has become free of gas.

Note: --The fact of carbide having become wet, will be indicated by the outward appearance of the drum, and probably by a disagreeable odour, showing a leakage of gas.

7.3.2.5 Children and intoxicate person (Rule 7)

No person shall employ or allow—

(i) Any child under eighteen years of age; or

(ii) Any person who is in a state of intoxication—

(a) For the purpose of loading, unloading or transport of carbide; or

(b) To enter any premises licensed under these rules.

7.3.2.6 Prohibition of smoking, fires and lights (Rule 8)

No person shall smoke, and no fires, artificial lights or articles capable of igniting acetylene shall be permitted—

(a) At any time within or near the place where carbide is stored;

(b) Near a vehicle or vessel transporting carbide.

7.3.2.7 License for import of carbide (Rule 9)

Carbide shall not be imported except under a license granted under these rules.

7.3.2.8 IMPORTATION OF CARBIDE BY SEA (Rule 10 to 16)

A) Port of Import-Carbide shall not be imported except at the ports of—

Bombay, Calcutta, Cochin, Tuticorin, Kandla, Madras, Mangalore, Port Blair, Visakhapatnam

B) Duty of Master or an Agent in port.—

i. The master or the Agent of the owner of every vessel arriving at any port and carrying carbide shall on entering the port and before landing any cargo, declare in writing to

the Collector of Customs and also to the Conservator of the Port the quantity and description of the carbide carried by it.

ii. The master shall moor the vessel at such place as the Conservator of the port may direct and while any carbide remains on board, the master shall not, except for the purpose of proceedings to sea, remove the vessel without the written permission of the Conservator of the Port.

iii. The master shall ensure that the hold of every vessel brining carbide into port shall be efficiently ventilated from the time the vessel enters the port until all the carbide on board has been discharged or until the vessel has left the port.

C) Defective Receptacles

The Collector of Customs may require that any receptacle containing carbide which does not satisfy the requirements of rule 3 of which is defective shall be submerged in deep water under the direction of the Conservator of the port, without compensation to the consignees.

D) Landing of carbide

Carbide shall be landed only with the permission of the Collector of Customs and at such place or places as the Conservator of the Port may direct.

Carbide shall be landed only between sunrise and sunset.

E) Removal after landing

All carbide landed from any vessel shall be removed without unnecessary delay to a licensed premises, and if conveyed by water shall be conveyed only in an pen barge certified as suitable for the conveyance of carbide by the Conservator of the Port.

F) Storage at Port

If carbide is not removed immediately from the port may be stored in the port in a separate go down away from other buildings.

7.3.2.9 IMPORTATION BY LAND (Rule 17)

Nobody can import carbide by land without previous sanction in of the Central Government and under such conditions and restrictions as it may impose in consultation with the Chief Controller

7.3.2.10 IMPORTATION BY AIR (Rule 18)

Nobody can import carbide by air without the previous sanction of the Central Government and under such conditions and restrictions and on payment of such fees as it may impose and in such quantities and manners as may be allowed by the Director General, Civil Aviation.

7.3.2.11 TRANSPORATION OF CARBIDE (Rule 19 to 24)

A) Transport by Railway or Road

i. Carbide while in the custody of railway administration or a road transport agency for transport, shall not be stored in any goods shed with other materials but shall be stacked in the open under water-proof sheets and shall be so placed as to prevent any receptacle containing in from becoming wet.
ii. Where the carbide is conveyed by rail it shall be subject to all the regulations which may from time to time be prescribed generally or specially in that behalf by the railway administration.

B) Transport by Passenger Train

Where carbide is transported by passenger train; -

(i) The quantity carried by any one train shall not exceed 250 kilograms;

(ii) The carbide shall be carried in brake van of the train;

(iii) No naked lamp or other artificial light capable of igniting inflammable gas shall be taken into a van containing carbide; and

(iv) The van shall be well ventilated and as far as possible is watertight.

C) Transport by water

Where carbide is conveyed by water it shall be packed and stored in accordance with the regulations contained in the Merchant Shipping Carriage of Dangerous Goods Rules, 1978.

D) Transport by Air

Carbide may be transported by air in such quantities and in such a manner as may be allowed by the Director General, civil aviation.

7.3.2.12 STORAGE OF CARBIDE (Rule 25 to 29)

A) Carbide to be commercially pure

No carbide shall be kept at any place with or without a license unless it is "commercially pure" that is, unless it contains no impurities which would render the gas evolved either alone or in admixture with air, liable to ignited spontaneously and the gas evolved shall comply with the requirements given in specification for calcium carbide, technical, IS:1040.

B) License for storage

No person shall store any carbide except under a license granted under the Rules

C) Observance of safety distance from the licensed storage shed necessary

i. Carbide shall be stored –

(a) if in quantities aggregating more than 200 kilograms but not exceeding 500 kilograms in a suitable uninhabited building at least 3 metres away from any other promises;

(b) if in quantities aggregating more than 500 kilograms and not more than, 5000 kilograms in a suitable uninhabited building at least 6 metres away from any other premises;

(c) if in quantities aggregating more than 5000 kilograms, in a suitable un inhabited building at least 9 metres away from any other premises;

Not more than 1000 metric tonnes of carbide shall be stored in any one building,

ii. A carbide storage shed may also from a part of, or attached to an Acetylene plant provided that it is separated from other portions of the plant by substantial partition and the entire building including the carbide storage shed, observes a safety distance of 15 metres from any other premises

iii. Every building storing carbide shall be surrounded by a wall or fence of at least 1.8 metres high to prevent unauthorized persons having access to the shed and are enclosed by such wall or fence shall cover the safety zone required to be kept clear.

D) Construction of storage premises

Every premises for storage of carbide shall be –

(a) Constructed of non-flammable material with cemented floor raised at least 30 centimetres from the surrounding ground level ;

(b) Well ventilated both near the coiling and the floor to the satisfaction of the licensing authority. The ventilator openings shall be covered with two layers of galvanised iron or other non-corroding metal wire gauge having no copper and of mesh not less than 11 per linear centimetre;

(c) Water tight;

(d) Sufficient capacity so as to conveniently accommodate the quantity of carbide proposed to be stored, leaving a gangway space of at least 60 centimetres around the stack.

7.3.2.13 Notice of Accidents (Rule 49)

The notice of an accident under section 27 of the Act shall be given:

a) In case of the notice to the Chief Controller by an Express telegram (Telegraphic Address: Explosives, Nagpur) followed within 24 hours by a letter giving particulars of the accident;

b) And by a quickest means of communication to the nearest Magistrate or to the officer-in-charge of the Police Station having jurisdiction.

Pending the visit of the Chief Controller or his representative or until instructions are received from these authorities that he does not wish any further investigations or inquiry to be made, all wreckage and debris shall be left untouched except in so far as its removal may be necessary for the rescue of persons injured and recovery of the bodies of any persons killed by the accident or in the case of railways, for the restoration of through communication.

7.4.0 THE MANUFACTURE, STORAGE AND IMPORT OF HAZARDOUS CHEMICAL RULES, 1989

7.4.1 OBJECTIVE AND SCOPE:

The Ministry of Environment & Forests, Govt. of India has notified the rules under title "Manufacture Storage and Import of Hazardous Chemicals Rules, 1989 to deal with the safety and environmental aspects associated with hazardous chemicals. This rule applies to an industrial activity in which a hazardous chemical, subject to schedule 1, is or may be

involved. The occupier is required to inform to the authority of any major accident caused due to hazardous chemicals occurring on a site or in a pipeline.

7.4.2RELEVANT PROVISIONS OF THE RULE

7.4.2.1Definitions (Section 2):

1."Hazardous Chemical" means -any chemical which satisfies any of the criteria laid down in Part I of Schedule 1 or listed in Column 2 of Part II of this Schedule ; any chemical listed in Column 2 of Schedule 2; any chemical listed in Column 2 of Schedule 3;

2."Industrial activity" means-an operation or process carried out in an industrial installation referred to in Schedule 4 involving or likely to involve one or more hazardous chemicals and includes on-site storage or on-site transport which is associated with that operation or process, as the case may be; or isolated storage; or pipeline ;

3."major accident" means -an incident involving loss of life inside or outside the installation, or ten or more injuries inside and/or one or more injuries outside or release of toxic chemicals or explosion or fire or spillage of hazardous chemicals resulting in on-site or off-site emergencies or damage to equipment leading to stoppage of process or adverse affects to the environment.

4. "major accident hazards (MAH) installations" means - isolated storage and industrial activity at a site handling (including transport through carrier or pipeline) of hazardous chemicals equal to or, in excess of the threshold quantities specified in, Column 3 of schedule 2 and 3 respectively.

5. **"site**" means any location where hazardous chemicals are manufactured or processed, stored, handled, used, disposed of and includes the whole of an area under the control of an occupier and includes pier, jetty or similar structure whether floating or not;

7.4.2.2 **DUTIES OF AUTHORITIES** (Section 3)

The concerned authority shall inspect the industrial activity at least once in a calendar year; except where such authority is the Ministry of Environment and Forests, annually report on the compliance of the rules by the occupiers to the Ministry of Environment and Forests through appropriate channel.

7.4.2.3 GENERAL RESPONSIBILITY OF THE OCCUPIER DURING INDUSTRIAL ACTIVITY (Section 4):

An occupier who has control of an industrial activity in terms of sub-rule (1) shall provide evidence to show that he has, -

(a) identified the major accident hazards; and

(b) taken adequate steps to -

(i) prevent such major accidents and to limit their consequences to persons and the environment;

(ii) Provide to the persons working on the site with the information, training and equipment including antidotes necessary to ensure their safety.

7.4.2.4 NOTIFICATION OF MAJOR ACCIDENT (Section 5):

Where a major accident occurs on a site or in a pipe line, the occupier shall within 48 hours notify the concerned authority of that accident, and furnish thereafter to the concerned authority a report relating to the accidents in installments. The concerned authority shall on receipt of the report undertake a full analysis of the major accident and sent the requisite information within 90 days to the Ministry of Environment and Forests through appropriate channel.

7.4.2.5 PREPARATION TO ON-SITE EMERGENCY PLAN BY THE OCCUPIER (Section 13):

An occupier shall prepare and keep up-to-date an on-site emergency plan containing details specified in Schedule II and detailing how major accidents will be dealt with on the site on which the industrial activity is carried on and that plan shall include the name of the person who is responsible for safety on the site and the names of those who are authorized to take action in accordance with the plan in case of an emergency. The occupier shall ensure that the emergency plan prepared takes into account any modification made in the industrial activity and that every person on the site who is affected by the plan is informed of its relevant provisions. The occupier shall prepare the emergency plan required –

(a) in the case of a new industrial activity, before that activity is commenced;

(b) in the case of an existing industrial activity within 90 days of commencing into operation of these rules.

7.4.2.6 PREPARATION OF OFF-SITE EMERGENCY PLAN BY THE AUTHORITY (Section 14):

It shall be the duty of the concerned authority as identified to prepare and keep up-to-date an adequate off-site emergency plan containing particulars specified and detailing how emergencies relating to a possible major accident on that site will be dealt with and in preparing that plan the concerned authority shall consult the occupier, and such other persons as it may deem necessary. For the purpose of enabling the concerned authority to prepare the emergency plan required the occupier shall provide the concerned authority with such information relating to the industrial activity under his control as the concerned authority may require, including the nature, extent and likely effects off-site of possible major accidents and the authority shall provide the occupier with any information from the off-site emergency plan which relates to his duties under rule 13.

7.4.2.7 **INFORMATION TO BE GIVEN TO PERSONS LIABLE TO BE AFFECTED BY A MAJOR ACCIDENT (Section 15):**

The occupier shall take appropriate steps to inform persons outside the site either directly or through District Emergency Authority who are likely to be in an area which may be affected by a major accident about, -

(a) the nature of the major accident hazard; and

(b) the safety measures and the "Do's' and 'Don'ts" which should be adopted in the event of a major accident.

7.4.2.8 IMPORT OF HAZARDOUS CHEMICALS (Section 18):

This rule shall apply to a chemical which satisfies any of the criteria laid down in Part I of Schedule 1 or listed in Column 2 of Part II of this Schedule. Any person responsible for importing hazardous chemicals in India shall provide before 30 days or as reasonably possible but not later than the date of import to the concerned authorities as identified in Column 2 of Schedule 5 the information pertaining to, -

(i) the name and address of the person receiving the consignment in India;

(ii) the port of entry in India;

(iii) mode of transport from the exporting country to India;

(iv) the quantity of chemical (s) being imported; and

(v) complete product safety information.

If the Concerned Authority of the State is satisfied that the chemical being imported is likely to cause major accidents, it may direct the importer to take such safety measures as the concerned Authority of the State may deem appropriate. In case the concerned Authority of the State is of the opinion that the chemical should not be imported on safety or on environmental considerations, such Authority may direct stoppage of such import. The concerned Authority at the State shall simultaneously inform the concerned Port Authority to take appropriate steps regarding safe handling and storage of hazardous chemicals while off-loading the consignment within the port premises. Any person importing hazardous chemicals shall maintain the records of the hazardous chemicals imported as specified in Schedule 10 and the records so maintained shall be open for inspection by the concerned authority at the State or the Ministry of Environment and Forests or any officer appointed by them in this behalf. The importer of the hazardous chemical or a person working on his behalf shall ensure that transport of hazardous chemicals from port of entry to the ultimate destination is in accordance with the Central Motor Vehicles Rules, 1989 framed under the provisions of the Motor Vehicles Act, 1988.

7.5.0 CHEMICAL ACCIDENTS (EMERGENCY PLANNING, PREPAREDNESS, AND RESPONSE) RULES, 1996

7.5.1 OBJECTIVE AND SCOPE:

In exercise of the power conferred by Section 6, 8 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby makes the Chemical Accidents (Emergency Planning, Preparedness, and Response) Rules, 1996.

7.5.2 RELEVANT PROVISION OF THE RULE:

7.5.2.1 Definitions (Rule 2)

a) "chemical accident" means an accident involving a fortuitous, or Sudden or unintended occurrence while handling any hazardous chemicals resulting in continuous, intermittent or repeated exposure to death, or injury to, any person or damage to any property but does not include an accident by reason only of war or radio-activity;

b) "hazardous chemical" means,-
   (i) any chemical which satisfies any of the criteria laid down in Part I of Schedule 1 or is listed in Part 2 of the said schedule;
   (ii) any chemical listed in Column 2 of Schedule 2;
   (iii)any chemical listed in Column 2 of Schedule 3;

c) "industrial activity" includes an operation or process,-
   (i) carried out in an industrial installation referred to in Schedule -4 involving or likely to involve one or more hazardous chemicals;
   (ii) on-site storage or on-site transport which is associated with that operation or process as the case may be;
   (iii)isolated storage;
   (iv)pipeline;

d) "industrial pocket" means any industrial zone ear-marked by the Industrial Development Corporation of the State Government or by the State Government;

e) "isolated storage" means,- storage of a hazardous chemical other than storage associated with an installation on the same site specified in **Schedule 4** where that storage involves at least the quantities of that chemical set out in **Schedule-2;**

f) "major chemical accident" means, - an occurrence including any particular major emission, fire or explosion involving one or more hazardous chemicals and resulting from uncontrolled developments in the course of industrial activity or transportation or due to natural events leading to serious effects both immediate or delayed, inside or outside the installation likely to cause substantial loss of life and property including adverse effects on the environment;

g) "Major Accident Hazards (MAH) Installations".- means, isolated storage and industrial activity at a site, handling (including transport through carrier or pipeline)

of hazardous chemicals equal to or, in excess of the threshold quantities specified in column 3 of **Schedule 2 and 3** respectively;

h) Manufacture, Storage and Import of Hazardous Chemical, Rules" means, - the Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989, published in the notification of Government of India in the Ministry of Environment & Forests No. S.0.966 (E), dated 27 1h November, 1989;

i) "off-site emergency plan" means,- the off-site emergency plan prepared under rule 14 of the Manufacture, Storage and Import of Hazardous Chemicals Rules;

j) "pipeline" means,- a pipe (together with any apparatus and works associated therewith) or system of pipes (together with any apparatus and works associated therewith) for the conveyance of a hazardous chemical other than a flammable gas as set out in column 2 of Part 11 of Schedule 1, at a pressure of less than 8 bars absolute;

k) "site" means,- any location where hazardous chemicals are manufactured or processed, stored, handled, used, disposed of and includes the whole of an area under the control of an occupier and includes pier, jetty or similar structure whether floating or not;

l) "Transport" means.- movement of hazardous chemicals by any means over land, water or air.

7.5.2.2 Constitution of Central Crisis Group (Rule3)

The Central Government shall constitute a Central Crisis Group for management of chemical accidents and set up a Crisis Alert System in accordance with the provisions of Rule-4 within thirty days from the date of the commencement of these rules. The composition of the Central Crisis Group specified in Schedule 5.

7.5.2.3 Constitution of Crisis Alert System (Rule 4)

The Central Government shall-

a) set up a functional control room at such place as it deems fit;
b) set up an information net working system with the State and district control rooms;
c) appoint adequate staff and experts to man the functional control room;
d) publish a list of Major Accident Hazard installations;
e) publish a list of major chemical accidents in chronological order;

f) publish a list of members of the Central, State and District Crisis Groups;
g) Take measures to create awareness amongst the public with a view to preventing chemical accidents.

7.5.2.4 Functions of the Central Crisis Group (Rule 5)

The Central Crisis Group shall be tile apex body to deal with major chemical accidents and to provide expert guidance for handling major chemical accidents. The Central Crisis Group shall-

a) continuously monitor the post accident situation arising out of a major chemical accident and suggest measures for prevention and to check recurrence of such accidents;
b) conduct post accident analysis of such major chemical accidents and evaluate responses;
c) review district off-site emergency plans with a view to examine its adequacy in accordance with the Manufacture, Storage and Import of Hazardous Chemicals, Rules, and suggest measures to reduce risks in the Industrial pockets;
d) review the progress reports submitted by the State Crisis Groups;
e) respond to queries addressed to it by the State Crisis Groups and the District Crisis Groups;
f) publish a State wise list of experts and officials who are concern" with the handling of chemical accidents;
g) Render, in the event of a chemical accident in a State, all financial and infra-structural help as may be necessary.

7.5.2.5 Constitution of State Crisis Group (Rule 6)

The State Government shall constitute a State Crisis Group for management of chemical accidents within thirty days from the date of the commencement of these rules. The composition of the State Crisis Group shall be as specified in **Schedule 6.**

7.5.2.6 Functions of the State Crisis Group (Rule 7)

The State Crisis Group shall be the apex body in the State to deal with major chemical accidents and to provide expert guidance for handling major chemical accidents. The State Crisis Group shall-

a) review all district off-site emergency plans in the State with a view to examine its adequacy in accordance with the Manufacture, Storage and Import of Hazardous Chemicals, Rules and forward a report to the Central Crisis Group once in three months;
b) assist the State Government in managing chemical accidents at a site;
c) assist the State Government in the planning, preparedness and mitigation of major chemical accidents at a site in the State;
d) continuously monitor the post accident situation arising out of a major chemical accident in the State and forward a report to the Central Crisis group;
e) review the progress report submitted by the District Crisis groups;
f) respond to queries addressed to it by the District Crisis groups;
g) Publish a list of experts and officials in the State who are concerned with the management of chemical accidents.

7.5.2.7 Constitution of the District and Local Crisis Group (Rule 8)

The State Government shall cause to be constituted within thirty days from the date of commencement of these rules,-

(a) District Crisis Groups;
(b) Local Crisis Groups;

The composition of the District Crisis Groups and the Local Crisis Groups shall be as specified in **Schedule 7 and 8** respectively.

The District Crisis Group shall meet every forty five days and send a report to the State Crisis Group. The Local Crisis Group shall meet every month and forward a copy of the proceedings to the District Crisis Group.

7.5.2.8 Functions of the District Crisis Group (Rule 9)

The District Crisis Group shall be the apex body in the district to deal with major chemical accidents and to provide expert guidance for handling chemical accidents. The District Crisis Group shall-

a) assist in the preparation of the district off-site emergency plan;
b) review all the on-site emergency plans prepared by the occupier of Major Accident Hazards installation for the preparation of the district off-site emergency plan;
c) assist the district administration in the management of chemical;
d) continuously monitor every chemical accident;
e) ensure continuous information flow from the district to the Central and State Crisis Group regarding accident situation and mitigation efforts;
f) forward a report of the chemical accident within fifteen days to the State Crisis Group;
g) Conduct at least one full scale mock drill of a chemical accident at a site each year and forward a report of the strength and the weakness of the plan to the State Crisis Group.

7.5.2.9 Functions of the Local Crisis Group (Rule 10)

The Local Crisis Group shall be the body in the industrial pocket to deal with chemical accidents and coordinate efforts in planning, preparedness and mitigation of a chemical accident. The Local Crisis Group shall-

a) prepare local emergency plan for the industrial pocket;
b) ensure dovetailing of the local emergency plan with the district off-site emergency plan;
c) train personnel involved in chemical accident management;
d) educate the population likely to be affected in a chemical accident about the remedies and existing preparedness in the area;
e) conduct at least one full scale mock drill of a chemical accident at a site every six months forward a report to the District Crisis Group;
f) Respond to all public inquiries on the subject.

7.5.2.10 Powers of the Members of the Central, State and District Crisis Groups (Rule 11)

The Members of the Central Crisis Group, State Crisis Groups and District Crisis Groups shall be deemed to be persons empowered by the Central Government in this behalf under section 10(1) of the Environment (Protection) Act, 1986.

7.5.2.11 Aid and Assistance for the functioning of the District and Local Crisis Groups (Rule 12)

a) The Major Accident Hazard installations in the industrial pockets in the district shall aid, assist and facilitate functioning of the District Crisis Group;
b) The Major Accident Hazard installations in the industrial pockets shall also aid, assist and facilitate the functioning of the Local Crisis Group.

7.5.2.12 Information to the Public (Rule 13)

a) The Central Crisis Groups shall provide information on request regarding chemical accident prevention, preparedness and mitigation in the country.
b) The State Crisis Group shall provide information on request regarding chemical accident prevention, preparedness and mitigation to the public in the State.
c) The Local Crisis Group shall provide information regarding possible chemical accident at a site in the industrial pocket and related -information to the public on request.

Schedule 5

[See rule – (3) (2)]

Composition of the Central Crisis Group

i. Secretary, Govt. of India, Ministry of Environment and Forest…….. Chairperson
ii. Joint Secretary/Adviser (Environment & Forests)..... Member Secretary
iii. Joint Secretary (labour)……. Member
iv. Joint Secretary/ Adviser (Chemical & Pharmaceuticals)……...…Member
v. Director General, Civil Defense……Member
vi. Fire Advisor, Directorate General Civil Defense…….. "
vii. Chief Controller of Explosive……..…….. "
viii. Joint Secreiary, (Deptt. of Industries)…… "

ix. Director General, Indian Council of Medical Research…… "
x. Joint Secretary (Health)……. "
xi. Chairman, Central Pollution Control Board…….. "
xii. Director General, Indian Council of Agriculture Research…….. "
xiii. Director General, Council of scientific & Industrial Research ……..."
xiv. 4 Experts (Industrial Safety and Health)……... "
xv. Joint Secretary(Fertilizers)…… "
xvi. Director General(Telecom)…… "
xvii. 2 Representatives of Industries to be nominated by Central Government…… "
xviii. Joint Secretary (Surface Transport)……... "
xix. General Manager (Rail safety)……... "
xx. Adviser, Centre for environment and Explosive safety……. "
xxi. One Representative of Indian Chemical…… "

Manufacturers Association to be nominated by the Central Govt.

Schedule 6

[See rule 6(2)]

Composition of the State Crisis Group

i.	Chief Secretary	Chairperson
ii.	Secretary (Labour)	Member Secy.
iii.	Secretary (Environment)	Member
iv.	Secretary (Health)	"
v.	Secretary (Industries)	"
vi.	Secretary (Public Health Engg.)	"
vii.	Chairman, State Pollution Control Board	"
viii	4-Experts (Industrial Safety & Health)	"

to be nominated by the State Government

viii.	Secretary/Commissioner(Transport)	"
ix.	Director(Industrial Safety)/Chief	"
x.	Inspector of Factories	"
xi.	Fire Chief	"
xii.	Commissioner of Police	"
xiii.	One Representative from the Industry to be nominated by the State Govt.	"

Schedule 7

[See rule 8]

Composition of the District Crisis Group

i.	District Collector	Chair person
ii.	Inspector of Factories	Member Secy.
iii.	District Energy Officer	Member
iv.	Chief Fire Officer	Member
v.	District Information Officer	"
vi.	Controller of Explosives	"
vii.	Chief, Civil Defense	"
viii.	One Representative of Trade Unions to be nominated by the District Collector	"
ix.	Deputy Superintendent of Police	"
x.	District Health Officer/Chief Medical Officer	"
xi.	Commissioner, Municipal Corporations	"
xii.	Representative of the Department of Public Health Engineering	"
xiii.	4 Experts (Industrial Safety & Health)	"

to be nominated by the District Collector

xiv.	Commissioner (Transport)	"
xv.	One Representative of Industry " to be nominated by the District Collector	
xvi.	Chair-person/Member-Secretary of Local Crisis Groups	"

Schedule 8

[See rule 8)]

Composition of the Local Crisis Groups

(i)	Sub-divisional Magistrate / District Emergency Authority	Chair person
(ii)	Inspector of Factories	Member Secy.
(iii)	Industries in the District/ Industrial area/ industrial pocket	Member
(iv)	Transporters of Hazardous Chemicals(2 Numbers)	"
(v)	Fire Officer	"
(vi)	Station House Officer (Police)	"
(vii)	Block Development Officer	"
(viii)	One Representative of Civil Defense	"
(ix)	Primary Health Officer	"
(x)	Editor of local News paper	"
(xi)	Community leader/Sarpanch/Village	"
(xii)	Pradhan nominated by Chair-person	"
(xiii)	One Representative of Non-Government	"
(xiv)	Organisation to be nominated by the Chair-person	"
(xv)	Two Doctors eminent in the Local area, to be nominated by Chair-person	"

(xvi) Two Social Workers to be nominated by the Chair-person "

7.6.0 THE MAJOR ACCIDENT HAZARD CONTROL RULES, 1997

7.6.1 OBJECTIVE AND SCOPE

Clause(iv) of Sub-Section 3(2) of the Environment (Protection) Act lays emphasis on the responsibility of the Central Government for prescribing procedures and safeguards for prevention of accidents which may cause substantial damage to life and to take remedial measures in case of such emergencies. In view of this, an inter- Ministerial Working Group was constituted in October, 1986 by the Government of India to discuss various related issues and recommend necessary policies and procedures for implementation. Subsequently the following regulations came into effect. These Rules supplement the rules already notified under Chapter IV-A of the Factories Act, 1948.

7.6.2 RELEVANT PROVISIONS OF THE RULE

7.6.2.1 Definitions (Section 2):

1.“Hazardous chemical” means, -

i) any chemical which satisfies any of the criteria laid down in Part I of Schedule 1 or is listed in Column 2 of Part II of this Schedule; or
ii) Any chemical listed in Column 2 of Schedule 2; or
iii) Any chemical listed in Column 2 of Schedule 3;
2. “Industrial activity” means: -
An operation or process carried out in a factory referred to in Schedule 4 involving or likely to involve one or more hazardous chemicals and includes on-site storage or on-site transport which is associated with that operation or process, as the case may be.
3. “major accident” means an incident involving loss of life inside or outside the site or 10 or more injuries inside and / or one or more injuries outside or release of toxic chemical or explosion or fire or spillage of hazardous chemicals resulting in ‘on-site’ or ‘off-site’ emergencies or damage to equipment leading to stoppage of process or adverse effects to the environment.

7.6.2.2 Application (Section 3):

This Rule shall apply to an industrial activity or isolated storage in which a hazardous chemical which satisfies any of the criteria laid down in Part I of

Schedule 1 or listed in Column 2 of Part II of this Schedule is or may be involved. An occupier of an industrial activity or isolated storage shall arrange to obtain or develop information in the form of Safety Date Sheet. The information shall be made accessible to workers upon request for reference. The occupier while obtaining or developing safety data sheet in respect of hazardous chemical handled by him shall ensure that the information is recorded accurately and reflects the scientific evidence used in making the hazard determination. In case, any significant information regarding hazard of a chemical is available, it shall be added to the safety data sheet as soon as practicable. Every container of a hazardous chemical shall be clearly labelled or marked to identify,

(a) The contents of the container;

(b) The name and address of the manufacturer or importer of the hazardous chemicals; and

(c) The physical, chemical and toxicological data of the hazardous chemical.

(5) Where it is impractical to label a chemical in view of the size of the container or the nature of the package, provision should be made for other effective means like tagging or accompanying documents.

7.6.2.3 Duties of Inspector (Section 3A):

The Inspector shall –

(a) Inspect the industrial activity or isolated storage at least once in a calendar year;

(b) Send annually status report on the compliance with the Rules by occupiers to the Ministry of Environment & Forests through the Directorate General Factory Advice Service and Labour Institutes and Ministry of Labour, Govt. of India

(c) Enforce directions and procedures in respect of industrial activities or isolated storages covered under the Factories Act 1948.

7.6.2.4 General responsibility of the occupier (Section 4):

This Rule shall apply to –

(a) an industrial activity in which a hazardous chemical, which satisfies any of the criteria laid down in Part I of Schedule 1 or is listed in Column 2 of Part II of this Schedule is or may be involved; and

(b) Isolated storage in which there is involved a quantity of a hazardous chemical listed in Column 2 of Schedule 2 which is equal to or more than the threshold quantity specified in this Schedule for than chemical in Column 3 thereof.

An occupier shall provide information on demand to show that he has –

(a) Identified the major accident hazards; and

(b) Taken adequate steps to –

(i) Prevent such major accidents and to limit their consequences to persons and the environment; and

(ii) Provide to the persons working on the site with the information, training and equipment including antidotes necessary to ensure their safety and health.

7.6.2.5 Notification of Major Accident (Section 5):

Where a major accident occurs on a site or in a pipeline the occupier shall with 48 hours notify the Inspector and Chief Inspector of than accident, and furnish thereafter to the inspector and Chief inspect a report relating to the accident in instalments, if necessary. The Inspector and Chief Inspector shall on receipt of the report shall undertake a full analysis of the major accident and send the requisite information to the Ministry of Environment and Forests through the Directorate General Factory Advice Service and Labour Institutes and Ministry of Labour, Government of India. An occupier shall notify to the Inspector steps taken to avoid any repetition of such occurrence on a site. The Inspector and Chief Inspector shall compile information regarding major accidents and made available a copy of the same to the Ministry of Environment and Forests through Directorate General Factory Advice Service and Labour Institutes and Ministry of Labour, Government of India. The Inspector and the Chief Inspector shall inform the occupier in writing, of any lacunae which in their pinion needs to be rectified to avoid major accidents.

7.6.2.6 Safety reports and Safety audit reports (Section 10):

An occupier shall not undertake any industrial activity or isolated storage to which this Rule applies, unless he has prepared a safety report on that industrial activity or isolated storage and has sent a copy of that report to Chief Inspector at least 90 days before commencing that activity. After the commencement of these Rules, the occupiers of both the new and the existing industrial activities or isolated storages shall arrange to carry out once in a year safety audit by a competent agency to be accredited by an Accreditation Board to be constituted by the Ministry of Labour, Government of India in this behalf and in absence of such Accreditation Board by a competent agency approved by Chief inspector of Factories. The occupier, within 30 days of the completion of the audit, shall send a report to the Chief Inspector with respect to the implementation of the audit recommendations.

7.6.2.7 Preparation of on-site emergency plan by the occupier (Section 13):

The occupier shall prepare, keep up-to-date and furnish to the Inspector and Chief Inspector an On-site emergency plan and detailing how major accidents will be dealt with on the site on which the industrial activity or isolated storage is carried on and that plan shall include the name of the person who is responsible for safety on the site and the names of those who are

authorized to take action in accordance with the plan in case of an emergency. The occupier shall ensure that the emergency plan prepared takes into account any modification made in the industrial activity or isolated storage and that every person on the site who is concerned with the plan is informed of its relevant provisions.

7.6.2.8 Information to be given to persons liable to be affected by a major accident (Section 15):

The occupier shall take appropriate steps to inform persons outside the site who are likely to be in an area which may be affected by a major accident about –

a. the nature of the major accident hazard; and

b. the safety measures and the Do's and Don'ts which should be adopted in the event of a major accident.

7.7.0 DUMPING AND DISPOSAL OF FLY ASH DISCHARGED FROM COAL OR LIGNITE BASED THERMAL POWER PLANS ON LAND RULES 1999

7.7.1 OBJECTIVE AND SCOPE:

Rules proceed on the basis that it is necessary to protect the environment, conserve top soil and prevent the dumping and disposal of fly ash discharged from coal or lignite based thermal power plants on land. Further, the Rules have been drafted for restricting the excavation of top soil for manufacture of bricks and promoting the utilization of fly ash in the manufacture of building materials and in construction activity within a specified radius of fifty kilometers from coal or lignite based thermal power plants. The Rules have also been published to give effect to the order of Hon'ble High Court of Judicature, Delhi dated 25th August, 1999 in CWP No. 2145/99 Centre for Public Interest Litigation, Delhi v/s Union of India where the Court directed that the Central Government will publish the final notification in respect of fly ash on or before 26th October, 1999.

7.7.2 RELEVANT PROVISIONS OF RULES:

7.7.2.1 Use of fly ash, bottom ash or pond ash in the manufacture of bricks and other construction activities (Rule 1)

No person shall within a radius of fifty kilometers from coal or lignite based thermal power plants, manufacture clay bricks or tiles or blocks for use in construction activities without mixing at least 25 per cent of ash (fly ash, bottom ash or pond ash) with soil on weight to weight basis. '

The authority for ensuring the use of specified quantity of ash shall be the concerned Regional Officer of the State Pollution Control Board or the Pollution Control Committee. In case of non-compliance, the said authority can cancel consent order issued to establish the brick kiln and move the district administration for cancellation of mining lease.

7.7.2.2 Utilization of ash by Thermal Power Plants (Rule 2)

All coal or lignite based thermal power plants shall utilize the ash generated in the power plants. Every coal or lignite based thermal power plant shall make available ash, for at least ten years from the date of publication of this notification, without any payment. Every coal or lignite based thermal power plant commissioned subject to environmental clearance conditions shall within nine years from the publication of this notification, phase out the dumping and disposal of fly ash on land.

7.7.2.3 Specifications for use of ash-based products (Rule 3)

Manufacture of ash-based products such as cement, concrete blocks, bricks, panels or any other material or the use of ash in construction activity such as in road laying, embankments or use as landfill to reclaim low lying areas including back filling in abandoned mines or pitheads or for any other use shall be carried out in accordance with specifications and guidelines laid down by the Bureau of Indian Standards, Indian Bureau of Mines, Indian Road Congress, Central Building Research institute, Roorkee, Central Road Research Institute, New Delhi, Building Materials and Technology Promotion Council, New Delhi, Central Public Works Department, State Public Works Departments and other Central and State Government agencies.

All local authorities shall specify in their respective building bye-laws and regulations the use of ash and ash-based products and construction techniques in building materials, roads, embankments or for any other use within a period of four months from the date of publication of this notification.

7.8.0 THE CHEMICAL WEAPONS CONVENTION ACT, 2000

7.8.1 OBJECTIVE AND SCOPE: The purpose of this Act, which aims to ensure appropriate implementation of the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction (hereinafter referred to as the "Chemical Weapons Convention") and the International Convention for the Suppression of Terrorist Bombings, is to prohibit the manufacture, possession, provision, and acceptance of chemical weapons, control the manufacture and use of specific chemicals, as well as implement other necessary measures. A Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction was signed on behalf of the Government of India at Paris on the14th day of January, 1993. India, having ratified the said Convention, has to make provisions for giving effect thereto and for matters connected therewith or incidental thereto. Act extends to the whole of India, and it shall apply to -

(*a*) Citizens of India outside India; and

(*b*) Associates, branches or subsidiaries, outside India of companies or bodies corporate, registered or incorporated in India.

7.8.2 RELEVANT PROVISIONS OF THE ACT

7.8.2.1 Definition

a) "Chemical Weapons" means,-

(*i*) The Toxic Chemicals and their precursors, except where intended for purposes not prohibited under the Convention, as long as the types and quantities are consistent with such purposes;

(*ii*) The munitions and devices, specifically designed to cause death or other harm through the toxic properties of those Toxic Chemicals specified in sub clause (i), which would be released as a result of the employment of such munitions and devices;

(*iii*) any equipment specifically designed for use directly in connection with the employment of munitions and devices specified in sub-clause (*ii*) together or separately;

b) "Convention" means the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction signed on behalf of the Government of India at Paris on the 14th day of January, 1993;

c) "goods", in relation to Toxic Chemicals, Precursors or Discrete Organic Chemicals including those Discrete Organic Chemicals containing elements of phosphorous, sulphur or fluorine, means any material, commodity, article or compound consisting of such Toxic Chemicals, Precursors or Discrete Organic Chemicals including those Discrete Organic Chemicals containing elements of phosphorous, sulphur or fluorine and includes materials, commodities, articles, compounds or apparatus used in the production, processing or storing of Toxic Chemicals, Precursors or Discrete Organic Chemicals including those Discrete Organic Chemicals containing elements of phosphorous, sulphur or fluorine;

7.8.2 Power of Central Government to deny the request for inspection (Section 4)

Where the Central Government considers any inspection of a Chemical Weapons Production Facility in India under this act to be against the interest of national security or economic interests of India, it may deny the request for such inspection.

7.8.2.2 Establishment of National Authority (Section 6)

For the purposes of this Act, the Central Government shall establish, by notification in the Official Gazette, an Authority to be known as the National Authority for implementing the provisions of the Convention which shall consist of a Chairperson and such number of Directors as may be appointed by the Central Government.

7.8.2.3. Powers and functions of National Authority (Section 7)

(*a*) It shall be the general duty of the National Authority to fulfil, on behalf of the Government of India, the obligations under the Convention;
(*b*) It shall be incumbent on the National Authority to act as the national focal point for effective liaison with the Organisation and other States Parties on matters relating to the Convention;

Subject to the provisions given above, the functions of the National
Authority shall be to –

a) Interact with the Organisation and other States Parties for the purpose of fulfilling the obligations of the Government of India under the Convention;
b) Monitor compliance with the provisions of the Convention;

c) Regulate and monitor the development, production, processing, consumption, transfer or use of Toxic Chemicals or Precursors as specified in the Convention;
d) Manage routine inspection or Challenge Inspection managing investigation, in case a complaint of use of Chemical Weapons or riot control agents as a method of warfare is received from the Organisation;
e) Conduct inspections for the purposes of this act;
f) Interact with the Organisation in respect of acceptance of request of India for Challenge Inspection or to counter any frivolous or defamatory request made by any State Party against India to the Organisation;
g) Scrutinise and accept list of Inspectors and to verify the Approved Equipment brought by an Inspection Team on to the Inspection Site;
h) Provide escort to the Inspection Team and the Observer within the territory of India;
i) Identify and oversee the closure and destruction of Chemical Weapons, Chemical Weapons Production Facilities, Old Chemical Weapons or Abandoned Chemical Weapons;
j) Advise Central Government for laying down safeguards for transportation, sampling or storage of Chemical Weapons and fixation of standards for emission or discharge of environmental pollutants arising out of the destruction of Chemical Weapons, Old Chemical Weapons, Abandoned Chemical Weapons or Chemical Weapons Production Facility;
k) Ensure protection of environment, health and safety of the people during transportation, sampling, storage or destruction of Chemical Weapons, Chemical Weapons Production Facilities, Old Chemical Weapons or Abandoned Chemical Weapons;
l) Co-ordinate exchange of scientific and technological information among laboratories handling Toxic Chemicals or Precursors;
m) Determine, from time to time, the quantity limit that a person at any time may produce, otherwise acquire, retain, transfer or use any Toxic Chemical or Precursor listed in any of the Schedules 1 to 3 in the Annex on Chemicals to the Convention, any Discrete Organic Chemical including Chemicals to the Convention, any Discrete Organic Chemical including Discrete Organic Chemical containing elements of phosphorous, sulphur or fluorine for purposes not prohibited under the Convention;
n) Such other functions as may be prescribed.

7.8.2.4 National Authority to submit initial, annual and other periodical declarations to Organization (Section 8)

The National Authority shall prepare such initial, annual and other periodical declarations regarding Toxic Chemicals or Precursors listed in any of the Schedules 1 to 3 in the Annex on Chemicals to the Convention, Discrete Organic Chemicals including those Discrete Organic Chemicals containing elements of phosphorous, sulphur or fluorine Chemical Weapons, Old Chemical Weapons, Abandoned Chemical Weapons, riot control agents, Chemical Weapons Production Facilities, past transfers of Chemical Weapons or their production equipments or any other declaration required to be made under the Convention and shall submit such declarations to the Organization at such time as are specified under the Convention.

7.8.2.5 Prohibition to develop, produce, acquire, etc. Toxic Chemical or Precursor (Section 15)

No person shall –

(*a*) produce, acquire, retain or use Toxic Chemicals or Precursors listed in Schedule 1 in the Annex on Chemicals to the Convention, outside the territories of States Parties, and shall not transfer such Chemicals or Precursors outside the territory of India except to another State Party;

(*b*) produce, acquire, retain, transfer or use Toxic Chemicals or Precursors listed in Schedule 1 in the Annex on Chemicals to the Convention without permission from the National Authority and unless –

(*i*) It is to be applied to research,medical, pharmaceutical or protective purposes; and

(*ii*) the types of Toxic Chemicals or Precursors are strictly limited to those that can be justified with reference to the purposes specified in sub-clause (*i*) and the quantities of such Toxic Chemicals or Precursors for such purposes at any time do not exceed the limits fixed by the National Authority;

7.8.2.6 Registration of persons engaged in production etc. of any toxic chemical or precursor (Section 18)

Every person who is engaged in the production, processing, acquisition, consumption, transfer, import, export or use of any Toxic Chemical or Chemicals to the Convention or, engaged in the production of any Discrete Organic Chemical including Discrete Organic

Chemical containing elements of phosphorous, sulphur or fluorine shall make, within thirty days from the

commencement of this Act, an application for registration of his name, as a producer, processor, acquirer, consumer, transferor, importer, exporter or user of any Toxic Chemical or Precursor or, as the case may be, as a producer of any Discrete Organic Chemical including Discrete Organic Chemicals containing elements of phosphorous, sulphur or fluorine, to such registration authority as the Central Government may, by notification in the Official Gazette, specify in this behalf.

7.8.2.7 Power of Inspector to inspect any person or place (Section 19)

(*1*) An Inspector may inspect -

(*a*) any person who is engaged in -

(*i*) the production, processing, acquisition, consumption, transfer, import, export or use of any Toxic Chemical or Precursor listed in any of the Schedules 1 to 3 in the Annex on Chemicals to the Convention; or

(*ii*) the production of any Discrete Organic Chemical including those Discrete Organic Chemicals containing elements of phosphorous, sulphur or fluorine;

(*b*) any place where any Chemical Weapon, Old Chemical Weapon or Abandoned Chemical Weapon is located or Chemical Weapon Production Facility exists, for the purposes specified in the Verification Annex to the Convention.

7.9.0 ATOMIC ENERGY (RADIATION PROTECTION) RULES 2004

7.9.1 OBJECTIVE AND SCOPE: These Rules have been made by the Central Government framed in exercise of the powers conferred by Section 30 read with Section 3 and clause (i) and sub-clauses (c) and (d) of clause (ii) of Sub-Section (1), Sub-Section (4) of Section 14, and Sections 16, 17 and other relevant Sections of the Atomic Energy Act and in super cession of Radiation Protection Rules 1971.

7.9.2 **RELEVANT PROVISIONS OF THE RULES:**

7.9.2.1 E**xtent and commencement (Rule 1)**

These rules apply to practices adopted and interventions applied with respect to radiation sources. (3) They extend to the whole of India.

7.9.2.2 **Definitions (Rule 2)**

i. "accident" means any unintended event, including operating error, equipment failure or other mishap, the consequences or potential consequences of which are not negligible from the radiation protection point of view;

ii."Adequate protection" means protection against radiation so provided that the regulatory constraints notified by the competent authority are not exceeded;

iii. "Competent authority" means any officer or authority referred to in Section 27 of the Act;

iv. "Contamination" means the presence of a radioactive substance in or on a material or in the human body or other place in excess of quantities specified in the relevant safety codes by the competent authority;

v. "controlled area" means any area in which specific protection measures and safety provisions are or could be required for controlling exposures or preventing the spread of contamination during normal working conditions; and preventing or limiting the extent of potential exposures;

vi. "Exposure" means the act or condition of being exposed to radiation;

vii. "nuclear fuel cycle" means all operations associated with the production of nuclear energy, including mining, milling, processing of uranium or thorium; enrichment of uranium; manufacture of nuclear fuel; operation of reactors; reprocessing of nuclear fuel; decommissioning; radioactive waste management and any research or development activity related to any of the foregoing;

viii. "Off-site emergency" means accident condition or emergency situation involving excessive release of radioactive materials/hazardous chemicals from the plant into public domain calling for an intervention;

ix. "Potential exposure" means exposure that is not expected to be delivered with certainty but which can result from an accident involving a source or due to an event or sequence of events of a probabilistic nature including equipment failure and operating errors;

x. "practice" means any human activity that introduces additional sources or exposure pathways or extends exposure to additional people or modifies the network of exposure pathways from existing sources, which may increase the exposure or likelihood of exposure of people, or the number of people exposed;

xi. "Quality assurance" means any planned and systematic action necessary to provide adequate confidence that a structure, system, component or procedure will perform satisfactorily, in compliance with safety standards specified by the competent authority, and includes quality control;

xii. "Quality control" means the set of operations (programming, coordinating, implementing) intended to maintain or to improve quality and includes monitoring, evaluation and maintenance at required levels of performance;

xiii. "radiation installation" means any location or facility, including a mobile facility, in which a radiation generating equipment or plant or radioactive material is present and which in the opinion of the competent authority requires radiation surveillance for ensuring adequate protection against radiation;

xiv. “Radiation surveillance" means measures, including measurements and reviews performed, to ensure adequate protection;

xv. "Radiation work" means work involving exposure;

xvi. "Radiation worker" means any person who is occupationally exposed to radiation;

xvii. "Radiological Safety Officer” means any person who is so designated by the employer with the approval of the competent authority;

xviii. "Regulatory constraint" means restriction on radiation protection parameters notified by the competent authority;

xix. "Sealed source" means radioactive material that is permanently sealed in a capsule; or in a solid form which is closely bounded and is designed to meet the safety standards prescribed by the competent authority;

xx. "Source" means a radioactive material or a radiation generating plant or equipment;

xxi. "Supervised area" means any area not already designated as a controlled area but where occupational exposure conditions are kept under review even though specific protection measures and safety provisions are not normally needed;

xxii. "Unsealed source" means any radioactive material that is not a sealed source.

7.9.2.3. **License (Rule 3)**

No person shall, without a license establishes a radiation installation for sitting, design, construction, commissioning and operation; and decommission a radiation installation.

No person shall handle any radioactive material, or operate any radiation generating equipment except in accordance with the terms and conditions of a license. A license shall be issued for sources and practices associated with the operation of nuclear fuel cycle facilities; land based high intensity gamma irradiators other than gamma irradiation chambers; particle accelerators used for research and industrial applications; neutron generators; facilities engaged in the commercial production of radioactive material or radiation generating equipment; tele gamma and accelerators used in radiotherapy; computed tomography (CT) unit; interventional radiological x-ray unit; industrial radiography; and such other source or practice as may be notified by the competent authority, from time to time.

7.9.2.4 **Conditions precedent to the issuance of a license (Rule 7)**

An application for license shall be made by to the competent authority by an employer or a person duly authorized by him. No license to handle radioactive material, or to operate radiation generating equipment, shall be issued to a person unless, in the opinion of the

competent authority the application for such license is for purposes envisaged by the Act; documentation relevant to the license and complete in all respects is submitted to the competent authority; in respect of approval for sitting, design, construction, commissioning and decommissioning, of a radiation installation, the proposed equipment, facilities and handling procedures afford adequate protection during normal or intended operations; the applicant has demonstrated compliance with the provisions of the relevant safety codes and safety standards specified by the competent authority; and in respect of license for operation of a radiation installation all the requirements relating to safety specified by the competent authority in the relevant safety codes and safety standards have been satisfied in the construction of the radiation installation; workers have appropriate training and instructions in radiation safety, in addition to the appropriate qualification and training required for performing their intended tasks; a Radiological Safety Officer is designated; appropriate radiation monitors and dosimetry devices are available with the applicant for purposes of radiation surveillance; the equipment, facilities and handling procedures afford adequate protection during normal operations, minimize occurrence of potential exposures and enable appropriate remedial actions to be taken in the event of an accident.

7.9.2.5 **Modification of radiation installation or change in working condition (Rule 11)**

No modification to an existing radiation installation or no change in working conditions therein, affecting safety shall be done without the prior approval of the competent authority.

7.9.2.6 **Restrictions on use of sources (Rule 12)**

The licensee shall not handle any source other than those specified in the license; for any purpose other than those specified in the license; and in any location except as specified in the license. The licensee shall ensure that individuals other than those who may be specified in the license do not handle the source.

7.9.2.7 **Restriction on certain practices (Rule 13)**

Practices such as deliberate addition of radioactive substances in foodstuffs, beverages, toys, personal ornaments, and cosmetics or any other commodity or product intended for ingestion, inhalation or percutaneous intake by, or application to, a human being and sale, import or export of such products shall not be permitted.

7.9.2.8 **Radiation symbol or Warning sign (Rule 14)**

The radiation symbol or warning sign shall be conspicuously and prominently displayed at all times on externally visible surfaces of radiation equipment, and containers for storage of radioactive materials; packages for radioactive materials and vehicles carrying such packages; at the entrance to the room housing the radiation generating equipment; and at the entrance of controlled area and supervised area. The radiation symbol shall not be used for any purpose other than those mentioned in these rules.

7.9.2.9 **Dose limits and other regulatory constraints (Rule 15)**

The licensee shall ensure compliance with the dose limits and other regulatory constraints specified by the competent authority by order under these rules.

7.9.2.10 **Safety Standards and Safety Codes (Rule 16)**

The competent authority may issue safety codes and safety standards, from time to time, prescribing the requirements for radiation installation, sealed sources, radiation generating equipment and equipment containing radioactive sources, and transport of radioactive material and the licensee shall ensure compliance with the same.

7.9.2.11 **Prohibition of employment of persons below certain age (Rule 17)**

No person under the age of 18 years shall be employed as a worker. No person under the age of 16 years shall be taken as trainee or employed as an apprentice for radiation work.

7.9.2.12 **Classified worker (Rule 18)**

The employer shall designate as classified workers, those of his employees, who are likely to receive an effective dose in excess of three tenths of the average annual dose limits notified by the competent authority and shall forthwith inform those employees that they have been so designated.

7.9.2.13 **Radiological Safety Officer (Rule 19)**

Every employer shall designate a person having appropriate qualifications as Radiological Safety Officer.

7.9.2.14 **Responsibilities of the employer (Rule 20)**

Every employer shall ensure that provisions of these rules are implemented by the licensee, Radiological Safety Officer and other worker(s), provide facilities and equipment to the licensee, Radiological Safety Officer and other worker(s) to carry out their functions effectively in conformity with the regulatory constraints, prior to employment of a worker, procure from his former employer, where applicable, the dose records and health surveillance reports, upon termination of service of worker provide to his new employer on request his dose records and health surveillance reports, furnish to each worker dose records and health surveillance reports of the worker in his employment annually, as and when requested by the worker and at the termination of his service, inform the competent authority if the licensee or the Radiological Safety

Officer or any worker leaves the employment, and arrange for health surveillance of workers. The employer shall be the custodian of radiation sources in his possession and shall ensure physical security of the sources at all times. The employer shall inform the competent authority, within twenty four hours, of any accident involving a source or loss of source of which he is the custodian.

7.9.2.15 **Responsibilities of the licensee (Rule 21)**

The responsibility for implementing the terms and conditions of the license shall rest with the licensee. The licensee shall comply with the surveillance procedures, safety codes and safety standards specified by the competent authority. Every licensee shall establish written procedures and plans for controlling, monitoring and assessment of exposure for ensuring adequate protection of workers, members of the public and the environment and patients, wherever applicable. The licensee shall comply with the provision of rules for safe disposal of radioactive waste issued under the Act. The licensee shall arrange for preventive and remedial maintenance of radiation protection equipment, and monitoring instruments; in consultation with the Radiological Safety Officer, investigate any case of exposure in excess of regulatory constraints received by individual workers and maintain records of such

investigations; inform competent authority promptly of the occurrence, investigation and follow-up actions in cases of exposure in excess of regulatory constraints, including steps to prevent recurrence of such incidents; carry out physical verification of radioactive material periodically and maintain inventory; inform appropriate law enforcement agency in the locality of any loss of source; inform the employer and the competent authority of any loss of source; investigate and inform the competent authority of any accident involving source and maintain record of investigations; verify the performance of radiation monitoring systems, safety interlocks, protective devices and any other safety systems in the radiation installation; in consultation with Radiological Safety Officer, prepare emergency plans for responding to accident to mitigate their consequences and ensure emergency preparedness measures; conduct or arrange for quality assurance tests of structures, systems, components and sources and related equipment; advise the employer about the modifications in working condition of a pregnant worker; inform the competent authority if the Radiological Safety Officer or a worker leaves the employment; and inform the competent authority when he leaves the employment. The licensee shall ensure that the workers are familiarised with contents of the relevant surveillance procedures, safety standards, safety codes, safety guides and safety manuals issued by the competent authority and emergency response plans.

7.9.2.16 **Responsibilities of the Radiological Safety Officer (Rule 22)**

The Radiological Safety Officer shall be responsible for advising and assisting the employer and licensee on safety aspects aimed at ensuring that the provisions of these rules are complied with. The Radiological Safety Officer shall carry out routine measurements and analysis on radiation and radioactivity levels in the controlled area, supervised area of the radiation installation and maintain records of the results thereof; investigate any situation that could lead to potential exposures; advise the employer regarding the necessary steps aimed at ensuring that the regulatory constraints and the terms and conditions of the license are adhered to; the safe storage and movement of radioactive material within the radiation installation; initiation of suitable remedial measures in respect of any situation that could lead to potential exposures; and routine measurements and analysis on radiation and radioactivity levels in the off-site environment of the radiation installation and maintenance of the results thereof; ensure that reports on all hazardous situations along with details of any immediate remedial actions taken are made available to the employer and licensee for reporting to the competent authority and a copy endorsed to the competent authority; and assist the employer

in instructing the workers on hazards of radiation and on suitable safety measures and work practices aimed at optimising exposures to radiation sources; and the safe disposal of radioactive wastes; and developing suitable emergency response plans to deal with accidents and maintaining emergency preparedness; advise the licensee on the modifications in working condition of a pregnant worker; and the safety and security of radioactive sources; furnish to the licensee and the competent authority the periodic reports on safety status of the radiation installation; and inform the competent authority when he leaves the employment.

7.9.2.17 **Responsibilities of worker (Rule 23)**

Every worker shall observe the safety requirements and follow safety procedures and instructions and shall refrain from any willful act that could be detrimental to self, co-workers, the radiation installation and public. The worker shall provide to the employer information about his previous occupations including radiation work; make proper use of such protective equipment, radiation monitors and Personnel monitoring devices as provided; and inform the licensee and the Radiological Safety Officer, of any accident or potentially hazardous situation that may come to his notice.

7.9.2.18 **Health surveillance of workers (Rule 25)**

Every employer shall provide the services of a physician with appropriate qualifications to undertake occupational health surveillance of classified workers. Every worker, initially on employment, and classified worker, thereafter at least once in three years as long as the individual is employed, shall be subjected to general medical examination as specified by order by the competent authority; and health surveillance to decide on the fitness of each worker for the intended task. The health surveillance shall include special tests or medical examinations as specified by order by the competent authority, for workers who have received dose in excess of regulatory constraints; and counselling of pregnant workers.

7.9.2.19 **Medical exposures (Rule 26)**

The licensee carrying out diagnostic or therapeutic work using radiation generating equipment, sealed or unsealed sources, shall for optimizing the medical exposure ensure that performance of the equipment is verified periodically by appropriate quality assurance tests; records are maintained of radiation doses received by therapy patients; activity administered

to patients for diagnostic and therapeutic purposes; the exposure of humans for bio-medical research is carried out only on healthy volunteers with their prior consent in writing and any accidental medical exposure is investigated and a written report is submitted to the competent authority.

7.9.2.20 **Radiation surveillance requirements (Rule 27)**

The competent authority may by order specify appropriate radiation surveillance requirements and procedures and the employer and the licensee shall comply with them.

7.9.2.21 **Directives in the cases of exposures in excess of regulatory constraints (Rule 28)**

When, in the opinion of the competent authority, any worker has exceeded the dose constraints, the competent authority may issue appropriate directives for controlling further exposure and the employer shall comply with the directives. If a worker discontinues radiation work under the directives of the competent authority issued under this rule, the employer shall assign alternative work not involving exposure to radiation, until the competent authority is satisfied about the fitness of the worker to resume radiation work.

7.9.2.22 **Inspection of premises, radiation installations and conveyances (Rule 30)**

Any person duly authorized may inspect any premises, or radiation installation, or conveyance. The date and time of inspection may or may not be informed to the employer or the licensee prior to the inspection. The employer and the licensee shall extend all assistance to enable the inspection to be carried out effectively and unhindered. The findings of the inspection shall be forwarded to the licensee for necessary corrective actions. Inspection may be carried out at all licensing stages, namely, sitting, construction, commissioning, operation and decommissioning.

7.9.2.23 **Power to investigate, seal or seize radiation installation or radioactive material and to give direction to the employer (Rule 31)**

Any person duly authorized may, after inspection, carry out investigation for the purposes of determining contravention of any of the provisions of these rules. The investigation may be

carried out against a complaint or on suspicion or after an unusual incident or accident. The person authorized to investigate may seal any radiation installation or any conveyance carrying radioactive materials or seize any radioactive material or contaminated equipment; and indicate in writing to the employer any recommendation aimed at ensuring adequate protection and the licensee shall comply with the same.

7.9.2.24 **Directives in case of accidents (Rule 32)**

In the event of an accident involving the source or release of radioactive material, the competent authority may intervene and issue such directions as deemed fit and proper under the circumstances in the interest of radiation safety and the employer shall act as
per the directions of the competent authority and shall make every effort to mitigate the consequences of the accident , or the competent authority may assign experts to give advice or render assistance in mitigating the consequences of the accident and the expenses incurred, if any, shall be reimbursed by the employer.

7.9.2.25 **Emergency preparedness (Rule 33)**

The licensee shall prepare emergency response plans as specified by the competent authority in the relevant safety codes and maintain emergency preparedness. The licensee shall submit the response plans for plant emergencies and site emergencies to the competent authority for approval. The licensee shall submit the response plans for off-site emergencies prepared by the appropriate authorities to the competent authority for review. Any modification to the emergency plan shall require prior approval of or review by the competent authority.

7.10.0 WEAPONS OF MASS DESTRUCTION AND THEIR DELIVERY SYSTEMS (PROHIBITION OF UNLAWFUL ACTIVITIES) ACT, 2005

7.10.1 **OBJECTIVE AND SCOPE**:

In 2005, The Weapons of Mass Destruction and Their Delivery Systems (Prohibition of Unlawful Activities) Act 2005 (‘WMD Act’) was introduced pursuant to UNSCR 1540 requiring member countries to have effective legislation in place to counter proliferation of WMD and related materials. The WMD Act expanded India’s existing export control provisions, creating a unified export control law. The WMD Act provided for integrated

legislation prohibiting unlawful activities and the export of WMD and their related delivery systems. The WMD Act incorporated provisions relating to the transit and transhipment of certain restricted goods and technologies. The Act applies to export, transfer, retransfer, transit and transhipment of material, equipment or technology of any description as are identified, designated, categorised or considered necessary by the Central Government, as pertinent or relevant to India as a Nuclear Weapon State, or to the national security of India, or its international obligations under any bilateral, multilateral or international treaty, Covenant, Convention to which India is a party. The Act declares that it intends to prohibit unlawful activities, in relation to weapons of mass destruction and their delivery systems and for matters connected therewith or incidental thereto. The Act underlines India's commitment not to transfer nuclear weapons or other nuclear explosive devices, or to transfer control over such weapons or explosive devices, and not in any way to assist, encourage, or induce any other country to manufacture nuclear weapons or other nuclear explosive devices. Further, the Act declares India's commitment to prevent a non-State actor and a terrorist from acquiring weapons of mass destruction and their delivery systems; objective of global nuclear disarmament and its obligations as a State Party to the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction and the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction.

7.10.2 **RELEVANT PROVISIONS OF THE ACT:**

7.10.2.1 Act in addition to other laws (Section 2)

The provisions of this Act shall be in addition to any other relevant Act for the time being in force in relation to any matter covered under this Act.

7.10.2.2 Extent and application (Section 3)

The Act extends to the whole of India including its Exclusive Economic Zone. The provisions of this Act shall also apply to citizens of India outside India; companies or bodies corporate, registered or incorporated in India or having their associates, branches or subsidiaries, outside India; any ship, aircraft or other means of transport registered in India or outside India, wherever it may be; foreigners while in India and persons in the service of the Government of India, within and beyond India.

7.10.2.3 Definitions (Section 4)

i. "biological weapons" are microbial or other biological agents, or toxins whatever their origin or method of production, of types and in quantities that have no justification for prophylactic, protective or other peaceful purposes; and weapons, equipment or delivery systems specially designed to use such agents or toxins for hostile purposes or in armed conflict;

ii. "chemical weapons" means, the toxic chemicals and their precursors, except where intended for industrial, agricultural, research, medical, pharmaceutical or other peaceful purposes; protective purposes, namely those purposes directly related to protection against toxic chemicals and to protection against chemical weapons; military purposes not connected with the use of chemical weapons and not dependent on the use of the toxic properties of chemicals as a method of warfare; or law enforcement including domestic riot control purposes; as long as the types and quantities are consistent with such purposes; the munitions and devices, specifically designed to cause death or other harm through the toxic properties of those toxic chemicals which would be released as a result of the employment of such munitions and devices; and any equipment specifically designed for use directly in connection with the employment of munitions and devices specified ;

iii. "Nuclear weapon or other nuclear explosive device" means any nuclear weapon or other nuclear explosive device as may be determined by the Central Government, whose determination in the matter shall be final;

iv. "Weapons of mass destruction" means any biological, chemical or nuclear weapons.

7.10.2.4 **Prohibition relating to weapons of mass destruction (Section 8)**

No person shall unlawfully manufacture, acquire, possess, develop or transport a nuclear weapon or other nuclear explosive device and their means of delivery. No person shall unlawfully transfer, directly or indirectly, to any one a nuclear weapon or other nuclear explosive device, or transfer control over such a weapon, knowing it to be a nuclear weapon or other nuclear explosive device. No person shall unlawfully manufacture, acquire, possess, develop or transport a biological or chemical weapon or their means of delivery. No person shall unlawfully transfer, directly or indirectly, to any one biological or chemical weapon. No person shall unlawfully transfer, directly or indirectly, to any one missiles specially designed for the delivery of weapons of mass destruction.

7.11.0 THE CIVIL LIABILITY FOR NUCLEAR DAMAGE ACT, 2010

7.11.1 OBJECTIVE AND SCOPE

India has had no special legislation so far about liability under civil law for nuclear damage. Instead, the general law about damages outside of contractual provisions applied. The Indian civil nuclear program requires intensified international cooperation. The potential partners in that cooperation demand that liability regulations be adopted on the basis of the principles of the international nuclear liability conventions so as to grant legal assurance to their export industries. In May 2010, draft liability legislation was introduced into the Indian parliament. Final deliberations were held on August 30, 2010. On September 21, 2010, the President confirmed the draft legislation, thereby making it law.

This Act was enacted to provide for civil liability for Nuclear Damage and prompt compensation to the victims of a Nuclear accident through a No Fault Liability Regime channeling liability to the operator, appointment of Claims Commissioner, establishment of Nuclear Damage Claims commission and for matters connected therewith or incidental thereto.

It extends to the whole of India.
It also applies to nuclear damage suffered-
(a) In or over the maritime areas beyond the territorial waters of India;
(b) In or over the exclusive economic zone of India as referred to in section 7 of the Territorial Waters, Continental Shelf, Exclusive Economic Zone and Other Maritime Zones Act, 1976;
(c) On board or by a ship registered in India under section 22 of the Merchant Shipping Act, 1958 or under any other law for the time being in force;.
(d) on board or by an aircraft registered in India under clause *(d)* of sub-section (2) of section 5 of the Aircraft Act, 1934 or under any other law for the time being in force;
(e) On or by an artificial island, installation or structure under the jurisdiction of India.
It applies only to the nuclear installation owned or controlled by the Central Government either by itself or through any authority or corporation established by it or a Government company.

7.11.2 RELEVANT LEGAL PROVISIONS OF THE BILL

7.11.2.1 Definition

a) "Chairperson" means the Chairperson of the Commission appointed under sub-section (/) of section 20;

b) "Claims Commissioner" means the Claims Commissioner appointed under sub-section (2) of section 9;

c) "Commission" means the Nuclear Damage Claims Commission established under section 19;

d) "Nuclear damage" means-

(i) Loss of life or personal injury (including immediate and long term health impact) to a person; or

(ii) Loss of, or damage to, property, caused by or arising out of a nuclear incident, and includes each of the following to the extent notified by the Central Government;

(iii) Any economic loss, arising from the loss or damage referred to in sub-clauses (i) or (ii) and not included in the claims made under those sub-clauses, if incurred by a person entitled to claim such loss or damage;

(iv) Costs of measures of reinstatement of impaired environment caused by a nuclear incident, unless such impairment is insignificant, if such measures are actually taken or to be taken and not included in the claims made under sub-clause (ii);

(v) Loss of income derived from an economic interest in any use or enjoyment of the environment, incurred as a result of a significant impairment of that environment caused by a nuclear incident, and not included in the claims under sub-clause (ii);

(vi) The costs of preventive measures, and further loss or damage caused by such measures;

(vii) any other economic loss, other than the one caused by impairment of the environment referred to in sub-clauses *(iv)* and (v), in so far as it is permitted by the general law on civil liability in force in India and not claimed under any such law, in the case of sub-clauses *(i)* to *(v)* and *(vii)* above, to the extent the loss or damage arises out of, or results from, ionizing radiation emitted by any source of radiation inside a nuclear installation, or emitted from nuclear fuel or radioactive products or waste in, or of, nuclear material coming from, originating in, or sent to, a nuclear installation, whether so arising from the radioactive properties of such

matter, or from a combination of radioactive properties with toxic, explosive or other hazardous properties of such matter;

e) "Nuclear fuel" means any material which is capable of producing energy by a self-sustaining chain process of nuclear fission;

f) "Nuclear incident" means any occurrence or series of occurrences having the same origin which causes nuclear damage or, but only with respect to preventive measures, creates a grave and imminent threat of causing such damage;

g) "Nuclear installation" means-

(A) Any nuclear reactor other than one with which a means of transport is equipped for use as a source of power, whether for propulsion thereof or for any other purpose;

(B) Any facility using nuclear fuel for the production of nuclear material, or any facility for the processing of nuclear material, including re-processing of irradiated nuclear fuel; and

(C) Any facility where nuclear material is stored (other than storage incidental to the carriage of such material).

h) "Nuclear material" means and includes-

(i) Nuclear fuel (other than natural uranium or depleted uranium) capable of producing energy by a self-sustaining chain process of nuclear fission outside a nuclear reactor, either by itself or in combination with some other material; and

(ii) Radioactive products or waste;

i) "Nuclear reactor" means any structure containing nuclear fuel in such an arrangement that a self-sustaining chain process of nuclear fission can occur therein without an additional source of neutrons;

j) "Operator", in relation to a nuclear installation, means the Central Government or any authority or corporation established by it or a Government company who has been granted a license pursuant to the Atomic Energy Act, 1962 for the operation of that installation;

k) "Preventive measures" means any reasonable measures taken by a person after a nuclear incident has occurred to prevent or minimise damage referred to in sub-clauses (i) to *(v)* and *(vii)* of clause *(g),* subject to the approval of the Central Government;

l) "Radioactive products or waste" means any radioactive material produced in, or any material made radioactive by exposure to, the radiation incidental to the production or utilisation of nuclear fuel, but does not include radioisotopes which have reached the final stage of fabrication so as to be usable for any scientific, medical, agricultural, commercial or industrial purpose;

7.11.2.2 Atomic Energy Regulatory Board to notify nuclear incident (Section 3)

(1) The Atomic Energy Regulatory Board constituted under the Atomic Energy Act, 1962 if satisfied that the gravity of threat and risk involved in a nuclear incident, within a period of fifteen days from the date of occurrence of a nuclear incident, notify such nuclear incident.

7.11.2.3 Liability of operator (Section 4)

The operator of the nuclear installation shall be liable for nuclear damage caused by a nuclear incident. The liability of the operator of the nuclear installation shall be strict and shall be based on the principle of no-fault liability.

7.11.2.4 Operator not liable in certain circumstances (Section5).

An operator shall not be liable for any nuclear damage where such damage is caused by a nuclear incident directly due to-

(i) A grave natural disaster of an exceptional character; or

(ii) An act of armed conflict, hostility, civil war, insurrection or terrorism.

(iii)The nuclear installation itself and any other nuclear installation including a nuclear installation under construction, on the site where such installation is located; and

(iii) To any property on the same site which is used or to be used in connection with any such installation; or

(iv) To the means of transport upon which the nuclear material evolved was carried at the time of nuclear incident:

(v)Where any nuclear damage is suffered by a person on account of his own negligence or from his own acts of commission or omission, the operator shall not be liable to such person.

7.11.2.5 Liability of Central Government (Section 7)

The Central Government shall be liable for nuclear damage in respect of a nuclear incident

7.11.2.6 Person entitled to make application for nuclear damage (Section14)

An application for compensation before the Claims Commissioner or the Commission, in respect of nuclear damage may be made by-

(a) A person who has sustained injury; or

(b) The owner of the property to which damage has been caused; or

(c) The legal representatives of the deceased; or

(d) Any agent duly authorized by such person or owner or legal representatives.

7.11.2.7 Nuclear Damage Claims Commission (Section 19)

Where the Central Government, having regard to the injury or damage caused by a nuclear incident, is of the opinion that it is expedient in the public interest that such claims for such damage be adjudicated by the Commission instead of a

Claims Commissioner, it may, by notification, establish a Commission for the purposes of this Act.

CHAPTER EIGHT

BIOLOGICAL DISASTER

Biological disasters are scenarios involving disease, disability or death on a large scale among humans, animals and plants due to toxins or disease caused by live organisms or their products. Such disasters may be natural in the form of epidemics or pandemics of existing, emerging or reemerging diseases and pestilences or man-made by the intentional use of disease causing agents in Biological Warfare (BW) operations or incidents of Bioterrorism (BT). Biological disasters might be caused by epidemics, accidental release of virulent microorganism(s) or Bioterrorism (BT) with the use of biological agents such as anthrax, smallpox, etc.

8.1.0 8.1.0RULES FOR THE MANUFACTURE, USE, IMPORT, EXPORT AND STORAGE OF HAZARDOUS MICRO ORGANISMS GENETICALLY ENGINEERED ORGANISMS OR CELLS

8.1.1 OBJECTIVE AND SCOPE:

In exercise of the powers conferred by sections 6, 8 and 25 of the Environment (Protection) Act, 1986 and with a view to protecting the environment, nature and health, in connection with the application of gene-technology and micro-organisms, the Central Government has made these rules. These rules are applicable to the manufacture import and storage of micro-organisms and Gene-Technological products. The Rules apply to genetically engineered organisms micro-organisms and cells and correspondingly to any substances and products and food stuffs, etc. of which such cells, organisms or tissues hereof form part. Rules also apply to new gene-technologies apart from those referred and to organisms/micro-organisms and cells generated by the utilisation of such other gene-technologies and to substances and products of which such organisms and cells form part. Rules are applicable to sale, offers for sale, storage for the purpose of sale, offers and any kind of handling over with or without a consideration; exportation and importation of genetically engineered cells or organisms; production, manufacturing, processing, storage, import, drawing off, packaging and repacking of the Genetically Engineered Products; Production, manufacture etc. of drugs and

pharmaceuticals and food stuffs distilleries and tanneries, etc. which make use of micro-organisms genetically engineered micro-organisms one way or the other.

8.1.2 RELEVANT PROVISIONS OF THE RULES:

8.1.2.1 Competent Authorities (Rule 4)

Recombinant DNA Advisory Committee (IXDAC) shall review developments in Biotechnology al national and international levels and shall recommend suitable and-appropriate safety regulations for India in recombinant research, use and applications from time to time.

Review Committee on Genetic Manipulation (RCGM) shall function in the Department of Biotechnology to monitor the safety related aspect in respect of ongoing research projects and activities involving genetically engineered organisms/hazardous microorganisms. The Review Committee on Genetic Manipulation shall lay down procedures restricting or prohibiting production sale importation and use of such genetically engineered organisms of cells as are mentioned in the Schedule. Institutional Bio-safety Committee (IBSC) shall be constituted by an occupier or any person including research institutions handling microorganisms/genetically engineered organisms. The occupier or any person including research institutions having microorganisms/genetically engineered organisms shall prepare with the assistance of the Institutional Bio-safety Committee (IBSC) an up-to-date on-site emergency plan according to the manuals/guidelines of the RCGM and make available copies to the District Level Committee/State Biotechnology Co-ordinating Committee and the Genetic Engineering Approval Committee. Genetic Engineering Approval Committee (GE.AC) shall function as a body under the Department of Environment Forests and Wildlife for approval of activities involving large scale use of hazardous microorganisms and recombinants in research and industrial production from the environmental angle. The Committee shall also be responsible for approval of proposals relating to release of genetically engineered organisms and products into the environment including experiment Field trials. State Biotechnology Co-ordination Committee (SBCC) shall have powers to inspect, investigate and take punitive action in case of violations of statutory provisions through the Nodal Department and the State Pollution Control Board/Directorate of Health/Medical Services. The Committee shall review periodically the safety and control

measures in the various industries/institutions handling genetically engineered Organisms/Hazardous microorganisms.

There shall be a District Level Biotechnology Committee (DLC) in the districts wherever necessary under the District Collectors to monitor the safety regulations in installations engaged in the use of genetically modified organisms/ hazardous microorganisms and its applications in the environment. The District Level Committee/or any other person/s authorized in this behalf shall visit the installation engaged in activity involving genetically engineered organisms, hazardous microorganisms, formulate information chart, find out hazards and risks associated with each of these installations and coordinate activities with a view to meeting any emergency. They shall also prepare an off-site emergency plan. The District Level Committee shall regularly submit its report to the State Biotechnology Co-ordination Committee/Genetic Engineering Approval Committee. The District Level Committee shall comprise of the District Collector (Chairman);Factory Inspector (Member); representative of the Pollution Control Board (Member); Chief Medical Officer (District Health Officer); District Agricultural Officer; representative of the Public Health Engineering Department; District Microbiologists/Pathologist (technical expert)and Commissioner Municipal Corporation.

8.1.2.2 Approval and Prohibitions etc. (Rule 7)

No person shall import, export, transport, manufacture, process, use or sell any hazardous microorganisms of genetically engineered organisms/substances or cells except with the approval of the Genetic Engineering Approval Committee. Use of pathogenic micro-organisms or any genetically engineered organisms or cells for the purpose of research shall only be allowed in laboratories or inside laboratory area notified by the Ministry of Environment and Forests for this purpose under the Environment (Protection) Act, 1986. The Genetic Engineering Approval Committee-shall give directions to the occupier to determine or take measures concerning the discharge of microorganisms/genetically engineered organisms or cells mentioned in the Schedule from the laboratories, hospitals and other areas including prohibition of such discharges and laying down measures to be taken to prevent such discharges. Any person operating or using genetically engineered organisms/micro-organisms mentioned in the schedule for scale up or pilot operations shall have to obtain license issued by the Genetic Engineering Approval Committee for any such activity. Certain

experiments for the purpose of education within the field of gene technology or microorganism may be carried out outside the laboratories and laboratory areas mentioned and will be looked after by the Institutional Bio-safety Committee.

8.1.2.3 Production (Rule 8)

Production in which genetically engineered organisms or cells or micro- organisms are generated or used shall not be commenced except with the consent of Genetic Engineering Approval Committee with respect of discharge of genetically engineered organisms or cells into the environment.

8.1.2.4 Deliberate or unintentional release (Rule 9)

Deliberate or unintentional release of genetically engineered organisms/hazardous microorganisms or cells, including deliberate release for the purpose of experiment shall not be allowed. The Genetic Engineering Approval Committee may in special cases give approval of deliberate release.

8.1.2.5 Permission and approval for certain substances (Rule 10)

Substances and products, which contain genetically engineered organisms or cells or micro-organisms shall not be produced, sold, imported or used except with the approval of Genetic Engineering Approval Committee.

8.1.2.6 Permission and approval for food stuffs (Rule 11)

Food stuffs, ingredients in food stuffs and additives including processing and containing or consisting of genetically engineered organisms or cells, shall not be produced, sold, imported or used except with the approval of the Genetic Engineering Approval Committee.

8.1.2.7 Supervision (Rule 14)

The Genetic Engineering Approval Committee may supervise the implementation of the terms and conditions laid down in connection with the approvals accorded by it. The Genetic Engineering Approval Committee may carry out this supervision through the State

Biotechnology Coordination Committee or the State Pollution Control Boards/District Level Committee or through any person authorized in this behalf.

8.1.2.8 Penalties (Rule 15)

If an order is not complied with, the District Level Committee or State Biotechnology Co-ordination Committee may take measures at the expense of the person who is responsible. In case where immediate intervention is required in order to prevent any damage to the environment, nature or health, the District level Committee or State Biotechnology Coordination Committee may take the necessary steps without issuing any order or notice. The State Biotechnology Co-ordination Committee/District Level Committee may take samples for a more detailed examination of organisms and cells. The State Biotechnology Co-ordination Committee/District Level Committee shall be competent to ask for assistance from any other government authority to carry out its instructions.

8.1.2.9 Responsibility to notify interruptions or accidents (Rule 16)

Any person who is responsible for conditions or arrangements shall immediately notify the District Level Committee/State Biotechnology Co-ordination Committee and the state medical officer of any interruption of operations or accidents shat may lead to discharges of genetically engineered organisms or cells which may be harmful to the environment, nature or health or involve any danger thereto.

8.1.2.10 Preparation Off-site emergency Plan by the DLC (Rule 17)

It shall be the duty of the DLC to prepare an off-site emergency plan detailing how emergencies relating to a possible major accident at a site will be dealt with and in preparing the plan, the DLC shall consult the occupier and such other person as it may deem necessary.

8.2.0 BIO- MEDICAL WASTE (MANAGEMENT AND HANDLING) RULES 1998

8.2.1 OBJECTIVE AND SCOPE: in 1989 the Government of India, in exercise of powers conferred under sections 6, 8 and 25 of the Environmental (Protection) Act, 1986 formulated

the Hazardous Waste (Management & Handling) Rules, 1989 which were amended in 2000. However, these rules did not cover hospital wastes. To cover up the same, a draft notification on Bio-Medical Wastes (Management and Handling) Rules, 1995 was issued on 24th April, 1995 and objections were invited from public. After duly considering necessary amendment in the Draft Rules, the Bio-Medical Waste (Management & Handling) Rules 1998 finally came into operation with effect from 20th July, 1998.

These Rules are applicable to all persons who generate, collect, receive, store, transplant, dispose or handle Bio-Medical Waste in any form. The Bio-Medical (Management and Handling) Rules, 1998 list down the institutions generating Bio-Medical Wastes including hospital, nursing homes, clinics, dispensaries, veterinary institutions, animal houses, pathological laboratories and blood banks while specifying the duty of Occupier, categories of Bio-Medical Wastes and various standards for treatment and disposal of Bio-Medical Wastes.

The Municipal Corporations, Municipal Boards or Urban Local Bodies, as the case may be, shall be responsible for providing suitable common disposal/incineration sites for the Bio-Medical Wastes generated in the area under their jurisdiction and in areas outside the jurisdiction of any municipal body, it shall be the responsibility of the Occupier generating Bio-Medical Waste /Operator of a Bio-Medical Waste treatment facility to arrange for suitable sites individually or in association, so as to comply with the provisions of these rules.

There are 10 categories of Bio-Medical Waste types in all and each of them has a specified mode of treatment and disposal option for effectively rendering the said waste free from risk.

8.2.2 RELEVANT PROVISIONS:

8.2.2.1<u>Definitions (Rule 3)</u>

1. **Authorized person** means an Occupier or Operator authorized by the prescribed authority to generate, collect, receive, store, transport, treat, dispose and / or handle Bio-Medical Waste in accordance with these rules and any guidelines issued by the Central Government.

2. **Bio-Medical Waste** means any waste, which is generated during the diagnosis, treatment or immunisation of human beings or animals or in research activities pertaining thereto or in the production or testing of biologicals, and including categories mentioned in Schedule I.

The issue of 'Improper Hospital Waste Management' in India was first highlighted in a writ application in *B.L. Wadhera v. Union of India*,[24] The apex court while keeping in view the appalling conditions arising due to Bio-Medical Waste disposal provided certain guide lines: (a) All hospitals with 50 beds and above should install incinerators or any other effective alternate method under their own administrative control; (b) The incinerator or alternative methods should be fitted with necessary pollution control mechanism, approved and conforming to the standards laid down by the Central Pollution Control Board; (c) The Central Pollution Control Board and the State Pollution Control Boards should regularly send its inspection teams in different areas to ascertain that the collection transportation and disposal of garbage/ wastes is carried out satisfactorily.

3. **Bio-Medical Waste treatment facility** means any facility wherein treatment disposal of Bio-Medical Waste or processes incidental to such treatment or disposal is carried out and includes common treatment facilities.

4. **Occupier** in relation to any institution generating Bio-Medical Waste , animal house, pathological laboratory, blood bank by whatever name called, means a person who has control over that institution and/or its premises.

5. **Operator of a Bio-Medical Waste Treatment facility** means a person who owns or controls or operates a facility for the collection, reception, storage, transport, treatment, disposal or any other form of handling of Bio-Medical Waste.

8.2.2.**2 Duty of Occupier: (Rule 4)**

Rules specify that it shall be the duty of every Occupier of an institution generating Bio-Medical Waste which includes a hospital, nursing home, clinic, dispensary, veterinary institution, animal house, pathological laboratory, blood bank by whatever name called to take all steps to ensure that such waste is handled without any adverse effect to human health and the environment.

The Orissa High Court on 15.11.2006 in *Maitree Sansad v. State of Orissa and Ors.*[25] expressed serious concern in respect of three Medical Colleges and Hospitals of the State as

[24] AIR 1996 SC 2969
[25] 103 (2007) CLT 191

well as some nursing homes which are operating in the city of Cuttack as also the Capital Hospital in Bhubaneshwar which the petitioner contended gross violation of the rules relating to management and handling of Bio-Medical Wastes and directed the Chairman, State Pollution control Board to cause inquiry in this regard.

8.2.2.3 **Treatment and Disposal (Rule 5):**

The treatment and disposal of Bio-Medical Waste shall be treated and disposed of in accordance with Schedule I, and in compliance with the standards prescribed in Schedule V. Besides, every Occupier, where required, shall set up in accordance with the time-schedule in Schedule VI, requisite Bio-Medical Waste treatment facilities like incinerator, autoclave, microwave system for the treatment of waste, or, ensure requisite treatment of waste at a common waste treatment facility or any other waste treatment facility.

8.2.4 **Segregation, Packaging, Transportation and Storage (Rule 6):**

Specific directions are given in these rules with regard to the segregation of Bio-Medical Wastes at the point of generation into containers or bags in accordance with Schedule II (of these Rules) prior to its storage, transportation, treatment and disposal. These containers shall be labeled according to Schedule III (of these Rules). It has been laid down that Bio-Medical Waste shall not be mixed with other wastes. If a container is transported from the premises where Bio-Medical Waste is generated to any waste treatment facility outside the premises, the container shall, apart from the label prescribed in Schedule III, also carry information prescribed in Schedule IV.

Notwithstanding anything contained in the Motor Vehicles Act, 1988, or rules thereunder, untreated Bio-Medical Waste shall be transported only in such vehicle as may be authorized for the purpose by the competent authority as specified by the Government. With regards to storage, untreated Bio-Medical Waste shall not be kept stored beyond a period of 48 hours.

The Karnataka High Court on 14.3.2000 in the matter of State of *Karnataka and Others v. B. Krishna Bhat and Others*[26]directed the Government of Karnataka to take action in regard to disposal of hospital wastes and to totally ban throwing of hospital wastes in any public or common area and to introduce incinerators in big hospitals; and to transport waste from small hospitals to Corporation incinerators. The 56 interim orders made by the learned Judge,

[26] 2001(2) KarLJ 1

broadly covered improvement of roads, public health and infrastructural facilities in Bangalore. These orders covered laying roads and sidewalks, improving street lighting, co-ordination among agencies regarding digging footpaths and road cutting, prevention of dumping of debris and hospital waste, etc.

8.2.2.5 **Prescribed Authority (Rule 7):**

Prescribed authority for enforcement of the provisions of these rules shall be the State Pollution Control Boards in respect of States and the Pollution Control Committees in respect of the Union Territories and all pending cases with a prescribed authority appointed earlier shall stand transferred to the concerned State Pollution Control Board, or as the case may be, the Pollution Control Committees. It has been laid down in the rules that the prescribed authority for enforcement of the provisions of these rules in respect of all healthcare establishments including hospitals, nursing homes, clinics, dispensaries, veterinary institutions, animal houses, pathological laboratories and blood banks of the Armed Forces under the Ministry of Defense shall be the Director General, Armed Forces Medical Services shall be appointed by the State or Union territory government, within one month from the coming into force of these rules. The prescribed authority shall on receipt of Form I make such enquiry as it deems fit and if it is satisfied that the applicant possesses the necessary capacity to handle Bio-Medical Waste in accordance with these rules, grant or renew an authorization, as the case may be.

An authorisation shall be granted for a period of three years, including an initial trial period of one year from the date of issue. Thereafter, an application shall be made by the Occupier/Operator for renewal. All such subsequent authorisation shall be for a period of three years. A provisional authorisation will be granted for the trial period, to enable the Occupier/Operator to demonstrate the capacity of the facility. The prescribed authority may after giving reasonable opportunity of being heard to the applicant and for reasons thereof to be recorded in writing, refuse to grant or renew authorisation. Every application for authorisation shall be disposed of by the prescribed authority within ninety days from the date of receipt of the application. The prescribed authority may cancel or suspend an authorisation, if for reasons, to be recorded in writing, the Occupier/Operator has failed to comply with any provision of the Act or these rules. However, no such authorisation shall be cancelled or suspended without giving a reasonable opportunity to the Occupier/Operator of being heard.

The Delhi High Court in Courts On Its Own Motion v. In The Matter of Statement made by Shri Raman Duggal, Adv.[27] on 16.1.2001 gave directions to the M.C.D. and other related authorities that the All India Institute of Medical Sciences, New Delhi through its Director to install sufficient number of incinerators, or an equally effective alternate, to dispose of the hospital waste. The Director shall file an affidavit within two months to indicate the progress made in this respect. It further gave directions that the MCD and NDMC to issue notices to all the private hospitals/nursing homes in Delhi to make their own arrangements for the disposal of their garbage and hospital waste and that they be asked to construct their own incinerators. In case these hospitals are permitted to use facilities (for collection, transportation and disposal of garbage) provided by the MCD and NDMC then they may be asked to pay suitable charges for the service rendered in accordance with law.

8.2.2.6 **Authorisation (Rule 8):**

Every Occupier of an institution generating, collecting, receiving, storing, transporting, treating, disposing and/or handling Bio-Medical Waste in any other manner, except such Occupier of clinics, dispensaries, pathological laboratories, blood banks providing treatment/service to less than 1000 (one thousand) patients per month, shall make an application in Form I to the prescribed authority for grant of authorisation.

In *Delhi Medical Association and Ors. v. Union of India (UOI) and Ors*[28].the Delhi High Court on 24.04.2009 held that the running of a nursing home involves the use of and therefore disposal of highly toxic chemicals and substances. The waste generated by a hospital or nursing home is certainly of a hazardous nature. The Environment (Protection) Act, 1986 sets out the applicable statutory provisions concerning the disposal of such hazardous waste by a nursing home or a hospital. Merely because an Act and the Rules there under do not specifically advert to the disposal of hazardous waste by such nursing home, it would not mean that such nursing home does not have to conform to the standards set down under the EPA and the Rules made there under.

8.2.2.7 **Advisory Committee (Rule 9):**

[27] 2001 CrLJ 1064
[28] AIR 2009 Delhi 163

The Government of every State/Union Territory shall constitute an Advisory Committee. The Committee will include experts in the field of medical and health, animal husbandry and veterinary sciences, environmental management, municipal administration, and any other related department or organisation including non-governmental organisations. As and when required, the committee shall advise the Government of the State/Union Territory and the prescribed authority on matters related to the implementation of these rules.

8.2.2.8 **Annual Report (Rule 10):**

Every Occupier/Operator shall submit an annual report to the prescribed authority by 31 January every year. This report will include information about the categories and quantities of Bio-Medical Wastes handled during the preceding year. The prescribed authority shall send this information in a compiled form to the Central Pollution Control Board by 31 March every year.

8.2.2.9 **Maintenance of Records (Rule 11):**

Every authorized person shall maintain records related to the generation, collection, reception, storage, transportation, treatment, disposal and/or any form of handling of Bio-Medical Waste in accordance with these rules and any guidelines issued. All records shall be subject to inspection and verification by the prescribed authority at any time.

8.2.2.10 **Accident Reporting (Rule 12):**

When any accident occurs at any institution or facility or any other site where Bio-Medical Waste is handled or during transportation of such waste, the authorized person shall report the accident to the prescribed authority forthwith.

8.2.2.11 **Appeal (Rule 13):**

Any person aggrieved by an order made by the prescribed authority under these rules may, within thirty days from the date on which the order is communicated to him, prefer an appeal. The authority may entertain the appeal after the expiry of the said period of thirty days if it is satisfied that the appellant was prevented by sufficient cause from filing the appeal in time. Any person aggrieved by an order of the Director General, Armed Forces Medical Services under these rules may, within thirty days from the date on which the order is communicated

to him prefer an appeal to the Central Government in the Ministry of Environment and Forests.

8.3.0THE MUNICIPAL SOLID WASTES (MANAGEMENT & HANDLING) RULES, 2000

8.3.1 OBJECTIVE AND SCOPE: Solid waste management is becoming a major public health and environmental concern in urban areas of developing countries. The situation in India particularly in the capital cities is severe. In general solid waste management is given a very low priority and as a result, very limited funds are provided for solid waste management by the government. Government of India notified Municipal Solid Waste Management and Handling Rules in year 2001, under the Environmental Protection Act, 1986. Municipal Solid Waste (Management and Handling) Rules, 2000 includes responsibility of Municipal Authority, State Government, Union Territory administration, Central or State Pollution Control Board or Committee. The MSW (M & H) Rules 2000 make it obligatory on the part of all the municipal authorities to arrange for collection, segregation, transportation and suitable disposal of municipal wastes of the municipal towns/cities. They need to obtain authorisation of the GPCB for the compliance of these Rules. Under these rules all municipal authorities responsible for collection, segregation, storage, transportation, processing & disposal of municipal solid wastes are covered. The municipal authority or an operator of a facility needs to make an application for grant of authorization for setting up of waste processing and disposal facility including landfills, to the state Board. The Rules does not contain any provision for levying penalty on the generator of wastes or the operator of the facility for the collection, segregation, transportation, processing and disposal of municipal solid wastes, if the wastes are not disposed in the prescribed manner. Similarly, the Rules prescribe no penalty if the incinerator or landfills disposing municipal solid waste do not meet operating standards. Thus, there is no disincentive provided in the rules for the unsafe disposal of waste.

8.3.3 RELEVANT PROVISIONS OF THE RULES:

8.3.3.1 Application (Section 2)

These rules shall apply to every municipal authority responsible for collection, segregation, storage, transportation,, processing and disposal of municipal solid wastes .

8.3.3.2 Definitions (Section 3)

i. "biodegradable substance" means a substance that can be degraded by micro-organisms;

ii. "Collection" means lifting and removal of solid wastes from collection points or any other location;

iii. "Composting" means a controlled process involving microbial decomposition of organic matter.

iv. "Demolition and construction waste" means wastes from building materials debris and rubble resulting from construction, re-modelling, repair and demolition operation.

v. "Disposal" means final disposal of municipal solid wastes in terms of the specified measures to prevent contamination of ground-water, surface water and ambient air quality.

vi. "Generator of wastes" means persons or establishments generating municipal solid wastes;
vii. "land filling" means disposal of residual solid wastes on land in a facility designed with protective measures against pollution of ground water, surface water and air fugitive dust, wind-blown litter, bad odour, fire hazard, bird menace, pests or rodents, greenhouse gas emissions, slope instability and erosion.

viii. "Municipal authority" means Municipal Corporation, Municipality, Nagar Palika, Nagar Nigam, Nagar Panchayat, Municipal Council including notified area committee (NAC) or any other local body constituted under the relevant statutes and, where the management and handling of municipal solid waste is entrusted to such agency.

ix. "Municipal solid waste" includes commercial and residential wastes generated in a municipal or notified areas in either solid or semi-solid form excluding industrial hazardous wastes but including treated bio-medical wastes.

x. “operator of a facility" means a person who owns or operates a facility for collection, segregation, storage, transportation, processing and disposal of municipal solid wastes and

also includes any other agency appointed as such by the municipal authority for the management and handling of municipal solid wastes in the respective areas.

xi. "Transportation" means conveyance of municipal solid wastes from place to place hygienically through specially designed transport system so as to prevent foul odour, littering, unsightly conditions and accessibility to vectors.

8.3.3.3 Responsibility of municipal authority (Section 4)

Every municipal authority shall, within the territorial area of the municipality, be responsible for the implementation of the provisions of these rules, and for any infrastructure development for collection, storage, segregation, transportation, processing and disposal of municipal solid wastes.

8.3.3.4 Responsibility of the State Government and the Union territory Administrations (Section 5)

The Secretary-in charge of the Department of Urban Development of the concerned State or the Union territory, as the case may be, shall have the overall responsibility for the enforcement of the provisions of these rules in the metropolitan cities. The District Magistrate or the Deputy Commissioner of the concerned district shall have the overall responsibility for the enforcement of the provisions of these rules within the territorial limits of their jurisdiction.

8.3.3.5 Responsibility of the Central Pollution Control Board and the State Board or the Committees (Section 6)

The State Board or the Committee shall monitor the compliance of the standards regarding ground water, ambient air, leachate quality and the compost quality including incineration standards as specified. The State Board or the Committee, after the receipt of application from the municipal authority or the operator of a facility for grant of authorization for setting up waste processing and disposal facility including landfills, shall examine the proposal taking into consideration the views of other agencies like the State Urban Development Department, the Town and Country Planning Department, Air Port or Air Base Authority, the

Ground Water Board or any such other agency prior to issuing the authorization. The State Board or the Committee shall issue the authorization to the municipal authority or an operator of a facility within forty-five days stipulating compliance criteria and standards as specified including such other conditions, as may be necessary. The authorization shall be valid for a given period and after the validity is over, a fresh authorization shall be required. The Central Pollution Control Board shall co-ordinate with the State Boards and the Committees with particular reference to implementation and review of standards and guidelines and compilation of monitoring data.

8.3.3.6 Management of municipal solid wastes (section 7)

Any municipal solid waste generated in a city or a town, shall be managed and handled in accordance with the compliance criteria and the procedure laid down in Schedule-II.

8.3.3.7 Accident Reporting (Section 9)

When an accident occurs at any municipal solid wastes collection, segregation, storage, processing, treatment and disposal facility or landfill site or during the transportation of such wastes, the municipal authority shall forthwith report the accident in Form-V to the Secretary in-charge of the Urban Development Department in metropolitan cities, and to District Collector or Deputy Commissioner in all other cases.

CHAPTER NINE

POISONING

In the context of biology, poisons are substances that cause disturbances to organisms, usually by chemical reaction or other activity on the molecular scale, when a sufficient quantity is absorbed by an organism. The fields of medicine (particularly veterinary) and zoology often distinguish a poison from a toxin, and from a venom. Toxins are poisons produced by some biological function in nature, and venoms are usually defined as toxins that are injected by a bite or sting to cause their effect, while other poisons are generally defined as substances absorbed through epithelial linings such as the skin or gut. Poisons are most often applied in industry, agriculture and other uses for other reasons than their toxicity. Pesticides are one application where they are indeed used for their toxicity. The term "poison" is often used colloquially to describe any harmful substance, particularly corrosive substances, carcinogens, mutagens, teratogens and harmful pollutants, and to exaggerate the dangers of chemicals. The legal definition of "poison" is stricter. Environmentally hazardous substances are not necessarily poisons and vice versa. For example, food industry wastewater—which may contain potato juice or milk can be hazardous to the ecosystems of streams and rivers by consuming oxygen and causing eutrophication, but is nonhazardous to humans and not classified as a poison

9.1.0 THE DESTRUCTIVE INSECTS AND PESTS ACT, 1914

9.1.1 OBJECTIVE AND SCOPE

This act was enacted to prevent the introduction into and the transport from one state to another in India of any insects, fungus or other pest which is or may be destructive to crops. It was passed by the governor general of India in council. The Act received the assent of the governor-general on the 3rd, February, 1914.

9.1.2 **RELEVANT PROVISIONS OF THE ACT**

9.1.2.1 Definitions

a) "Crops" includes all agricultural or horticultural crops, and all trees, bushes or plants;
b) "Import" means the bringing or taking by sea, land or air, across any customs frontier defined by the Central Government;
c) "Infection" means infection by any insect, fungus or other pest injurious to crops.

9.1.2.2 Power of the Central Government to regulate or prohibit the import of articles likely to infect (Section 3)

The Central Government may, by notification in the Gazettee of India, prohibit or regulate, subject to such restrictions and conditions as the Central Government may impose, the import into India, of any articles or class of articles likely to cause infection to any crop or of insects generally or by class of insects.

A notification shall specify any article or insect with reference to the country of origin, or the route by which it is imported

9.1.2.3 Power of Central Government to regulate or prohibit transport from State to State of Insects or articles likely to infect (Section 4A)

The Central Government may, prohibit or regulate, subject to such conditions as the Central Government may impose, the export from a State or the transport from the State to another State in India of any article likely to cause infection to any crop or of insects generally.

9.1.2.4 Refusal to carry article of which transport is prohibited (Section 4B)

When a notification issued under section 4 A:

- prohibits export or transport or
- imposes conditions upon export or transport

the person responsible for the booking of goods or parcels at any railway station or inland steam vessel station shall refuse to receive for

- carriage at, or
- to forward or
- knowingly allow to be carried on the railway or inland steam vessel from that station

anything, of which import or transport is prohibited, consigned to any place in India outside the state in which such station is situated ; and

he shall also refuse export or transport, unless the consignor produces, or the thing consigned is accompanied by a document or documents of the prescribed nature showing that the conditions imposed by the notifications are satisfied.

9.1.2.5 Power of Central Government to make rules (Section 4D)

The Central Government may, by notification in the Official Gazettee, make rules prescribing the nature of the documents which shall accompany any article or insect the export or transport whereof is subject to conditions imposed under section section 4A, or which shall be held by the consignor or consignee thereof, the authorities which may issue such documents and the manner in which the documents shall be employed.

9.1.2.6 Power of State Government to make rules (Section 5)

1. The State Government may make rules for the detention, inspection, disinfection or destruction of any insect or any article in respect of which a notification has been issued under section 3 or under section 4 A or of any article which may have been in contact or proximity thereto, and for regulating the powers and duties of the officers whom it may appoint in this behalf.

2. In making any rule under this section the State Government may direct that a breach shall be punishable with fine, which may extend to one thousand rupees.

9.1.2.7 Penalties (Section 5A)

Any person-

- who knowingly exportsany article or insect from a State or
- transports any article or insect from one State to another in India

-in contravention o f a notification issued under section 4A,

or

-attempts so to export or transport any article or insect, and any person responsible for the booking of goods or parcles at a railway or inland steam vessel station who knowingly contravenes the provisions of section 4B

- shall be punishable with fine which may extend to two hundred and fifty rupees and upon any subsequent conviction, with fine which any extend to two thousand rupees.

9.1.2**.8 Protection to persons acting under Act (Section 6)**

No suit, protection or other legal proceedings shall lie against any person for anything in good faith done or intended to be done under this Act.

9.2.0 THE POISONS ACT, 1919

9.2.1 OBJECTIVE AND SCOPE

The Act is based on the Poison Act, 1904 which had limited scope. It restricted interference with legitimate industries with the result that the control afforded over trafficking poison proved inadequate. Certain radical changes in the old Act were, however, brought in the form of poisons Act 1919. According to this Act, Central Government is authorized to regulate import of poisons and the State Governments are authorized to regulate, possession, possession for sale and sale for poisons, within their respective areas. Any substance specified as poision under this Act, applies to or interferes with anything done in good faith in the exercise of this profession by medical or veterinary practioner.

9.2.3 RELEVANT PROVISIONS OF THE ACT

9.2.3.1 Power of the State Government to regulate possession for sale and sale of any poison (Section 2)

The State Government may by rule regulate the possession for sale and the sale, whether wholesale or retail, of any specified poison.

The State Government has power to make rules in this connection which may provide for:

(a) The grant of licenses to possess any specified poison for sale, wholesale or retail, and

fixing of the fee to be charged for such licenses.

(b) the classes of persons to whom alone such licenses may be granted;

(c) the classes of persons to whom alone any such poison may be sold;

(d) the maximum quantity of any such poison which may be sold to any one person;

(e) the maintenance of the registers for the sale of poisions ans the inspection of the same.

(f) the safe custody of such poisons and the labelling of the vessels, packages or coverings

in which any such poison is sold or possessed for sale

g) Inspection and examination of any such poison possessed for sale by any vendor.

*In Goodwill Paint and Chemical Industry V. Union of India And Anr. (1991 Air 2150)It was observed by the court that*The object of the enactment is to regulate the possession for sale and the sale, whether wholesale or retail of poisons and the importation of the same. The Poisons Act, 1919 enabled State Government to declare any substance as poison for the purposes of the Act by a notification under the Act or the rules made under the Act.

It is not all poisonous substances that are brought within the regulation under the Act. It is those substances which the Government considers its possession for sale or sale to be regulated in the interest of health and safety of the society. This limitation is inherent in the scheme of the Act itself.

It was also observed by the court that no comprehensive definition can be given to the word, "poison". Under this term would fall anything calculated to destroy life. Substances harmless in themselves might become poison by the time or manner of their administration. Nothing is a poison unless regard be had to its administration. A substance may be a deadly poison or a valuable medicine according to how and how much is taken. If the resultant effect of administering into the system produces a violent, morbid or fatal changes or which destroys living tissues, the substance can be safely called poison. Any substance which is used for purposes mentioned therein section 4 can definitely be declared as poison.

9.2.3.2 Power to regulate possession of any poison in certain areas (Section 4)

The State Government has power to regulate rule regarding the possession of any specified poison in local area where such poison can be used for murders or for poisoning cattle and in such local area where such occurrences are very frequent.

Any break of this rule is punishable with imprisonment for a term which may extend to one year, or with fine which may extend to one thousand rupees, or with both, together with confiscation of the poison in respect of which the breach has been committed.

9.2**.3.3 Penalty for unlawful importation (Section 6)**

Import of specified poison is allowed only under and in accordance with the conditions of a license, Central Government may regulate the grant of such licenses.

Penalty for unlawful importation, possession for sale any sale of any poison:

a) Unlawful possession for sale and sale of poison.
b) Importation without a license of any poision the importation of which is for the time being restricted by the Central Government.
c) Breach of any condition of a license for the importation of any poison granted to him are punishable.

i. on a first conviction, with imprisonment for a term which may extend to three months, or with fine which may extend to five hundred rupees, or with both, and
ii. on a second or subsequent conviction, with imprisonment for a term which may extend to six months, or with fine which may extend to one thousand rupees, or with both.

The poison in connection with the offence, together with the vessel, packages or co coverings is liable for confiscation.

9.2.3.4 Power to issue search warrants (Section 7)

- the District Magistrate,
- the Sub-divisional- magistrate and,
- in a presidency-town, the Commissioner of Police,

may issue a warrant for the search of any place in which he has reason to believe that any poison is possessed or sold in contravention of this Act or any rule or any poison liable to confiscation under this Act is kept or concealed.

The person to whom the warrant is directed may enter and search the place in accordance with the provisions of the Code of Criminal Procedure, 1898 (5 of 1898), relating to search.

9.3.0 THE DRUGS AND COSMETICS ACT, 1940

9.3.1 OBJECTIVE AND SCPE: The Drugs and Cosmetics Act is mainly aimed to regulate the import, Manufacture, distribution and sale of Drugs and Cosmetics, for maintaining high

standards of medical treatment. Substandard medicines / drugs may cause severe damage to lives of people. The Act covers all Medicines (Ayurvedic, Siddha, and Unani) for internal or external use of human being or animals and all substances (other than food) intended to be used for or in the diagnosis, treatment, mitigation or prevention of any disease or disorder in human beings or animals including preparation applied on human body or to destroy insects. Under the Act, the Central or State government have power to make rules and appoint inspector to control or inspect any drug or cosmetic for its standardisation and safety which can be tested in the Central or State Drug laboratory. The Government can prohibit manufacturing, importing or selling of any drug or cosmetic. Violation of law by any person or corporate manager or owner is liable for punishment for a term which may extend to 3-10 years and shall also be liable to fine which could be five hundred or ten thousand rupee or with both. Drugs and Cosmetic Rules 1995 contains the list of drugs for which license is required by manufacturer, importers, and exporters. All imported drugs in indigenous manufacturers have to register to control over the quality of imported as well as locally manufacturing kits.

9.3.2 RELEVANT PROVISIONS OF THE ACT:

9.3.2.1 Application of Other laws not barred (Section 2)

The provisions of this Act shall be in addition to, and not in derogation of, the Dangerous Drugs Act, 1930 and any other law for the time being in force.

9.3.2.2 Definitions (Section 3)

i. “cosmetic” means any article intended to be rubbed, powered, sprinkled or sprayed on, or introduced into, or otherwise applied to, the human body or any part thereof for cleansing, beautifying, promoting attractiveness, or altering the appearance, and includes any article intended for use as a component of cosmetic,

ii. “drug” includes all medicines for internal or external use of human beings or animals and all substances intended to be used for on in the diagnosis, treatment, mitigation or prevention of any disease or disorder in human beings or animals, including preparations applied on human body for the purpose of repelling insects like mosquitoes; such substances (other than food) intended to affect the structure or any function of the human body or intended to be used for the destruction of vermin or insects which cause disease in human beings or animals,

as may be specified from time to time by the Central Government; all substances intended for use as components of a drug including empty gelatin capsules; and such devices intended for internal or external use in the diagnosis, treatment, mitigation or prevention of disease or disorder in human beings or animals, as may be specified from time to time by the Central Government;

iii. "manufacture" in relation to and drug for cosmetic includes any process or part of a process for making, altering, ornamenting, finishing, packing, labelling, breaking up or otherwise treating or adopting any drug or cosmetic with a view to its sale or distribution but does not include the compounding or dispensing of any drug, or the packing of any drug or cosmetic, in the ordinary course of retail business; and "to manufacture" shall be construed accordingly;

9.3.2.3 Presumption as to poisonous substances (Section 4)

Any substance specified as poisonous by rule made under Chapter III or Chapter IV or Chapter IVA shall be deemed to be a poisonous substance for the purposes of Chapter III or Chapter IV for Chapter IVA as the case may be.

9.3.2.4 The Drugs Technical Advisory Board (Section 5)

The Central Government shall constitute a Board (to be called the Drugs Technical Advisory Board) to advise the Central Government and the State Governments on technical matters arising out of the administration of this Act and to carry out the other functions assigned to it by this Act. The Board shall consist of the Director general of Health Services ex officio, who shall be Chairman; the Drugs Controller, India, ex officio; The Director of the Central Drugs Laboratory, Calcutta, ex officio; The Director of the Central Research Institute, Kasauli, ex officio; the Director of the Indian Veterinary Research Institute, Izatnagar, ex officio; the President of the Medical Council of India, ex officio; the President of the Pharmacy Council of India, ex officio; the Director of the Central Drug Research Institute, Lucknow, ex officio; two persons to be nominated by the Central Government from among persons who are in charge of drugs control in the States; one person, to be elected by the Executive Committee of the Pharmacy Council of India, from among teacher in pharmacy or pharmaceutical chemistry or pharmacognosy on the staff of an Indian University or a college affiliated thereto; one person, to be elected by the Executive Committee of the Medical Council of

India, from among teachers in medicine or therapeutics on the staff of an Indian university or a college affiliated thereto; one person to be nominated by the Central Government from the pharmaceutical industry; one pharmacologist to be elected by the Governing Body of the Indian Council of Medical Research; one person to be elected by the Central Council of the Indian Medical Association; one person to be elected by the Council of the Indian Pharmaceutical Association; two persons holding the appointment of Government Analyst; under this Act, to be nominated by the Central Government.

9.3.2.5 The Central Drugs Laboratory (Section 6)

Central Government shall establish a Central Drugs Laboratory under the control of a Director to be appointed by the Central Government, to carry out the functions entrusted to it by this Act.

9.3.2.6 The Drugs Consultative Committee (Section 7)

Central Government may constitute an advisory committee to be called "the Drugs Consultative Committee" to advise the Central Government, the State Governments and the Drugs Technical Advisory Board on any matter in the administration of this Act.

9.3.2.7 Standards of quality (Section 16)

"Standard quality" means in relation to a drug, that the drug complies with the standard set out in the Second Schedule, and in relation to a cosmetic, that the cosmetic complies with such standard as may be prescribed.

.

9.3.2.8 Misbranded drugs (Section 17)

A drug shall be deemed to be misbranded if is so coloured, coated, powdered or polished that damage is concealed or if it is made to appear of better or greater therapeutic value than it really is; or if it is not labelled in the prescribed manner; or if its label or container or anything accompanying the drug bears any statement, design or device which makes any false claim for the drug or which is false or misleading in any particular.

9.3.2.9 Adulterated drugs (Section 17A)

A drug shall be deemed to be adulterated, if it consists in whole or in part, of any filthy, putrid or decomposed substance; or if it has been prepared, packed or stored under insanitary conditions whereby it may have been contaminated with filth or whereby it may have been rendered injurious to health; or if its container is composed, in whole or in part, of any poisonous or deleterious substance which may render the contents injurious to health; or if it bears or contains, for purposes of colouring only, a colour other than one which is prescribed; or if it contains any harmful or toxic substance which may render it injurious to health; or if any substance has been mixed therewith so as to reduce its quality or strength.

9.3.2.10 Spurious drugs (Section 17B)

A drug shall be deemed to be spurious if it is manufactured under a name which belongs to another drug; or if it is an imitation of, or is a substitute for another drug or resembles another drug in a manner likely to deceive or bears upon it or upon its label or container the name of another drug unless it is plainly and conspicuously marked so as to reveal its true character and its lack of identity with such other drug; or if the label or container bears the name of an individual or company purporting to be the manufacturer of the drug, which individual or company is fictitious or does not exist; or if it has been substituted wholly or in part by another drug or substance; or if it purports to be the product of a manufacturer of whom it is not truly a product.

9.3.2.11 Misbranded cosmetics (Section 17C)

Cosmetic shall be deemed to be misbranded, if it contains a colour which is not prescribed; or if it not labelled in the prescribed manner; or if the label or container or anything accompanying the cosmetic bears any statement which is false or misleading in any particular.

9.3.2.12 Spurious cosmetics (Section 17D)

A cosmetic shall be deemed to be spurious, if it is manufactured under a name which belongs to another cosmetic; or if it is an imitation of, or a substitute for, another cosmetic or

resembles another cosmetic in a manner likely to deceive or bears upon it or upon its label or container the name of another cosmetic unless it is plainly and conspicuously marked so as to reveal its true character and its lack of identity with such other cosmetic; or if the label or container bears the name of an individual or a company purporting to be the manufacturer of the cosmetic which individual or company is fictitious or does not exist; or if it purports to be the products of a manufacturer of whom it is not truly a product.

9.3.2.13 Prohibition of manufacture and sale of certain drugs and cosmetics (Section 18)

No person shall himself or by any other person on his behalf manufacture for sale or for distribution, or sell, or stock or exhibit or offer for sale, or distribute any drug which is not of a standard quality, or is misbranded, adulterated or spurious; any cosmetic which is not of a standard quality or is misbranded or spurious; any adulterated drug; any patent or propriety medicine unless there is displayed in the prescribed manner on the label or container thereof the true formula or list of active ingredients contained in it together with the quantities thereof; any drug which by means of any statement, design or device accompanying it or by any other means, purports or claims to prevent, cure or mitigate any such disease or ailment, or to have any other effect as may be prescribed; any cosmetic containing any ingredient which may render it unsafe or harmful for use under the directions indicated or recommended; any drug or cosmetic in contravention of any of the provision of the Chapter or any rule made there under; sell, or stock or exhibit or offer or distribute any drug or cosmetic which has been imported or manufactured in contravention of any of the provision of this Act or any rule made there under; manufacture for sale or for distribution, or sell stock or distribute any drug or cosmetic, except under, and in accordance exhibit or offer for sale, or with the conditions of a license issued for the purpose of examination, test or analysis;

9.3.2.14 disclosure of the name of the manufacturer, etc (Section 18A)

Every person, not being the manufacturer of a drug or cosmetic or his agent for the distribution thereof, shall, if so required, disclose to the inspector the name, address and other particulars of the person from whom he acquired the drug or cosmetic.

9.3.2.15 Power of Central Government to prohibit manufacture, etc., of drug and cosmetic in public interest (Section 26A)

If the Central Government is satisfied, that the use of any drug or cosmetic is likely to involve any risk to human beings or animals or that any drug does not have the therapeutic value claimed or purported to be claimed for it or contains ingredients and in such quantity for which there is no therapeutic justification and that in the public interest it is necessary or expedient so to do, then, that Government may, by notification prohibit the manufacture, sale or distribution of such drug or cosmetic.

9.3.2.16 Power to give directions (Section 33)

Central Government may give such directions to any State Government as may appear to the Central Government to be necessary for carrying into execution in the State any of the provisions of this Act or of any rule or order made there under.

9.4.0 THE PREVENTION OF FOOD ADULTERATION ACT, 1954

9.4.1 OBJECTIVE AND SCOPE

Laws existed in a number of States in India for the prevention of adulteration of food- stuffs, but they lacked uniformity having been passed at different times without mutual consultation between States. The need for Central legislation for the whole country in this matter has been felt since 1937 when a Committee appointed by the Central Advisory Board of Health recommended this step. 'Adulteration of food-stuffs and other goods' is now included in the Concurrent List (III) in the Constitution of India. It has, therefore, become possible for the Central Government to enact all India legislation on this subject. The Bill replaces all local food adulteration laws where they exist and also applies to those States where there are no local laws on the subject. Among others, it provides for —

(i) A Central Food Laboratory to which food samples can be referred to for final opinion in disputed cases .

(ii) A Central Committee for Food Standards consisting of representatives of Central and State Governments to advise on matters arising from the administration of the Act and

(iii) The vesting in the Central Government of the rule-making power regarding standards of quality for the articles of food and certain other matters.

The Prevention of Food Adulteration Bill was passed by both the house of Parliament and received the assent of the President on 29th September, 1954. It came into force on 1st June, 1955 as THE PREVENTION OF FOOD ADULTERATION ACT, 1954.This Act was enacted-

a) To make provision for prevention of adulteration of the food.
b) To protect the public from poisonous and harmful foods
c) To prevent the sale of substandard foods
d) To protect the interests of the consumers by eliminating fraudulent practices

9.4.2 SALIENT PROVISIONS OF THE ACT

9.4.2.1 Meaning of Adulterant (Section 2(i))

Any material which is or could be employed for the purposes of adulteration

9.4.2.2 Definition of Food (Section 2(v))

Any article used as food or drink for human consumption other than drugs and water and includes

a. Any article which ordinarily enters into or is used in the composition or preparation of human food

b. Any flavouring matter or condiments and

c. Any other article which the Central Government may having regard to its use, nature, substance or quality, declare, by notification in the official gazette as food for the purpose of this Act.

9.4.2.3 Concept of Adulteration (Section 2(ia))

An article of food shall be deemed to be adulterated:

a. If the article sold by vendor is not of the nature, substance or quality demanded by the purchaser
b. If the article contains any other substance which affects the substance or quality thereof.

   If any inferior or cheaper substance has been substituted wholly or in part for the article so as to affect the nature, substance or quality of the product
c. If any constituent of the article has been wholly or in part extracted to affect the quality thereof
d. If the article has been prepared, packed or kept under unsanitary conditions whereby it has become contaminated or injurious to health
e. If the article consists wholly or in part of any filthy, putrefied, rotten decomposed or diseased animal or vegetable substance or is insect-infested or is otherwise unfit for human consumption
f. If the article is obtained from a diseased animal
g. If the article contains any poisonous or other ingredient which renders it injurious to health
h. If the container of the article is composed, whether, wholly or in part of any poisonous or deleterious substance which renders sits contents injurious to health
i. If any colouring matter other than that prescribed in respect thereof is present in the article or if the amounts of the prescribed colouring matter which is present in the article are not within the prescribed limits
j. If the article contains any prohibited preservative or permitted preservative in excess of the prescribed limits
k. If the quality or purity of the Article falls below the prescribed limits of variability which renders it injurious to health

m. If the quality or purity of the article falls below the prescribed standard or its constituents are present in quantities not within the prescribed limits of variability which renders it injurious to health

9.4.2.4 Procedure for sampling and analysis (section 8 to 14)

Any food Inspector can enter and inspect any place where any article of food is manufactured or stored for sale or stored for the manufacture of any other article of

food for sale or exposed or exhibited for sale or where any adulterant is manufactured or kept and take samples of such article of food or adulterant for analysis.

a. notice will be issued by the Inspector in writing then and there to the seller indicating his intention
b. three samples are taken and the signature of the seller is affixed to them
c. one sample is sent for analysis to Public Analyst under intimation to the Local Health Authority
d. The other two samples are sent to the local health authority for further reference

9.4.2.5 Penalties (section 16)

Guilt will be punished with imprisonment for a term which shall not be less than six months and upto 3 years and with fine upto one thousand rupees

9.4.2.6 Important miscellaneous provisions

a) If any extraneous additions of colouring matter is added, the same should be indicated on the labels
b) From the labels the blending composition of ingredients should be clear to the customer
c) Sale of kesari gram individually or as an admixture is prohibited
d) Prohibition of use of carbide (acetylene) gas in ripening is prohibited
e) Sale of ghee with Reichert value less than the permitted level
f) Sale of admixture of ghee or butter is prohibited
g) Addition of artificial sweetener should be mentioned on the label
h) Sale of food colours without license prohibited
i) Sale of insect damaged dry fruits and nuts prohibited
j) Food prepared in rusted containers, chipped enamel containers and untinned copper/brass utensils are treated as unfit for human consumption
k) Containers not made of plastic material which is not according to the standards are not to be used
l) Selling salseed fat or any other purpose except for bakery and confectionery is prohibited
m) Store of insecticides in the same premises where food articles are stored is prohibited

n) Milk powder or condensed milk can be sold only with ISI mark
o) Use of more than one type of preservative is prohibited
p) Crop contaminants beyond certain specified level is treated as adulterant
q) Naturally occurring toxic substances in the food material beyond certain level is considered as unfit for human consumption
r) No anti-oxidant, emulsifiers and stabilising agent is permitted beyond the prescribed level
s) No insecticides should be sprayed on the food items
t) Oils can be manufactured only in factories licensed for such purpose.

9.5.0 THE INSECTICIDES ACT, 1968

9.5.1 OBJECTIVE AND SCOPE:

The Insecticides Act, 1968 is an act to regulate the import, manufacture, sale, transport, distribution and use of insecticides in order to prevent risk to human beings or animals and for similar connected matters. Act 46 of 1968 was amended by the Insecticides (Amendment) Act, 1972, Insecticides (Amendment) Act, 1977, Insecticides (Amendment) Act, 2000. As a measure to check food poisoning etc. on the recommendation of the enquiry commission by justice J.C Shah the present legislation was given effect.

Act to regulate the import, manufacture, sale, transport, distribution and use of insecticides in order to prevent risk to human beings or animals and for similar connected matters.

9.5.3 RELEVANT PROVISION OF THE ACT

9.5.3.1Definitions (Section 3)

a) "Insecticide" is defined in section 3(e) to include

Any substance included in the schedule *or*

i. *Other substances as the Central Government may by notification in the official Gazette, include in the schedule from time to time; or*
ii. *Any preparation containing any one or more of the above stated substances.*

9.5.3.2 The Central Insecticides Board (Section 4)

Constituted by the Central Government to advise the Central and State Governments on:-

a) Technical matters arising out of administration of the Act
b) Other functions assigned to the Board by or under this Act.
c) The risk to human being or animals involved in the use of insecticides and the safety measures necessary to prevent such risk.
d) The manufacture, sale, storage, transport and distribution of insecticides with a view to ensure safety to human beings or animals

9.5.3.3 Registration of insecticides (Section 9)

a) Any person desiring to import or manufacture any insecticide may apply to the Registration Committee for the registration of such insecticide and there shall be separate application for each such insecticide.
b) It is pertinent to be mentioned that that if the Committee is of opinion that the precautions claimed by the applicant as being sufficient to ensure safety to human beings or animals are not such or that notwithstanding the observance of such precautions the use of the insecticide involves serious risk to human beings or animals it may refuse to register the insecticide.

9.5.3.4 Licensing officers (Section 12)

The State Government may, by notification in the Official Gazette, appoint such persons as it thinks fit to be licensing officers for the purposes of this Act and define the areas in respect of which they shall exercise jurisdiction.

9.5.3.5 Insecticide Inspectors (Section 20)

a) The Central Government or a State Government may appoint persons in such number as it thinks fit and possessing such technical and other qualifications as may be prescribed to be Insecticide Inspectors.
b) Every Insecticide Inspector shall be deemed to be a public servant within the meaning of Sec. 21 of the Indian Penal Code and shall be officially subordinate to such authority as the Government appointing him may specify in this behalf.

c) Sections 42 of the Code of Criminal Procedure, 1973 shall, as far as may be, apply to any search or seizure under this Act and an Insecticide Inspector may exercise the powers of a police officer as in section 94 of the Code of Criminal Procedure, 1973.

9.5.3.6 Notification of poisoning (Section 26)

The State Government may, by notification in the official Gazette, require any person or class of persons specified therein to report all occurrences of poisoning, through the use or handling of any insecticide, coming within his or their cognizance to such officer as may be specified in the said notification.

9.5.3.7 Prohibition of sale, etc. of insecticide for reasons of public safety (Section 27)

a) On receipt of a report under Sec. 26 or otherwise, if the Central Government or the State Government is of opinion that the use of any insecticide is likely to involve such risk to human beings or animals as to render it necessary to take immediate action then that Government may, by notification in the official Gazette, prohibit the sale, distribution or use of the insecticide or batch in such areas, to such extent and for such period (not exceeding sixty days) as may be specified in the notification pending investigation into the matter.
b) On conclusion of investigation if the Government is satisfied that the use of the said insecticide or batch is or is not likely to cause any such risk, it may pass such order as it deems fit, depending on the circumstances of the case.

In Ashok (Dr.) v . Union of India [(1997) 5SCC 10] Amongst the several chemicals used industrially, some insecticides, colour additives and food additives (the chemicals) were approved for use in India even though they were banned in “advanced countries” as they carried carcinogenic properties.

These facts were mentioned in a letter sent by Dr. Ashok (the Petitioner) to the Chief Justice of India. The Court treated the letter as a petition under Article 32 of the Constitution and took up the matter as public interest litigation. Article 32 guarantees the right to move the Supreme Court for the enforcement of fundamental rights. Along with the letter, the Court clubbed another petition challenging a notification by the Central Government which called for progressively phasing out the manufacture and use of Benzene Hexachloride (BHC) by cancelling certificate of registration from a future date. In this matter, the Central Government had set up an expert committee to review the use

of those pesticides which were either banned or restricted for use in other countries.

The Court's analysis centered on the interpretation of the Insecticide Act, 1968 and the application of Article 21of the Constitution which establishes the right to life and liberty and from which the Court derived the right to health. On the relation between use of the chemicals and health, the Court noted that even though these chemicals could be used to fight epidemics like plague and dengue, this could not be used as an excuse for allowing their manufacture when their use is grossly detrimental to the human health. The Court went on to hold that excessive use of such hazardous products was a danger to the health and safety of living beings especially agricultural workers. Stressing on the importance of public health within the framework of Article 21, the Court relied on M.C.Mehta v. Union of India & others ((1987) 4 SCC 463), where it held that "life, public health and ecology have priority over problems of unemployment and loss of revenue."Regarding the need for an intervention by the administrative machinery of the State, the Court noted that there was no coordination between the different ministries involved. It, therefore, directed that within two months from the order, a committee of four senior officers from the four different ministries involved be set up. The purpose of the committee would be to deliberate upon and take "suitable measures" in respect of insecticides and chemicals which is found to be hazardous to health. The Court did not issue directions with regard to the chemicals mentioned in the petition. As to the question of BHC and certificates of registration, the Court held that the order of the Central Government cancelling certificates of registration for the formulation of BHC 10% was within its jurisdiction and did not suffer with any legal infirmity. It, however, held that the Central Government had no power to cancel certificates of registration issued in respect of BHC which "is one of the substances specified in the schedule and as such is an insecticide"

The Court further held that the Central Government had no power to cancel certificates of registration with respect to substances specified in the Schedule even if there was scientific evidence that the use of such a substance was grossly detrimental to human health. It held this to be a lacuna in the legislation and therefore steps should be taken for appropriate amendment to the legislation.

"The excessive use of chemicals and pesticides for optimising agricultural production created alarming danger to health and safety of living beings in general and agriculture workers in particular." "Right to Life enshrined in Article 21 means right to have something more than survival and not mere existence or animal existence. It includes all those aspects of life which go to make a man's life meaningful, complete and worth

living.” “By giving an extended meaning to expression 'life' in Article 21 this court has brought health hazards due to pollution within it and so also the health hazards from use of harmful drugs.”

9.5.3.8 Powers of Governments to make rules (Sections 36 and 37)

The Central and State Governments may make rules respectively after consultation with the Board and subject to the condition of previous publication under sections 36 and 37 of the Act.

Note: India regulates its pesticides under the Insecticides Act 1968. This Act, however, hasn’t been able to stop the pesticides from contaminating the environment and having a deleterious impact on health. The Pesticides Management Bill 2008 is introduced in the parliament and is presently pending.

9.6.0 THE INSECTICIDES RULES, 1971

9. 6.1OBJECTIVE AND SCOPE:

In exercise of the powers conferred by section 36 of the Insecticides Act, 1968 (46 of 1968), the Central Government, after consultation with the Central Insecticides Board, makes The Insecticides Rules, 1971. It came into force on 30th of October 1971.

9.6.2 RELEVANT PROVISIONS OF THE RULES:

9.6.2.1 Functions of the Board (Rule 3)

The Board shall, in addition to the functions assigned to it by the Act, carry out the following functions, namely;

a. Advise the Central Government on the manufacture of insecticides under the Industries (Development and Regulation) Act, 1951 (65 of 1951);

b. Specify the uses of the classification of insecticides on the basis of their toxicity as well as their being suitable for aerial application;

c. Advise tolerance limits for insecticides, residues and an establishment of minimum intervals between the application of insecticides and harvest in respect of various commodities;

d. Specify the shelf-life of insecticides;

e. Suggest colorization, including colouring matter which may be mixed with concentrates of insecticides, particularly those of highly toxic nature;

f. Carry out such other functions as are supplemental, incidental or consequential to any of the functions conferred by the Act or these rules.

Functions of Registration Committee (Rule4)

The Registration Committee shall, in addition to the functions assigned to it by the Act, perform the following functions, namely;

a. Specify the precautions to be taken against poisoning through the use or handling of insecticides;

b. Carry out such other incidental or consequential matters necessary for carrying out the functions assigned to it under the Act or these rules.

9.6.2.2 Functions of Laboratory (Rule 5)

The functions of the Laboratory shall be as follows:

a. To analyze such samples of insecticides sent to it under the Act by any officer or authority authorized by the Central or State Governments and submission of certificates of analysis to the concerned authority;

b. To analyze samples of materials for insecticides residues under the provisions of the Act;

c. To carry out such investigations as may be necessary for the purpose of ensuring the conditions of registration of insecticides;

d. To determine the efficacy and toxicity of insecticides;

e. To carry out such other functions as may be entrusted to it by the Central Government or by a State Government with the permission of the Central Government and after consultation with the Board.

9.6.2.3 Segregation and disposal of date-expired pesticides (Rule 10 A)

a. Immediately after the date of expiry all such stocks after being segregated and stamped ";not for sale" or ";not for use" or ";not for manufacture", as the case may be, shall be kept by the licensee in a separate place specially demarcated for the purpose with a declaration date-expired insecticide, to be exhibited on the conspicuous part of the place.

b. All such stocks then shall be disposed off in such a manner as may be specified from time to time by the Central Government in consultation with the Central Insecticide Board.

9.6.2.4 Prohibition against sale or storage of insecticides in certain places (Rule 10 C)

No person shall manufacture, store or expose for sale or permit the sale or storage of any insecticide in the same building where any articles consumable by human beings or animals are manufactured, stored or exposed for sale.

9.6.2.5 Prohibition of sale or distribution unless packed and labeled (Rule 16)

No person shall stock or exhibit for sale or distribute any insecticide unless it is packed and labeled in accordance with the provisions of these rules.

9.6.2.6 Packaging of insecticides (Rule 17)

Every package containing the insecticides shall be of a type approved by the Registration Committee.

9.6.2.7 Leaflet to be contained in a package (rule 18)

The packing of every insecticide shall include a leaflet containing the following details, namely:

a. The plant disease, insects and noxious animals or weeds for which the insecticide is to be applied, the adequate direction concerning the manner in which the insecticide is to be used at the time of application;

b. Particulars regarding chemicals harmful to human beings, animals and wild life, warning and cautionary statements including the symptoms of poisoning suitable and adequate safety measures and emergency first-aid treatment where necessary;

c. Cautions regarding storage and application of insecticides with suitable warning relating to inflammable, explosive or other substance harmful to the skin;

d. Instructions concerning the decontamination or safe disposal of used containers;

e. A statement showing the antidote for the poison shall be included in the leaflet and the label;

f. If the insecticide is irritating to the skin, nose, throat, or eyes, a statement shall be included to that effect.

g. Common name of the insecticide as adopted by the International Standards Organization and where such a name has not yet been adopted such other name as may be approved by the Registration Committee.

9.6.2.8 Duties of Inspectors specially authorized to inspect manufacture of Insecticides (Rule 28)

Among the other duties of inspector it shall be the duty of any Inspector to report the Government all occurrences of poisoning.

9.6.2.9 Conditions to be specified for storage of insecticides (Rule 36)

1. The package containing insecticides shall be stored in separate rooms or premises away from the rooms or premises used for storing articles or shall be kept in separate almaries under lock and key depending upon the quantity and nature of the insecticides.
2. The rooms or premises meant for storing insecticides shall be well built, dry, well-lit and ventilated and of sufficient dimension.

9.6.2.10 Medical Examination (Rule 37)

All persons who are engaged in the work of handling, dealing or otherwise coming in contact with the insecticides during manufacture / formulation of insecticides or being engaged in spraying during operation shall be examined medically before their employment. Any person showing symptoms of poisoning shall be immediately examined and given proper treatment.

9.6.2.11 First aid measures (Rule 38)

In all cases of poisoning first-aid treatment shall always be given before the physician is called.

The workers also should be educated regarding the effects of poisoning and the first aid treatment to be given.

9.6.2.12 Respiratory devices (Rule 40)

For preventing inhalation of toxic dusts, vapours or gases the workers shall use any of the following types of respirators or gas-masks suitable for the purpose, namely:

a. Chemical cartridge respirator

b. Supplied air respirator

c. Demand flow, type respirator

d. Full face or half face gas masks with canister

In no case shall the concentrates of insecticides in the air where the insecticides are mixed exceed the maximum permissible values.

9.6.2.13 Manufacturers, etc. to keep sufficient quantities of antidotes and first-aid medicines (Rule41)

The manufacturers and distributors of insecticides and persons who undertake to spray insecticide on a commercial basis shall keep sufficient stocks of such first-aid tools, equipments, antidotes, injections and medicines as may be required to treat poisoning cases arising from inhalation, skin, contamination, eye contamination and swallowing.

9.6.2.14 Training of Workers (Rule42)

The manufacturers and distributors of insecticides and operators shall arrange for suitable training in observing safety precautions and handling safety equipment provided to them.

9.6.2.15 Disposal of used packages, surplus materials & washings of insecticides (Rule 44)

1. It shall be the duty of manufacturers, formulators of insecticides and operators to dispose packages or surplus materials and washing in a safe manner so as to prevent environmental or water pollution.
2. The used packages shall not be left outside to prevent their re-use.
3. The packages shall be broken and buried away from habitation.

9.7.0 THE NARCOTIC DRUGS AND PSYCHOTROPIC SUBSTANCES ACT, 1985

9.7.1 **OBJECTIVE AND SCOPE**: The NDPS Act, 1985 prohibits cultivation, production, possession, sale, purchase, trade, use and consumption of narcotic drugs and psychotropic substances except for medical and scientific purposes under license. The Act has been amended twice; in 1989 and 2001. The first amendments in 1989 leaned towards greater stringency by introducing mandatory minimum sentences of 10 years, restrictions on bail etc.

9.7.2 RELEVANT PROVISIONS OF THE ACT:

9.7.2.1 Extent (Section 1)

The Act extends to the whole of India and it applies also to all citizens of India outside India; to all persons on ships and aircrafts registered in India, wherever they may be.

In *Gulam Mohiuddin* v. *StateofJammu and Kashmir*, (1994) 1 Crimes 204 (J & K), it was held that this is a special Act. While adopting the liberal construction of the Act, it is found that the Act has been enacted with a view to make stringent provisions for the control and regulation of operations relating to the narcotic drugs and psychotropic substances;

9.7.2.2 **Definitions (Section 2)**

i. "Commercial quantity", in relation to narcotic drugs and psychotropic substances, means any quantity greater than the quantity specified by the Central Government.

ii. "controlled delivery" means the technique of allowing illicit or suspect consignments of narcotic drugs, psychotropic substances, controlled substances or substances substituted for them to pass out of, or through or into the territory of India with the knowledge and under the supervision of an officer empowered in this behalf or duly authorized under section 50A with a view to identifying the persons involved in the commission of an offence under this Act.

iii. "Controlled substance" means any substance which the Central Government may, having regard to the available information as to its possible use in the production or manufacture of narcotic drugs or psychotropic substances or to the provisions of any International Convention, declare to be a controlled substance.

iv. "illicit traffic", in relation to narcotic drugs and psychotropic substances, means cultivating any coca plant or gathering any portion of coca plant; cultivating the opium poppy or any cannabis plant; engaging in the production, manufacture, possession, sale, purchase, transportation, warehousing, concealment, use or consumption, import inter-State, export inter-State, import into India, export from India or transhipment, of narcotic drugs or psychotropic substances; dealing in any activities in narcotic drugs or psychotropic substances other than those referred to above or handling or letting out any premises for the carrying on of any of the activities referred to above other than those permitted under this Act.

v. "manufacture", in relation to narcotic drugs or psychotropic substances, includes all processes other than production by which such drugs or substances may be obtained; refining of such drugs or substances; transformation of such drugs or substances; and making of preparation (otherwise than in a pharmacy on prescription) with or containing such drugs or substances;

vi. "manufactured drug" means all coca derivatives, medicinal cannabis, opium derivatives and poppy straw concentrate; any other narcotic substance or preparation which the Central Government may, having regard to the available information as to its nature or to a decision, if any, under any International

Convention, by notification in the Official Gazette, declare to be a manufactured drug; but does not include any narcotic substance or preparation which the Central Government may, having regard to the available information as to its nature or to a decision, if any, under any International Convention, by notification in the Official Gazette, declare not to be a manufactured drug;

vii. "narcotic drug" means coca leaf, cannabis (hemp), opium, poppy straw and includes all manufactured goods;

viii. "psychotropic substance" means any substance, natural or synthetic, or any natural material or any salt or preparation of such substance or material included in the list of psychotropic substances specified in the Schedule;

9.7.2.3 **Central Government to take measures for preventing and combating abuse of and illicit traffic in narcotic drugs, etc**. (Section 4)

Central Government shall take all such measures as it deems necessary for preventing and combating abuse of narcotic drugs and psychotropic substances and the illicit traffic therein. Central Government may take measures with respect to coordination of actions by various officers, State Governments and other authorities under this Act, or under any other law for the time being in force in connection with the enforcement of the provisions of this Act; obligations under the International Conventions; assistance to the concerned authorities in foreign countries and concerned international organisations with a view to facilitating coordination and universal action for prevention and suppression of illicit traffic in narcotic drugs and psychotropic substances; identification, treatment, education, after care, rehabilitation and social re-integration of addicts; such other matters as, the Central Government deems necessary or expedient for the purpose of securing the effective implementation of the provisions of this Act and preventing and combating the abuse of narcotic drugs and psychotropic substances and illicit traffic therein.

In State v. Kulwant Singh, AIR 2003 SC 1599, the Court held that Section 4(1) of the Act does not create the Narcotics Control Bureau. It only authorizes the Central Government to

take all such measures as it deems necessary or expedient for the purpose of preventing and combating abuse of narcotic drugs and psychotropic substances and the illicit traffic therein.

9.7.2.4 **Officers of Central Government (Section 5)**

Central Government shall appoint a Narcotics Commissioner .

9.7.2.5 The Narcotic Drugs and Psychotropic Substances Consultative Committee. (Section 6)

Central Government may constitute an advisory committee to be called "The Narcotic Drugs and Psychotropic Substances Consultative Committee" to advise the Central Government on such matters relating to the administration of this Act as are referred to it by that Government from time to time.

9.7.2.6 **National Fund for Control of Drug Abuse (Section 7A)**

Central Government may constitute a Fund to be called the National Fund for Control of Drug Abuse and there shall be credited thereto an amount which the Central Government may, after due appropriation made by Parliament by law in this behalf, provide; the sale proceeds of any property forfeited under Chapter V A; any grants that may be made by any person or institution; any income from investment of the amounts credited to the Fund under the aforesaid provisions. The Fund shall be applied by the Central Government to meet the expenditure incurred in connection with the measures taken for combating illicit traffic in narcotic drugs, psychotropic substances or controlled substances; controlling the abuse of narcotic drugs and psychotropic substances; identifying, treating, rehabilitating addicts; Preventing drug abuse; Educating public against drug abuse; supplying drugs to addicts where such supply is a medical necessity. The Central Government may constitute a Governing Body as it thinks fit to advise that Government and to sanction money out of the said Fund subject to the limit notified by the Central Government.

9.7.2.7 Power of Central Government to permit, control and regulate (Section 9)

Central Government may, by rules permit and regulate the cultivation, or gathering of any portion (such cultivation or gathering being only on account of the Central Government) of coca plant, or the production, possession, sale, purchase, transport, import inter-State, export inter-State, use or consumption of coca leaves; the cultivation (such cultivation being only on account of Central Government) of the opium poppy; the production and manufacture of opium and production of poppy straw; the sale of opium and opium derivatives from the Central Government factories for export from India or sale to State Government or to manufacturing chemists; the manufacture of manufactured drugs (other, than prepared opium) but not including manufacture of medicinal opium or any preparation containing any manufactured drug from materials which the maker is lawfully entitled to possess; the manufacture, possession, transport import inter-State, export inter-State, sale, purchase, consumption or use of psychotropic substances; the import into India and export from India and transhipment of narcotic drugs and psychotropic substances.

9.7.2.8 Power to control and regulate controlled substances (Section 9A)

If the Central Government is of the opinion that, having regard to the use of any controlled substance in the production or manufacture of any narcotic drug or psychotropic substance, it is necessary or expedient so to do in the public interest, it may, by order, provide for regulating or prohibiting the production, manufacture, supply and distribution thereof and trade and commerce therein.

9.7.2.9 Power of State Government to permit, control and regulate (Section 10)

.State Government may, by rules permit and regulate the possession, transport, import inter-State, export inter-State, warehousing, sale, purchase, consumption and use of poppy straw; the possession, transport, import inter-State, export inter-State, sale, purchase, consumption and use of opium; the cultivation of any cannabis plant, production, manufacture, possession, transport, import inter-State, export inter-State, sale, purchase consumption or use of cannabis (excluding *charas);* the manufacture of medicinal opium or any preparation containing any manufactured drug from materials which the maker is lawfully entitled to possess; the possession, transport, purchase, sale, import inter-State,

export inter-State, use or consumption of manufactured drugs other than prepared opium and of coca leaf and any preparation containing any manufactured drug; the manufacture and possession of prepared opium from opium lawfully possessed by an addict registered with the State Government on medical advice for his personal consumption.

9.8.0 THE CONSUMER PROTECTION ACT, 1986

9.8.1 OBJECTIVE AND SCOPE:

The industrial revolution and the development in the international trade and commerce has led to the vast expansion of business and trade, as a result of which a variety of consumer goods have appeared in the market to cater to the needs of the consumers and a host of services have been made available to the consumers like insurance, transport, electricity, housing, entertainment, finance and banking. A well organised sector of manufacturers and traders with better knowledge of markets has come into existence, thereby affecting the relationship between the traders and the consumers making the principle of consumer sovereignty almost inapplicable. The advertisements of goods and services in television, newspapers and magazines influence the demand for the same by the consumers though there may be manufacturing defects or imperfections or short comings in the quality, quantity and the purity of the goods or there may be deficiency in the services rendered. In addition, the production of the same item by many firms has led the consumers, who have little time to make a selection, to think before they can purchase the best. For the welfare of the public, the adulterated and sub-standard articles in the market have to be checked. Inspite of various provisions providing protection to the consumer and providing for stringent action against adulterated and sub-standard articles in the different enactments like Code of Civil Procedure, 1908, the Indian Contract Act, 1872, the Sale of Goods Act, 1930, the Indian Penal Code, 1860, the Standards of Weights and Measures Act,

1976 and the Motor Vehicles Act, 1988, very little could be achieved in the field of Consumer Protection. Though the Monopolies and Restrictive Trade Practices Act, 1969 arid the Prevention of Food Adulteration Act, 1954 have provided relief to the consumers yet it became necessary to protect the consumers from the exploitation and to save them from adulterated and sub-standard goods and services and to safe guard the interests of the consumers. In order to provide for better protection of the interests of the consumer the Consumer Protection Bill, .1986 was introduced in the Lok Sabha on 5th December, 1986. It was passed by both the Houses of Parliament and it received the assent of the President on

24th December, 1986. It came on the Statutes Book as the Consumer Protection Act, 1986 (68 of 1986).

This Act was enacted provide for better protection of the interests of consumers and for that purpose to make provision for the establishment of consumer councils and other authorities for the settlement of consumers' disputes and for matters connected to it.

9.8.2 RELEVANT PROVISIONS OF THE ACT

9.8.2.1Definitions

"Complainant" means-

(i) A consumer; or

(ii) Any voluntary consumer association registered under the Companies Act,1956 (1of 1956) or under any other law for the time being in force; or

(iii) The Central Government or any State Government;

(iv) One or more consumers, where there are numerous consumers having the same interest;

(v) In case of death of a consumer, his legal heir or representative who makes a complaint;

"Complaint" means any allegation in writing made by a complainant that-

(i) An unfair trade practice or a restrictive trade practice has been adopted by any trader or service provider.

(ii) The goods bought by him or agreed to be bought by him suffer from one or more defects;

(iii) The services hired or availed of or agreed to be hired or availed of by him suffer from deficiency in any respect;

(iv) A trader or the service provider, as the case may be, has charged for the goods or for the services mentioned in the complaint, a price in excess of the price-

(a) Fixed by or under any law for the time being in force;

(b) Displayed on the goods or any package containing such goods;

(c) Displayed on the price list exhibited by him by or under any law for the time being in force;

(d) Agreed between the parties

(v) Goods which will be hazardous to life and safety when used, are being-offered for sale to the public-

(a) In contravention of any standard relating to safety of such goods as required to be complied with, by or under any law for the time being in force.

(b) If the trader could have known with due diligence that the goods so offered are unsafe to the public.

(vi) Services which are hazardous or likely to be hazardous to life and safety of the public when used, are being offered by the service provider which such person could have known with due diligence to be injurious to life and safety.

With a view to obtaining any relief provided by or under this Act;

"Consumer" means any person who-

(i) Buys any goods for a consideration which has been paid or promised or partly paid and partly promised, or under any system of deferred payment and includes any user of such goods other than the person who buys such goods for consideration paid or promised or partly paid or partly promised, or under any system of deferred payment when such use is made with the approval of such person, but does not include a person who obtains such goods for resale or for any commercial purpose; or

(ii) Hires or avails of any services for a consideration which has been paid or promised or partly paid and partly promised, or under any system of deferred payment and includes any beneficiary of such services other than the person who hires or avails of the services for consideration paid or promised, or partly paid and partly promised, or under any system of deferred payment, when such services are availed of with the approval of the first mentioned person but does not include a person who avails of such services of any commercial purpose.

"District Forum" means a Consumer Disputes Redressal Forum established under clause (a) of section 9.

"State Commission" means a Consumer Disputes Redressal Commission established in a State under clause (b) of section 9.

9.8.2.2 The Central Consumer Protection Council (1.3.2)

It is established by the Central Government which consists of the following members:

- The Minister of Consumer Affairs, – Chairman, and
- Such number of other official or non-official members representing such interests as may be prescribed.

9.8.2.3 Objects of the Central Council (Section 6)

The objects of the Central Council shall be to promote and protect the rights of the consumers such as,-

(a) The right to be protected against the marketing of goods and services which are hazardous to life and property;

(b) The right to be informed about the quality, quantity, potency, purity, standard and price of goods or services, to protect the consumer against, unfair trade practices;

(c) The right to be 'assured, wherever possible, access to a variety of goods and servicesat competitive prices;

(d) The right to be heard and to be assured that consumer's interests will receive due consideration at appropriate Fora;

(e) The right to seek redressal against unfair trade practices or restrictive trade practices or unscrupulous exploitation of consumers; and

(f) The right to consumer education.

9.8.2.4 The State Consumer Protection Councils (Section 7)

It is established by the State Government which consists of the following members:

- The Minister in charge of consumer affairs in the State Government – Chairman.
- Such number of other official or non-official members representing such interests as may be prescribed by the State Government.
- such number of other official or non-official members, not exceeding ten, as may be nominated by the Central Government.

9.8.2.5 Objects of the State Council (Section 8)

The objects of every State Council shall be to promote and protect within the State the rights of the consumers laid down in clauses (a) to (f) of section 6.

9.3.2.6 The District Consumer Protection Council (Section 8A)

The State Government shall establish a council to be known as the District Consumer Protection Council.

The District Consumer Protection Council shall consist of the following members, namely –

(a) The Collector of the district (by whatever name called), who shall be its Chairman; and

(b) Such number of other official and non-official members representing such interests as may be prescribed by the State Government.

9.8.2.7 Objects of the District Council (Section 8B)

The objects of every District Council shall be to promote and protect within the district the rights of the consumers laid down in clauses (a) to (f) of section 6.

9.9.0 THE BATTERIES (MANAGEMENT AND HANDLING) RULES, 2001.

9.9.1 SCOPE AND OBJECTIVE: The Batteries (Management and Handling) Rules, 2001 has been enacted in exercise of the powers conferred by the Environment (Protection) Act, 1986. The Rules apply to every manufacturer, importer, re-conditioner, assembler, dealer, recycler, auctioneer, consumer and bulk consumer involved in manufacture, processing, sale, purchase and use of batteries or components thereof. The Rules make it mandatory for manufacturers, assemblers, re-conditioners, importers and dealers to comply with the statutory requirements to ensure that used batteries are collected back against new batteries sold. The manufacturers, assemblers and re-conditioners have to file half-yearly returns of their sales and buy-back to the PC B concerned. Rules also stipulate that collection centres be set up either individually or jointly at various places for collection of used batteries from consumers or dealers. The used batteries collected are to be sold only to the registered recyclers.

9.9.2 RELEVANT PROVISIONS OF THE RULES:

9.9.2.1 Definitions (Rule 3)

(i) "Assembler" means a person who manufactures lead acid batteries by assembling various components;

(c) "Auction" means bulk sale of used lead acid batteries or component (s) thereof by invitation of tenders or auction, contract or negotiation by individual(s), companies or Government Departments;

(d) "Auctioneer" means a person (s) who auctions used lead acid batteries or components, thereof,

(e) "Battery" means lead acid battery which is a source of electrical energy and contains lead metal;

(f) "Bulk consumer" means a consumer such as Central or State Government Departments of Railways, Defense, Telecom, Posts & Telegraph, State Road Transport Undertakings, State Electricity Boards and others who purchase batteries through central 'rate' or running contract units under their jurisdiction.

(g) "Components" means lead bearing components of a lead acid battery;

(h) "Consumer" means a person using lead acid batteries excluding bulk consumers;

(i) "Dealer" means a person who sells and receives lead acid batteries or components thereof to and from the consumers or other dealers or retailers on behalf of the manufacturers, importers, assemblers and reconditioners or otherwise;

(j) "Designated collection centre" means a collection centre established, individually or jointly by one or more manufacturers or importers, assemblers and re-conditioners in pursuance of their responsibilities.

(k) "Importer" means a person who imports new lead acid batteries or components containing lead thereof for the purpose of sale;

(l) "Manufacturer" in relation to any factory manufacturing lead acid batteries or components thereof means a person or Chief Executive Officer (CEO) of the company who has control over the affairs of the factory or the premises for sale and collection of lead acid batteries or components thereof,

(m) "Original equipment manufacturer" means manufacturer of equipment or product using lead acid batteries as a component;

(n) "Reconditioner" means a person involved in repairing of lead acid batteries for selling the same in the market;

(o) "Recycler" means an occupier who processes used lead acid batteries or components thereof for recovering lead

(p) "Registered recycler" means a recycler registered with the Ministry of Environment and Forests or an agency designated by it for reprocessing used lead acid batteries or components thereof;

(q) "State Board" means the concerned State Pollution Control Board or the Pollution Control Committee as the case may be

(r) "Used batteries" means used damaged and old lead acid batteries or components thereof.

9.9.2.2 Responsibilities of manufacturer, importer, assembler and re-conditioner (Rule 4)

It shall be the responsibility of a manufacturer, importer, assembler and re-conditioner to

(i) Ensure that the used batteries are collected back as per the Schedule against new batteries sold excluding those sold to original equipment manufacturer and bulk consumer(s);

(ii) Ensure that used batteries collected back are of similar type and specifications as that of the new batteries sold;

(iii) File a half-yearly return of their sales and buy-back to the State Board in Form-I latest by 30 June and 30 December of every year;

(iv) Set up collection centres either individually or jointly at various places for collection of used batteries from consumers or dealers;

(v) Ensure that used batteries collected are sent only to the registered recyclers;
(vi) Ensure that necessary arrangements are made with dealers for safe transportation from collection centres to the premises of registered recyclers;
(vii) Ensure that no damage to the environment occurs during transportation;
(viii) Create public awareness through advertisements, publications, posters or by other means with regard to the following:
(a) Hazards of lead;
(b) Responsibility of consumers to return their used batteries only to the dealers or deliver at designated collection centres; and
(c) Addresses of dealers and designated collection centres.
(ix) Use the international recycling sign on the Batteries;
(x) Buy recycled lead only from registered recyclers; and
(xi) Bring to the notice of the State Board or the Ministry of Environment and Forests any violation by the dealers.

9.9.2.3 Registration of Importers (Rule 5)

The importer shall get himself registered with the Ministry of Environment and Forests or an agency designated by it.

9.9.2.4 Responsibilities of dealer (Rule 7)

It shall be the responsibility of a dealer to
(i) ensure that the used batteries are collected back as per the Schedule against new batteries sold;
(ii) Give appropriate discount for every used battery returned by the consumer;
(iii) Ensure that used batteries collected back are of similar type and specifications as that of the new batteries sold;
(iv) File half-yearly returns of the sale of new batteries and buyback of old batteries to the manufacturer in Form-V by 31st May and 30th November of every year;
(v) Ensure safe transportation of collected batteries to the designated collection centres or to the registered recyclers; and
(vi) Ensure that no damage is caused to the environment during storage and transportation of used batteries.

9.9.2.5 Responsibilities of recycler (Rule 8)

Each recycler shall apply for registration to the Ministry of Environment and Forests or an agency designated by it ; ensure strict compliance of the terms and conditions of registration; submit annual returns; make available all records to the State Board for inspection; mark 'Recycled' on lead recovered by reprocessing; and create public awareness through advertisements, publications, posters or others with regard to the hazards of lead; and obligation of consumers to return used batteries only to the registered dealers or deliver at the designated collection centres.

9.9.2.6 Responsibilities of consumer or bulk consumer (Rule 10)

It shall be the responsibility of the consumer to ensure that used batteries are not disposed of in any manner other than depositing with the dealer, manufacturer, importer, assembler, registered recycler, re-conditioner or at the designated collection centres. It shall be the responsibility of the bulk consumer to ensure that used batteries are not disposed of in any manner other than by depositing with the dealer/manufacturer/registered recycler/importer/ re-conditioner or at the designated collection centres and file half-yearly return to the State Board. Bulk consumers to their user units may auction used batteries to registered recyclers only.

9.9.2.7 Responsibilities of auctioneer (Rule 11)

The auctioneer shall ensure that used batteries are auctioned to the registered recyclers only, file half-yearly returns of their auctions to the State Boards and maintain a record of such auctions and make these records available to the State Board for inspection.

9.9.2.8 Prescribed Authority (Rule 12)

The prescribed authority for ensuring compliance of the provisions of these rules shall be the State Board. And, it shall file an annual compliance status report to the Central Pollution Control Board by 30th April of every year.

9.1.2.9 Duties of Central Pollution Control Board (Rule 13)

The Central Pollution Control Board shall compile and publish the data received every year from the State Boards. It shall review the compliance of the rules periodically to improve the collection and recycling of used. lead batteries and apprise the Ministry of Environment and Forests, Government of India.

9.1.**2.10 Computerisation of Records and Returns (Rule 14)**

Ministry of Environment and Forests or an agency designated by it shall develop a system for computerised tracking of distribution and sale of batteries; collection, auction, transport and re-processing of used batteries; sale of re-processed lead by registered recyclers; and sale of lead from all domestic producers or importers.

9.10.0 BATTERIES (MANAGEMENT & HANDLING) AMENDMENT RULES, 2010

9.10.1 Responsibility of dealer (Rule 1)

It shall be the responsibility of a dealer to ensure that the numbers of used batteries are collected back should be 90% of new batteries sold; give appropriate discount for every used battery returned by the consumer; ensure that used batteries collected back are of similar type and specifications as that of the new batteries sold; file half yearly returns of the sale of new batteries and buy-back of old batteries to the manufacturer in Form V by 31st May and 30th November of every year; ensure safe transportation of collected batteries to the designated collection centres or to the registered recyclers; ensure that no damage is caused to the environment during storage and transportation of used batteries.

9.10.2 Responsibility of auctioneer (Rule 2)

It shall be the responsibility of auctioneer to ensure that used batteries are auctioned to the registered recyclers only; file half-Yearly returns of their auctions to Delhi Pollution Control Committee.

9.10.3 Responsibility of recycler (Rule 3)

It shall be the responsibility of recycler to apply for registration to the Ministry of Environment & Forest; submit annual returns to Delhi Pollution Control Committee by 30th

June and 31st December for every year; create Public awareness through advertisements, Publications, posters or others with regard to hazards of Lead; obligation of consumers to return used batteries only to the registered dealers or deliver at the designated collection centres.

9.10.4. Responsibility of consumer and bulk consumer (Rule 4)

The Consumer as well as the Bulk Consumers are required to ensure that used batteries are not disposed off in any manner other than depositing with the dealer, manufacturer, importer, assembler, registered recycler, re-conditioner or at the designated collection centres. Bulk consumer shall file half yearly return.

9.10.5 Responsibility of manufacturers, importers, assemblers and re-conditioners (Rule 5)

It shall be the responsibility of the manufactures, importers, assemblers and re-conditioners To ensure that the number of the used batteries collected back should be at least 90 percent of the new batteries sold excluding those sold to original equipment manufacturer and bulk consumers; file a half-yearly return of their sales and buy-back to Delhi Pollution Control committee latest by 30th June and 31st December of every year; ensure that used batteries collected back are of similar type and specifications as that of new batteries sold; set up the collection centres either individually or jointly at various places for collection of used batteries from consumers or dealers; ensure that used batteries collected are sent only to the registered recyclers; ensure that necessary arrangements are made with dealers for safe transportation from collection centres to the premises of the registered recyclers; ensure that no damage to the environment occurs during transportation; create public awareness through advertisements, publications, posters or by other means with regard to hazards of Lead, responsibility of Consumers to return their used batteries only to the dealers or deliver and designated collection centres, addresses of dealers and designated collection centres; use the international recycling sign on batteries; buy recycled lead only from registered recyclers and bring to the notice to the DPCC or the Ministry of Environment and Forests any violation by the dealer.

9.11.0 E-WASTE (MANAGEMENT AND HANDLING) RULES, 2011

9.11.1 OBJECTIVE AND SCOPE: India's Ministry of Environment and Forests (MOEF) introduced E-waste (Management and Handling) Rules 201. The rules cover every producer, consumer and bulk consumer involved in the manufacture, sale, purchase and processing of electrical and electronic equipment. E-waste can be defined as discarded electronics / electrical goods that have reached their end of life. These are destined for reuse, resale, salvage, recycling, or disposal. This may include Computers and Laptops; Office IT & Electronic Equipment: Fax machine, servers, photo copier, scanner, CDs, printers; Mobile phones; Household electronics: TV, air conditioner, MP3 players, music system etc. E-waste is by-product of the technological revolution which has happened over past few decades.

Increasing consumerism, rapid technological advancement, low cost of ownership and planned obsolescence by large corporations has led to e-waste crisis around the globe.

Electronic waste contains toxic constituents (like Lead, Mercury, Cadmium etc.) which render it hazardous when dismantled, processed or disposed inappropriately.

9.11.2 RELEVANT PROVISIONS OF THE RULES:

9.11.2.1Application (Rule 2)

These rules apply to every producer, consumer or bulk consumer involved in the manufacture, sale, purchase and processing of electrical and electronic equipment or components as specified in Schedule-I, collection centre, dismantler and recycler of e-waste and shall not apply to batteries as covered under the Batteries (Management and Handling) Rules, 2001 made under the act; Micro and small enterprises as defined in the Micro, Small and Medium Enterprises Development Act, 2006 (27 of 2006); and radio-active wastes as covered under the provisions of the Atomic Energy Act, 1962.

9.11.2.2 Definitions (Rule 3)

i. 'authorisation' means permission for handling, collection, reception, storage, transportation, dismantling, recycling, treatment and disposal of e-waste granted under sub-rule (3) of rule 9;

ii. 'bulk consumer' means bulk users of electrical and electronic equipment such as Central Government or State Government Departments, public sector undertakings, banks, educational institution, multinational organization, international agencies and private companies that are registered under the Factories Act, 1948 and Companies Act, 1956;

iii. 'collection centre' means a centre established, individually or jointly or a registered society or a designated agency or a company or an association to collect e-waste

iv. 'consumer' means any person using electrical and electronic equipment excluding the bulk consumers;

v. 'disposal' means any operation which does not lead to recycling, recovery or reuse and includes physico-chemical or biological treatment, incineration and deposition in secured landfill;

vi. 'environmentally sound management of e-waste' means taling all steps required to ensure that e-waste are managed in a manner which shall protect health and environment against any adverse effects, which may result from hazardous substance contained in such wastes;

vii. ‘e-waste' means waste electrical and electronic equipment, whole or in part or rejects from their manufacturing and repair process, which are intended to be discarded;

viii. 'extended producer responsibility' means responsibility of any producer of electrical or electronic equipment, for their products beyond manufacturing until environmentally sound management of their end-of-life products.

ix. 'facility' means any location wherein the process incidental to the collection, reception, storage, segregation, refurbishing, dismantling, recycling, treatment and disposal of e-waste are carried out;

x. 'historical e-waste' means e-waste generated from electrical and electronic equipment as specified in Schedule I, which was available on the date from which these rules come into force;

xi. 'producer' means any person who, irrespective of the selling technique used;

xii. ‘manufactures and offers to sell electrical and electronic equipment under his own brand; or offers to sell under his own brand, assembled electrical and electronic equipment produced by other manufactures or suppliers; or offers to sell imported electrical and electronic equipment component;

xiii. 'transporter' means a person engaged in the off-site transportation of e-waste by air, rail, road or water Words and expressions used in these rules and not defined but defined in the Act shall have meanings respectively assigned to them in that Act.

9.11.2.3 Responsibilities of the producer (Rule 4)

The producer of electrical and electronic equipment listed in Schedule I shall be responsible for collection of e-waste generated during the manufacture of electrical and electronic equipment and channelizing it for recycling or disposal; collection of e-waste generated from

the 'end of life' of their products in line with the principle of 'Extended Producer Responsibility' and to ensure that such e-waste are channelized to registered dismantler or recycler. Producer shall, as necessary, ensure collection and channelization by authorizing collection agencies; setting up collection centers or take back systems either individually or collectively; financing and organizing a system to meet the costs involved in the environmentally sound management of e-waste generated from the 'end of life' of its own products and historical waste available on the date from which these rules come into force. The financing arrangement of such a system shall be transparent. The producer may choose to establish such a system either in individually or by joining a collective scheme; providing contact details such as address, telephone numbers/helpline number of authorized collection centers to consumer(s) or bulk consumer(s) so as to facilitate return of used electrical and electronic equipment ; creating awareness through publications, advertisement, posters, or by any other means of communication and information booklets accompanying the equipment with regard to information on hazardous constituents; information on hazards of improper handling, accidental breakage, damage and/or improper recycling of e-waste; instructions for handling the equipment after its use, along with the Do's and Don'ts ; affixing a visible, legible and indelible symbol given below on the products or information booklets to prevent e-waste from being dropped in garbage bins containing waste destined for disposal ; obtaining an authorization from the concerned State Pollution Control Board or Pollution Control Committee; maintaining records of the e-waste handled and make such records available for scrutiny by the State Pollution Control Board or the Committee concerned; filing annual returns to the State Pollution Control Board or Pollution Control Committee concerned, on or before the 30th day of June following the financial year to which that return relates.

9.11.2.4 Responsibilities of collection centers (Rule 5)

Collection centre shall obtain an authorization in accordance with the procedure under rule 9 from the State Pollution Control Board or Pollution Control Committee concerned as the case may be and provide details such as address, telephone numbers/helpline number, e-mail, etc. of such collection centre to the general public ; ensure that the e-waste collected by them is stored in a secured manner till it is sent to registered dismantler(s) or recycler(s) as the case may be; ensure that no damage is caused to the environment during storage and transportation if e-waste ; file annual returns in Form 3, to the State Pollution Control Board or Pollution

Control Committee concerned on or before the 30th day of June following the financial year to which that return relates; and maintain records of the e-waste handled and make such records available for scrutiny by the State Pollution Control Board or the Pollution Control Committee concerned.

9.11.2.5. Responsibilities of consumer or bulk consumer (Rule 6)

Consumers or Bulk consumers of electrical and electronic equipment listed in Schedule I shall ensure that e-waste generated by them is channelized to authorized collection center(s) or registered dismantler(s) or recycler(s) or is returned to the pick-up or take back services provided by the producers; and bulk consumers shall maintain records of e-waste generated by them in Form 2 and make such records available for scrutiny by the State Pollution Control or the Pollution Control Committee concerned.

9.11.2.6. Responsibilities of dismantler (Rule 7)

Every dismantler shall obtain authorization and registration from the State Pollution Control Board; ensure that no damage is caused to the environment during storage and transportation of e-waste; ensure that the dismantling processes do not have any adverse effect on the health and the environment; ensure that the facility and dismantling processes are in accordance with the standards or guidelines published by the Central pollution Control Board from time to time; ensure that dismantled e-waste are segregated and sent to the registered recycling facilities for recovery of materials ; ensure that non-recyclable/non-recoverable components are sent to authorized treatment storage and disposal facilities ; file a return to the State Pollution Control Board or the Pollution Control Committee concerned as the case may be, on or before 30th June following the financial year to which that return relates; not process any e-waste for recovery or refining of materials, unless he is registered with State Pollution Control Board as a recycler for refining and recovery of materials.

9.11.2.7. Responsibilities of recycler –

Every recycler shall obtain authorization and registration from State Pollution Control Board in accordance with the procedure; ensure that the facility and recycling processes are in accordance with the standards laid down in the guidelines published by the Central
Pollution Control Board from time to time; make available all records to the Central or State Pollution Control Board or Pollution Control Committee of Union territories for inspection; ensure that residue generated thereof is disposed of in hazardous waste treatment storage

disposal facility ; file annual returns to the State Pollution Control Board or Pollution Control Committee concerned as the case may be on or before 30th June following the financial year to which that returns relate.

9.11.2.8 Procedure for storage of e-waste. (Rule 12)

Every producer, collection centre, dismantler or recyclers may store the e-waste for a period not exceeding one hundred and eighty days and shall maintain a record of collection, sale, transfer, storage and segregation of wastes and make these records available for inspection.

9.11.2.9 Reduction in the use of hazardous materials in the manufacture of electrical and electronic equipment (Rule 13)

Every producer of electrical and electronic equipments listed in Schedule I shall ensure that, new electrical and electronic equipments does not contain Lead, Mercury, Cadmium, Hexavalent Chromium, polybrominated biphenyls or polybrominated diphenyl ethers. Manufacture and supply of electrical and electronic equipment used for defense and other similar strategic applications shall be excluded.

9.11.2.10 Accident reporting and follow-up. (Rule 17)

Where an accident occurs at the facility processing e-waste or during transportation of e-waste, the producer, transporter, dismantler or recycler, as the case may be, shall report immediately to the State Pollution Control Boards or Committees of Union Territories about the accident.

9.12.0 PLASTICS (MANUFACTURE, USAGE AND WASTE MANAGEMENT) RULES, 2011

9.12.1 OBJECTIVE AND SCOPE:

Plastic products have become an integral part in our daily life as a basic need. It is produced on a massive scale worldwide and indiscriminate littering of unskilled recycling/reprocessing and non-biodegradability of plastic waste raises various environmental issues. The Rules provide that the plastic carry bags can be used for the purpose of carrying or dispensing commodities but don’t include bags which are integral part of packaged products. The

thickness of bag shall not be <40µ. Prescribed Authority for registration, manufacture & recycling shall be State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) and for enforcement of Rules relating to use, collection, segregation, transportation & disposal of plastic waste, shall be concerned Municipal Authority. Every carry bags made from plastic shall bear a label or mark "recycled" as per IS:14534:1998 and each carry bag made from "Compostable Material" shall bear a label "Compostable" & shall conform to IS/ISO:17088:2008.

9.12.2 RELEVANT PROVISIONS OF THE RULES:

9.12.2.1 Definitions (Rule 3)

i. "Extended producer's responsibility (EPR)" means the responsibility of a manufacturer of plastic carry bags, and multilayered plastic pouches and sachets and the brand owners using such carry bags and multilayered plastic pouches and sachets for the environmentally sound management of the product until the end of its life;

ii. "Manufacturer" means any person who manufactures plastic carry bags or multilayered plastic pouches or sachets or like;

iii. "Municipal authority" means Municipal Corporation, Municipality, Nagar Palika, Nagar Nigam, Nagar Panchayat, Municipal Council including notified area committee (NAC) or any other local body constituted under the relevant statutes and, where the management and handling of municipal solid waste is entrusted to such agency;

iv. "Registration" means registration with the State Pollution Control Board or Pollution Control Committee concerned, as the case may be, of units manufacturing plastic carry bags, multilayered plastic pouch or sachet or recycling of plastic waste;

9.12.2.2 Prescribed Authority (Rule 4)

The prescribed Authority means the Authority for enforcement of the provisions of these rules related to registration, manufacturer and recycling shall be the State Pollution Control

Board and in respect of a Union territory shall be the Pollution Control Committee; for enforcement of the provisions of these rules relating to the use, collection, segregation, transportation and disposal of the plastic waste, the prescribed authority shall be the municipal authority concerned.

9.12.2.3 Conditions (Rule 5)

During the course of manufacture, stocking, distribution, sale and use of carry bags and sachets, carry bags shall either be in natural shade (Colourless) which is without any added pigments or made using only those pigments and colourants which are in conformity with Indian standard: IS : 9833: 1981, no person shall use carry bags made of recycled plastics or compostable plastics for storing, carrying, dispensing or packaging food stuffs; no person shall manufacture, stock, distribute or sell any carry bag made of virgin or recycled or compostable plastic, which is less than 40 microns in thickness; sachets using plastic material shall not be used for storing, packing or selling gutkha, tobacco and pan masala; recycled carry bags shall conform to the Indian standard IS 14534:1998 titled as Guidelines for Recycling of Plastic; carry bags made from compostable plastics shall conform to the Indian Standard : IS/ISO 17088:2008 titled as specifications for Compostable plastics; plastic material, in any form, shall not be used in any package for packing gutkha, pan masala and tobacco in all forms.

9.12.2.4 Plastic Waste Management (Rule 6)

The plastic waste management shall be recycling, recovery or disposal of plastic waste shall be carried out as per the rules, regulations and standards stipulated by the Central Government; recycling of plastics shall be carried out in accordance with the Indian Standard IS 14534: 1998 titled as Guidelines for Recycling of Plastics; the municipal authority shall be responsible for setting up, operationalisation and co-ordination of the waste management system. The responsibility for setting up collection systems for plastic waste shall be of the municipal authority concerned and the said municipal authority may seek the assistance of manufacturers of plastic carry bags, multilayered plastic pouches or sachets or of brand owners using such products. Municipal authority shall encourage the use of plastic waste by adopting suitable technology such as in road construction, co-incineration etc.

9.12.2.5 Registration of Manufacturers and Recyclers (Rule 9)

Any person manufacturing or proposing to manufacture plastic carry bags, multilayered plastic pouch or sachet shall apply to the State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) of the Union territory concerned for the grant of registration or for the renewal of registration for the manufacturing unit. Any person recycling or proposing to recycle carry bags or multilayered plastic pouch or sachet or any plastic waste shall apply to the SPCB or PCC for grant of registration or renewal of registration for the recycling unit. No person shall manufacture plastic carry bags, multilayered plastic pouch or sachet or recycle plastic carry bags or multilayered plastic pouch or sachet or any plastic waste without obtaining registration certificate from the State Pollution Control Board or Pollution Control Committee. The SPCB and PCC shall not issue or renew a registration for manufacturing or recycling units unless the unit possesses a valid consent under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981 and certificate of registration issued by the District Industries Centre or any other government agency authorized in this regard.

Every State Pollution Control Board or Pollution Control Committee, shall take a decision on the grant of registration within a period of ninety days of receipt of an application.

9.12.2.6 State level Advisory Body (Rule 11)

There shall be a State Level Advisory Body to monitor the implementation of Rules. The State Level Advisory Body shall consist of the Secretary, Department of Urban Development – Chairman; one expert from State Department of Environment – Member; one expert from State Pollution Control Board or Pollution Control Committee –Member; one expert from Urban Local Body – Member; one expert from Non-Governmental Organization – Member; one expert from field of Industry – Member; one expert from the field of academic institution – Member.

CHAPTER TEN
ACCIDENT

Accidents can turn into disasters depending upon its scale and its effect on other trigger factors. Accidents majorly can occur on all modes of communication- road, air and ship. In India we have no dearth of legislations prescribing different safety norms to be duly observed to avoid occurrence of such accidents. However, the implementation level is really poor. In recent times, the provisions have been made more stringent with stricter norms pertaining to penalty but the casualty rate is still high.

10.1.0 THE INLAND VESSELS ACT, 1917

10.1.1 OBJECTIVE AND SCOPE:

The Act lays down norms regulating Inland Vessels and extends to the whole of India except the State of Jammu and Kashmir. Inland vessels have been defined under the Act as a mechanically propelled vessel which ordinarily plies on any inland water. Further, inland water has been defined as any canal, river, lake or other navigable water.

10.1.2 RELEVANT PROVISIONS OF THE ACT:

10.1.2.1 Definitions (Section 2)

a) " inland vessel" or" inland mechanically propelled vessel" means a mechanically propelled vessel which ordinarily plies on any inland water;

b) " inland water" means any canal, river, lake or other navigable water ;

c) " mechanically propelled vessel" means every description of vessel propelled wholly or in part by electricity, steam or other mechanical power

d) “passenger" includes any person carried in a mechanically propelled vessel other than the master and crew and the owner, his family and servants.

10.1.2.2 Inland mechanically propelled vessel not to proceed on voyage or to be used for service without certificate of survey (Section 3)

An inland mechanically propelled vessel shall not proceed on any voyage, or be used for any service unless she has a certificate of survey in force and applicable to such voyage or service.

10.1.2.3 Powers of surveyors (Section 5)

For the purposes of a survey, the surveyor may, at any reasonable time, go on board any inland mechanically propelled vessel and may inspect the mechanically propelled vessel and every part thereof, including the hull, boilers, engines and other machinery, and all equipments and articles on board: Provided that he shall not unnecessarily hinder the loading or unloading of the mechanically propelled vessel or unnecessarily detain or delay her from proceeding on any voyage. The owner, master and officers of the mechanically propelled vessel shall afford to the surveyor all reasonable facilities for a survey, and all such information respecting the mechanically propelled vessel] and her machinery or any part thereof, and all equipments and articles on board, as he may require for the purposes of a survey.

10.1.2.4 Declaration of surveyor (Section 7)

When the survey of a mechanically propelled vessel is completed, if the surveyor making it is satisfied that the hull, boilers, engines and other machinery of the mechanically propelled vessel are sufficient for the voyage or service intended and in good condition, and the equipments of the mechanically propelled vessel and the certificates of the master and engineer are such and in such condition as are required by any law for the time being in force as and applicable to the mechanically propelled vessel, the surveyor shall forthwith give to the owner or master a declaration in the prescribed form containing the following particulars, namely:--the time (if less than one year) for which the hull, boilers, engines and other machinery and equipments of the mechanically propelled vessel] will be sufficient;The limit (if any) beyond which, as regards the hull, boilers, engines and other machinery or equipments, the mechanically propelled vessel is in the surveyor' s judgement not fit to ply; The number of passengers (if any) which the mechanically propelled vessel is, in the judgement of the surveyor, fit to carry, specifying, if necessary, the respective numbers to be carried on the deck and in the cabins, and in different parts of the deck and cabins: the number to be subject to such conditions and variations, according to the time of year, the nature of the voyage, the cargo carried or other circumstances, as the case requires; the

nature and quantum of cargo which the mechanically propelled vessel is, in the judgment of the surveyor, fit to carry; and any other prescribed particulars.

10.1.2.5 Inland mechanically propelled vessels not to proceed on voyage or be used for service without certificate of registration (Section 19A)

An inland mechanically propelled vessel shall not proceed on any voyage or be used for any service, unless it has a certificate of registration in force in respect thereof and granted under this Act.

10.1.2.6 Place of registry and registering authorities (Section 19B)

The State Government may declare such places within the territories under its administration as it thinks fit to be places of registry; and appoint registering authorities at the said places for the purposes of this Act.

10.1.2.7 Book of registration (Section 19C)

At every place of registry, a book shall be kept by the registering authority in which all the particulars contained in the form of the certificate of registration shall be duly entered and such registering authority shall, immediately after registering any inland mechanically propelled vessel] or within one month at the furthest, send to the State Government a true and exact copy, together with the number, of every certificate which shall be so granted by it.

10.1.2.8 Marking of inland mechanically propelled vessel (Section 19H)

Where an inland mechanically propelled vessel has been registered under this Chapter, the registering authority shall assign to the vessel, to be displayed thereon conspicuously in the prescribed manner, a distinguishing mark, hereinafter in this Act referred to as the registration mark.

10.1.2.9 Prohibition against transfer of certificate of registration (Section 19I)

A certificate of registration granted in respect of any inland mechanically propelled vessel shall be used only for the lawful navigation of that vessel. A certificate of registration in respect of an inland mechanically propelled vessel issued by a registering authority in one State shall be valid for that State only, but where any such vessel plies in inland waters of any

other State nothing in this section shall be deemed to require the owner or master of the vessel to obtain a fresh certificate of registration in relation to the State or States in which the vessel is not so registered.

10.1.2.10 Prohibition against transfer of ownership of registered vessel (Section 19M)

An inland mechanically propelled vessel registered under this Act in one State shall not be transferred to a person resident in another State in India or in any country outside India, without the previous approval of the Government of the State in which the vessel is registered.

10.1.2.11 Cancellation of registration (Section 19O)

If an inland mechanically propelled vessel has been destroyed or has been rendered permanently unfit for service, the owner of the vessel shall, with the least practicable delay, report the fact to the registering authority of the place where the vessel is registered and shall also forward to that authority, along with the report, the certificate of registration of the vessel and thereupon the registering authority shall have the certificate of registration cancelled. Any registering authority may at any time require that any inland mechanically propelled vessel within the local limits of its jurisdiction may be inspected by such authority as the State Government may, by general or special order, appoint in this behalf and, if as a result of such inspection, the registering authority is satisfied that the vessel is in such a condition that it is not fit to ply in any inland water, the registering authority may, after giving the owner of the vessel an opportunity of being heard, cancel the registration of the vessel and require the owner thereof to surrender forthwith to the registering authority, the certificate of registration in respect of that vessel, if it has not already been so surrendered.

10.1.2.12 Licenses (Section 22A)

The State Government may, also if it thinks fit, grant-- to a person who is in possession of a second- class master' s certificate granted under section 21 or section 22, and has, by virtue of such certificate, acted as master of an inland mechanically propelled vessel having engines of forty or more nominal horse- power for a period of not less than five years, or to a person who is in possession of a first- class engine- driver' s certificate granted under section 21 or

section 22, or an engine- driver' s certificate granted or deemed to be granted under the Merchant Shipping Act, 1958 , and has, by virtue of such certificate, served as an engine-driver of an inland mechanically propelled vessel having engines of not less than seventy nominal horse- power for five years, for not less than two and a half years of which period he has been the engine- driver of such vessel within the meaning of section 26, a license authorising such person to act as master or engineer, as the case may be, of any inland mechanically propelled vessel] having engines of one hundred and seventy nominal horse-power or of such less nominal horse- power 5[as such Government] may deem fit.

10.1.2.13 Power for State Government to make rules as to grant of certificates of competency (Section 29)

The State Government may make rules to regulate the granting of certificates of competency under this Chapter.

10.1.2.14 Power for State Government to make rules as to grant of certificates of service (Section 30)

The State Government may also make rules to regulate the granting of certificates of service under section 22.

10.1.2.15 Report of casualties to be made to nearest police- station (Section 32)

Whenever any inland mechanically propelled vessel has been wrecked, abandoned or materially damaged, or by reason of any casualty happening to, or on board of, any inland mechanically propelled vessel], loss of life has ensued, or any inland mechanically propelled vessel has caused loss or material damage to, any other vessel, the master of the mechanically propelled vessel shall forthwith give notice of the wreck, abandonment, damage, casualty, or loss to the officer in charge of the nearest police- station.

10.1.2.16 Power for State Government to appoint Court of investigation (Section 33)

Whenever the State Government is satisfied that it is necessary or expedient to have a formal investigation into the facts of any case reported under section 32 or otherwise brought to its notice, the State Government may appoint a special Court and direct the Court to make the investigation at such place as the State Government may fix in this behalf, or direct any

principal Court of ordinary criminal jurisdiction or the Court of any District Magistrate to make the investigation.

10.1.2.17 Power of Court of investigation to inquire into charges of incompetency or misconduct (Section 34)

Any Court making an investigation under section 33 may inquire into any charge of incompetency or misconduct arising in the course of the investigation against any master, engineer or engine- driver, or any person holding a certificate granted under Chapter III, as well as into any charge of a wrongful act or default on his part causing any wreck, abandonment, damage, casualty, or loss referred to in section 32.

10.1.2.18 Power for State Government to direct investigation otherwise than under section 33 (Section 35)

If the State Government has reason to believe that there are grounds for charging any master, engineer or engine- driver, or any person holding a certificate granted under Chapter III, with incompetency or misconduct, otherwise than in the course of an investigation under section 33, it may send a statement of the case to the principal Court of ordinary criminal jurisdiction, or the Court of the District Magistrate, at or nearest to the place at which it may be convenient for the parties and witnesses to attend, and may direct the Court to make an investigation into the charge.

10.1.2.19 Person charged to be heard (Section 36)

For the purpose of an investigation under this Chapter into any charge against a master, engineer or engine- driver, or any person holding a certificate granted under Chapter III, the Court may summon him to appear, and shall give him full opportunity of making a defense, either in person or otherwise.

10.1.2.20 Power of Court to effect arrest of witnesses by entry and detention of vessels (Section 39)

If any Court making an investigation under this Chapter issues a warrant of arrest to compel the attendance of any person whose evidence is in its opinion necessary, it may, for the purpose of effecting the arrest, but subject to any general or special instructions issued by the

State Government in this behalf, authorise any officer to enter any vessel. An officer so authorized to enter any vessel may, for the purpose of enforcing the entry, call to his aid any officers of Police or Customs, or any other persons, and may seize and detain the vessel for such time as is reasonably necessary to effect the arrest; and every such officer or other person shall be deemed to be a public servant within the meaning of the Indian Penal Code.

10.1.2.21 Report by Court to State Government (Section 42)

The Court shall, in the case of every investigation under this Chapter, transmit to the State Government a full report of the conclusions at which it has arrived, together with the evidence recorded and the written opinion of any assessor.

10.1.2.22 Power for State Government to direct investigations into causes of explosions on mechanically propelled vessels (Section 44)

Whenever any explosion occurs on board any inland mechanically propelled vessel, the State Government may direct that an investigation into the cause of the explosion be made by such person or persons as it may appoint in this behalf.

10.1.2.23 Power for State Government to suspend or cancel certificates in certain cases (Section 45)

Any certificate granted or any endorsement made under Chapter III may be suspended or cancelled by the Government of the State in which the certificate was granted or, as the case may be, in respect of which the endorsement was made, in the following cases, namely :-- if, on any investigation made under this Act, the Court reports that the wreck or abandonment of, or loss or damage to, any vessel, or loss of life, has been caused by the wrongful act or default of the holder of such certificate, or that the holder of such certificate is incompetent, or has been guilty of any gross act of drunkenness, tyranny or other misconduct, or if the holder of such certificate is proved to have been convicted of any non- bailable offence, or if the holder of such certificate is proved to have deserted his vessel or has absented himself, without leave and without sufficient reason, from his vessel or from his duty; or if, in the case of a person holding a certificate of competency or service as second- class master or serang, or as engine- driver, such person is or has become, in the opinion of the State Government, unfit to act as a second- class master or serang or as an engine- driver, as the case may be.

10.1.2.24Obligation to deliver up suspended or cancelled certificate (Section 46)

Every person whose certificate is suspended or cancelled under this Chapter shall deliver it up to such person as the State Government which suspended or cancelled it may direct.

10.1.2.25 Power for State Government to revoke suspension or cancellation, and to grant new certificate (Section 48)

Any State Government may, at any time, revoke any order of suspension or cancellation which it may have made under this Chapter, or grant, without examination, to any person whose certificate it has so cancelled, a new certificate.

10.1.2.26 Power for State Government to declare dangerous goods (Section 49)

The State Government may declare what shall, for the purposes of this Act, be deemed to be dangerous goods.

10.1.2.27 Carriage of dangerous goods (Section 50)

No person shall take with him on board an inland mechanically propelled vessel any dangerous goods without giving notice of their nature to the owner or master of the mechanically propelled vessel, or deliver or tender for carriage on such mechanically propelled vessel any dangerous goods without giving such notice, and without distinctly marking their nature on the outside of the package containing the goods. If the owner or master of an inland mechanically propelled vessel suspects, or has reason to believe, that any luggage or parcel taken, delivered, or tendered for carriage on the mechanically propelled vessel contains dangerous goods, he may refuse to carry it upon the mechanically propelled vessel or require it to be opened to ascertain the nature of its contents; or if it has been received for carriage, stop its transit until he is satisfied as to the nature of its contents.

10.1.2.28 Power of owner or master of mechanically propelled vessel to throw overboard dangerous Goods (Section 51)

Where any dangerous goods have been taken or delivered on board any inland mechanically propelled vessel in contravention of section 50, the owner or master of the mechanically propelled vessel may, if he thinks fit, cause the goods to be thrown overboard, together with

any package or receptacle in which they are contained, and neither the owner nor the master shall, in respect of his having so caused the goods to be thrown overboard, be subject to any liability, civil or criminal, in any Court.

10.1.2.29 Power for State Government to make rules for protection of inland mechanically propelled vessels from accidents (Section 52)

The State Government may make rules for the protection of inland mechanically propelled Vessels against explosion, fire, collision and other accidents.

10.1.2.30 Power for State Government to make rules as to carriage of passengers in inland mechanically propelled vessels (Section 53)

The State Government may make rules to regulate the carriage of passengers in inland mechanically propelled vessels.

10.1.2.31 Power for State Government to make rules for protection of passengers (Section 54)

The State Government] may also make rules for the protection of passengers in inland mechanically propelled vessels] and may by such rules require the prices of passenger tickets to be printed or otherwise denoted on such tickets; and the supply, free of charge, of a sufficient quantity of fresh water for the use of such passengers.

10.1.2.32 Application of Chapter VIII of the Motor Vehicles Act, 1939 in relation to the insurance of mechanically propelled vessels (Section 54C)

The provisions of Chapter VIII of the Motor Vehicles Act, 1939, shall mutatis mutandis apply, in relation to the insurance of mechanically propelled vessels against third party risks as they apply in relation to motor vehicles.

1.2.0 THE INDIAN CARRIAGE OF GOODS BY SEA ACT, 1925

10.2.1 OBJECTIVE AND SCOPE: The Act amends the law with respect to the carriage of goods by sea. It extends to the whole of India. The Rules set out in the Schedule shall have effect in relation to and in connection with the carriage of goods by sea in ships carrying goods from any port in India to any other port whether in or outside India.

10.2.2 RELEVANT PROVISIONS OF THE RULES RELATING TO BILLS OF LADING SCHEDULE

10.2.2.1 Definitions (Article 1)

i. "carrier" includes the owner or the charterer who enters into a contract of carriage with a shipper;
ii. "contract of carriage" applies only to contracts of carriage covered by a bill of lading or any similar document of title, in so far as such document relates to the carriage of goods by sea including any bill of lading or any similar document as aforesaid issued under or pursuant to a charter-party from the moment at which such bill of lading or similar document of title regulates the relations between a carrier and a holder of the same;

10.2.2.2 **Risks (Article II)**

Under every contract of carriage of goods by sea the carrier, in relation to the loading, handling, stowage, carriage, custody, care, and discharge of such goods, shall be subject to the responsibilities and liabilities, and entitled to the rights and immunities hereinafter set forth.

10.2.2.3 **Responsibilities and Liabilities (Article III)**

The carrier shall be bound, before and at the beginning of the voyage, to exercise due diligence to make the ship seaworthy and properly man, equip, and supply the ship.

10.2.2.4 **Rights and Immunities (Article IV)**

Neither the carrier nor the ship shall be liable for loss or damage arising or resulting from unsea worthiness unless caused by want of due diligence on the part of the carrier to make the ship seaworthy, and to secure that the ship is properly manned, equipped and supplied, and to make the holds, refrigerating and cool chambers and all other parts of the ship in which goods are carried fit and safe for their reception, carriage and preservation. Neither the carrier nor

the ship shall be responsible for loss or damage arising or resulting from act, neglect, or default of the master, mariner, pilot, or the servants of the carrier in the navigation or in the management of the ship; fire, unless caused by the actual fault or privity of the carrier; perils, dangers and accidents of the sea or other navigable waters; act of God; act of war; act of public enemies; arrest or restraint of princes, rulers or people, or seizure under legal process; quarantine restriction; act or omission of the shipper or owner of the goods, his agent, or representative; strikes or lock-outs or stoppage or restraint of labour from whatever cause, whether partial or general; riots and civil commotions; saving or attempting to save life or property at sea; wastage in bulk or weight or any other loss or damage arising from inherent defect, quality, or vice of the goods; insufficiency of packing; insufficiency or inadequacy of marks; latent defects not discoverable by due diligence; any other cause arising without the actual fault or privity of the carrier, or without the fault or neglect of the agents or servants of the carrier.

10.2.2.5 Surrender of Rights and Immunities, and Increase of Responsibilities and Liabilities (Article V)

A carrier shall be at liberty to surrender in whole or in part all or any of his rights and immunities or to increase any of his responsibilities and liabilities under the Rules contained in any of these Articles, provided such surrender or increase shall be embodied in the bill of lading issued to the shipper.

1.3.0 THE AIRCRAFT ACT, 1934

10.3.1 SCOPE AND OBJECTIVE: The Aircraft Act was enacted to make better provision for the control of the manufacture, possession, use, operation, sale, import and export of aircraft. The Act extends to the whole of India and applies also to citizens of India wherever they may be; to, and to the persons on, aircraft registered in India wherever they may be; to, and to the persons on, aircraft registered outside India but for the time being in or over India; and to an aircraft operated by a person who is not a citizen of India but has his principal place of business or permanent residence in India.

10.3.2RELEVANT PROVISIONS OF THE ACT:

10.3.2.1 Definition (Section 2)

i. "aircraft" means any machine which can derive support in the atmosphere from reactions of the air, other than reactions of the air against the earth's surface] and includes balloons, whether fixed or free, airships, kites, gliders and flying machines;

ii. " aerodrome" means any definite or limited ground or water area intended to be used, either wholly or in part, for the landing or departure of aircraft, and includes all buildings, sheds, vessels, piers and other structures thereon or appertaining thereto;

iii. "aerodrome reference point", in relation to any aerodrome, means a designated point established in the horizontal plane at or near the geometric centre of that part of the aerodrome reserved for the departure or landing of aircraft;

10.3.2.2 Power of Central Government to exempt certain aircraft (Section 3)

Central Government may exempt from all or any of the provisions of this Act any aircraft or class of aircraft and any person or class of persons, or may direct that such provisions shall apply to such aircraft or persons subject to such modifications as may be specified in the notification.

10.3.2.3 Power of Central Government to make rules to implement the Convention of 1944 (Section 4)

Central Government may make rules for carrying out the Convention relating to International Civil Aviation signed at Chicago on the 7th day of December, 1944.

10.3.2.4 **Safety oversight functions (Section 4A)**

The Director General of Civil Aviation shall perform the safety oversight functions in respect of matters specified in this Act or the rules made there under.

10.3.2.5 Power of Central Government to make rules (Section 5)

Central Government may make rules regulating the manufacture, possession, use, operation, sale, import or export of any aircraft or class of aircraft d[and for securing the safety of aircraft operation.

Such rules may provide for -

(a) The authorities by which any of the powers conferred by or under this Act are to be exercised;

(aa) the regulation of air transport services, and the prohibition of the use of aircraft in such services.

(ab) the economic regulation of civil aviation and air transport services.

(ac) the information to be furnished by an applicant for, or the holder of, a license authorising the establishment of an air transport service to such authorities as may be specified in the rules;

(b) The licensing, inspection and regulation of aerodromes, the conditions under which aerodromes may be maintained, the prohibition or regulation of the use of unlicensed aerodromes;

(ba) the fees which may be charged at those aerodromes to which the Airports Authority of India Act, 1994 does not apply;

(c) The inspection and control of the manufacture repair and maintenance of aircraft and of places where aircraft are being manufactured, repaired or kept;

(d) The registration and marking of aircraft;

(e) The conditions under which aircraft may be flown, or may carry passengers, mails or goods, or may be used for industrial purposes and the certificates, licenses or documents to be carried by aircraft;

(f) The inspection of aircraft for the purpose of enforcing the provisions of this Act and the facilities to be provided for such inspection;

(g) The licensing of persons employed in the operation, manufacture, repair or maintenance of aircraft;

(ga) the licensing of persons engaged in air traffic control;

(gb) the certification, inspection and regulation of communication, navigation and surveillance or air traffic management facilities;

(gc) the measures to safeguard civil aviation against acts of unlawful interference;

(h) The air-routes by which and, the conditions under which aircraft may enter or leave India, may fly over India and the places at which aircraft shall land;

(i) The prohibition of flight by aircraft over any specified area, either absolutely or at specified times, or subject to specified conditions and exceptions;

(j) The supply, supervision and control of air-route beacons, aerodrome lights, and lights at or in the neighbourhood of aerodromes or on or in the neighbourhood of air- routes;

(jj) the installation and maintenance of lights on private property in the neighbourhood of aerodromes or air- routes, by the owners or occupiers of such property, the payment by the Central Government for such installation and maintenance, and the supervision and control of such installation and maintenance, including the right of access to the property for such purposes;

(k) The signals to be used for purposes of communication by or to aircraft and the apparatus to be employed in signalling;

(l) The prohibition and regulation of the carriage in aircraft of any specified article or substance;

(m) The measures to be taken and the equipment to be carried for the purpose of ensuring the safety of life;

(n) The issue and maintenance of log-books;

(o) the manner and conditions of the issue or renewal of any license or certificate, the examinations and tests to be undergone in connection therewith, the form, custody, production, endorsement, cancellation, suspension or surrender of such license or certificate, or of any log-book;

(p) The fees to be charged in connection with any inspection, examination, test, certificate or license, made, issued or renewed under this Act;

(q) The recognition for the purposes of this Act of licenses and certificates issued elsewhere than in India relating to aircraft or to the qualifications of persons employed in the operation, manufacture, repair or maintenance of aircraft;

(qq) the prohibition of slaughtering and flaying of animals and of depositing rubbish, filth and other polluted and obnoxious matter within a radius of ten kilometres form the aerodrome reference point; and

(r) Any matter subsidiary or incidental to the matters referred to in this sub-section.

10.3.2.6 Power to issue directions (Section 5A)

Director-General of Civil Aviation may issue directions, consistent with the provisions of this Act and the rules made there under. Every direction issued shall be complied with by the person or persons to whom such direction is issued.

10.3.2.7 Power of Central Government to make orders in emergency (Section 6)

Central Government can in the interest of the public safety or tranquillity issue the following orders:

(a) Cancel or suspend licenses or certificates issued under this Act;
(b) Prohibit, regulate flight of aircraft or class of aircraft over India;
(c) Prohibit, or regulate the erection, maintenance or use of any aerodrome, aircraft factory, flying- school or club, or place where aircraft are manufactured, repaired or kept, or any class or description thereof; and
(d) Direct that any aircraft, or any aerodrome, aircraft factory, flying school or club, or place where aircraft are manufactured, repaired or kept, together with any machinery, plant, material shall be delivered, to such authority as may be specified to be at the disposal of the Government for public service.

Whoever knowingly disobeys, or fails to comply with, or does any act in contravention of, an order shall be punishable with imprisonment for a term which may extend to three years, or with fine, or with both.

10.3.2.8 Power of Central Government to make rules for investigation of accidents (Section 7)

Central Government may make rules providing for the investigation of any accident or incident in the course of navigation-
(a) In or over India of any aircraft, or
(b) Anywhere of aircraft registered in India.

10.3.2.9 Power to detain aircraft (Section 8)

Any authority authorized by Central Government may detain any aircraft, if-

(a) Having regard to the nature of an intended flight, the flight of such aircraft would involve danger to persons in the aircraft or to any other persons or property, or
(b) Such detention is necessary to secure compliance with any of the provisions of this Act.

10.3.2.10 Power of Central Government to make rules for protecting the public health (Section 8A)

Central Government] may make rules for the prevention of danger arising to the public health by the introduction or spread of any infectious or contagious disease from aircraft arriving at or being at any aerodrome and for the prevention of the conveyance of infection or contagion by means of any aircraft leaving an aerodrome.

10.3.2.11 Emergency powers for protecting the public health (Section 8B)

If the Central Government is satisfied that India is threatened with an outbreak of any dangerous epidemic disease, and ordinary provisions of law in force are insufficient for the prevention of danger arising to the public health through the introduction or spread of the disease by the agency of aircraft, the Central Government may take such measures as it deems necessary to prevent such danger.

10.3.2.12 Power of Central Government to make rules for securing safe custody and re-delivery of unclaimed property (Section 8C)

Central Government may make rules for securing the safe custody and re- delivery of ay property which is found on any aerodrome or in any aircraft on any aerodrome.

10.3.2.13 Wreck and Salvage (Section 9)

Provisions of Part XIII of the Merchant Shipping Act, 1958 relating to Wreck and Salvage shall apply to aircraft on or over the sea or tidal waters as they apply to ships, and the owner of an aircraft shall be entitled to a reasonable reward for salvage services rendered by the aircraft in like manner as the owner of a ship.

10.3.2.14 Power of Central Government to prohibit or regulate construction of buildings, planting of trees etc. (Section 9A)

If the Central Government is of opinion that it is necessary for the safety of aircraft operations, it may-

(i) Direct that no building or structure shall be constructed or erected, or no tree shall be planted on any land within such radius, not exceeding twenty kilo meters from the aerodrome reference point and where there is any building, structure or tree on such land, also direct the owner or the person having control of such building, structure or tree to demolish such building or structure or, to cut such tree.

(ii) Direct that no building or structure higher than such height as may be specified shall be constructed or no tree, which is likely to grow higher than such height as may be specified shall be planted, on any land within such radius, not exceeding twenty kilometres from the aerodrome reference point, as may be specified and where the height of any building or structure or tree on such land is higher than the specified height, also direct the owner or the person having control of such building, structure or tree to reduce the height thereof so as not to exceed the specified height.

10.3.2.15 Payment of compensation (Section 9B)

If in consequence of any direction contained in any notification issued under section 9 A, any person sustains any loss or damage, such person shall be paid compensation.

10.3.2.16 Penalty for act in contravention of rule made under this Act (Section 10)

If any person contravenes any provision prohibiting or regulating the carriage in aircraft of arms, explosives or other dangerous goods, or gives information in relation to any such goods which he knows or believes to be false shall be punishable with imprisonment which may extend to two years and shall also be liable to fine which may extend to ten lakh rupees. If any person contravenes any provision of any rule prohibiting the slaughter and flaying of animals and of depositing rubbish, filth and other polluted and obnoxious matter within a radius of ten kilometres from the aerodrome reference point, he shall be punishable with imprisonment which may extend to three years, or with fine which may extend to ten lakh rupees], or with both.

10.3.2.17 Penalty for flying so as to cause danger (Section 11)

Whoever wilfully flies any aircraft in such a manner as to cause danger to any person or to any property on land or water or in the air shall be punishable with imprisonment for a term which may extend to two years, or with fine which may extend to ten lakh rupees, or with both.

10.4.0 AIRCRAFT RULES, 1937.

10.4.1 OBJECTIVE AND SCOPE: The Rules extend to the whole of India and apply also to persons on, aircraft registered in India wherever they may be, to persons on all aircraft. In the case of aircraft registered in a country other than India, the regulations of that country relating to registration, license of personnel, airworthiness and log books shall apply in place of the provisions contained in Parts IV, V, VI and IX of these Rules. Rules shall also apply to aircraft registered in a contracting State and operated pursuant to an agreement for the lease, charter or interchange of the aircraft or any similar arrangement by an operator who has his principal place of business or his permanent residence in India provided that an agreement has been reached between the government of the State of registry of the Aircraft and the Government of India. The extent of application of these rules to such aircraft shall be as per the agreement between the two Governments. These rules shall not apply to aircraft registered in India and operated pursuant to an agreement for the lease, charter or interchange of aircraft or any similar arrangement by an operator who has his principal place of business or his permanent residence in a contracting State, provided that an agreement has been reached between the Government of India and the Government of that contracting state in regard to transfer of functions and duties. The extent of non-application of these rules to such aircraft shall be as per the agreement between the two Governments.

10.4.2 RELEVANT PROVISIONS OF THE RULES:

10.4.2.1 **Nationality of aircraft (Rule 2)**

An aircraft shall be deemed to possess the nationality of the State on the register of which it is entered.

10.4.2.2 Definitions (Rule 3)

(1) “Accident” means an occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, in which–

a) a person is fatally or seriously injured as a result of being in the aircraft, or direct contact with any part of the aircraft, including parts which have become detached from the aircraft;
or direct exposure to jet blast, except when the injuries are from natural causes, self inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew; or
b) the aircraft sustains damage or structural failure which adversely affects the structural strength, performance or flight characteristics of the aircraft, and would normally require major repair or replacement of the affected component, except for engine failure or damage, when the damage is limited to the engine, its cowlings or accessories; or for damage limited to propellers, wing tips, antennas, tires, brakes, fairings, small dents or puncture holes in the aircraft skin; or
c) The aircraft is missing or is completely inaccessible.

“Fatally injured” means an injury resulting in death within thirty days of the date of the accident.
“Aircraft is missing” means the wreckage of the aircraft has not been located when the official search has been terminated.

(2) "Aircraft component" means any part, the soundness and correct functioning of which, when fitted to an aircraft, is essential to the continued airworthiness or safety of the aircraft.

(3) "incident" in relation to an aircraft means an occurrence which takes place either on the ground or in flight , in which the aircraft suffers damage or a person associated either with the maintenance or operation of aircraft, or both, suffers injury in circumstances other than those specified in the definition of "accident", the aircraft makes a forced landing, the aircraft lands at aerodrome in an un airworthy condition, the aircraft is compelled to land at the aerodrome of departure without completing the scheduled flight, the aircraft lands owing to conditions which make continuance of the flight inadvisable, the position of the aircraft becomes "unknown for any period", or the safety of the aircraft or its occupants or of any other person or property is jeopardised in any manner.

(4) “Safety” means the state in which the risk of harm to persons or of property damage is reduced to and maintained at or below an acceptable level of safety through a continuing

process of hazard identification and risk management. “Acceptable level of safety” is the minimum degree of safety that must be assured by a system in actual practice.

(5) “Safety oversight function” means a function by means of which the safety–related standards and recommended practices and associated procedures contained in the Annexes to the Convention are implemented.”
(6) “Serious incident” means an incident involving circumstances indicating that an accident nearly occurred.

10.4.2.3 Registration and nationality and registration marks (Rule 5)

No person shall fly, or assist in flying, any aircraft unless it has been registered, and it bears its nationality and registrations marks and the name and residence of the owner affixed or painted thereon or, in the case of aircraft registered elsewhere than in India, in accordance with the regulations of the State in which it is registered. Prohibition imposed by this rule shall not apply to aircraft flown in accordance with the special permission in writing of the Central Government.

10.4.2.4 Prohibited Flight (Rule 5A)

No aircraft registered in India shall leave India for the purpose of a flight to a place outside India and no aircraft shall undertake a flight to any territory which the Central Government may declare to be a prohibited territory except in accordance with the terms and conditions of a permit issued by the Director-General of Civil Aviation.

10.4.2.5 Licensing of personnel (Rule 6)

Every aircraft shall carry and be operated by the personnel prescribed in Part V and such personnel shall be licensed in the manner prescribed in that part and in Schedule II. In the case of an aircraft not registered in India, such personnel shall be licensed in accordance with the regulations in force in the State in which the aircraft is registered.

10.4.2.6 Documents to be carried on aircraft (Rule 7)

No person shall fly an aircraft unless valid documents are carried on board. An aircraft registered in India shall carry on board valid documents as required by these rules.

10.4.2.7 Prohibition of carriage of persons without passport (Rule 7A)

No person-in-charge of any aircraft shall allow such aircraft to enter India from a place outside India unless all persons on board the aircraft are in possession of valid passports as required by rules for the time being in force made under the Indian Passport Act, 1920.

10.4.2.8 Carriage of arms, ammunition, explosives, military stores, etc. (Rule 8)

No person shall carry in any aircraft to, from, within or over India, any arms, ammunitions, implements of war, explosives and military stores, except with the written permission of the Central Government and subject to the terms and conditions of such permission.

10.4.2.9. Security check of persons boarding aircraft at aerodrome (Rule 8A)

For securing the safety of aircraft operations, every person boarding an aircraft at an aerodrome and his hand baggage, if any, shall be liable to be searched at the aerodrome, by an officer authorized in this behalf by the Central Government, before such person proceeds to the aircraft for embarkation.

10.4.2.10 Aerodromes (Rule 11)

No pilot or person-in-charge of any aircraft carrying passengers for hire or reward shall use any place for a series of landings and departures, and no pilot or person-in charge of any aircraft employed on a scheduled air transport service shall use any place as a regular place of landing or departure other than an aerodrome licensed or approved for the purpose.

10.4.2.11 Prohibited areas (Rule 12)

No person shall fly or assist in flying an aircraft over any of the areas specified in Schedule I save in accordance with the conditions specified in that schedule.

10.4.2.12 Photograph at aerodromes or from aircraft in flight (Rule 13)

No person shall take at a Government aerodrome or from an aircraft in flight, any photograph except in accordance with and subject to the terms and conditions of a permission in writing granted by the Director-General, a Joint Director General, a Deputy Director-General or the Director of Regulations and Information of the Civil Aviation Department

10.4.2.13 Conditions to be complied with by aircraft in flight (Rule 15)

No aircraft other than the Microlight aircraft shall be flown unless the aircraft shall be certified as airworthy and shall be maintained in airworthy condition, all the terms or conditions on which the certificate of airworthiness was granted shall be duly complied with; the aircraft shall carry on board its certificate of airworthiness and any other certificates which it is required to carry on board; the aircraft shall be fitted with and shall have in working order such instruments and equipment as are prescribed for an aircraft of that class or description.

10.4.2.14 **Rules of the Ai**r (Rule 16)

Every person shall comply with the Rules of the Air issued by the Director General and every pilot and every person-in-charge of an aircraft shall take such steps as are practicable to secure that when the aircraft is in flight or is being manoeuvred on the land or water, the windows, wind-screens or side-screen of the aircraft through which the pilots obtain the view forward or sideways are maintained in such a condition as not to obstruct his view.

10.4.2.15 Production of licenses, etc. (Rule 17)

Any license ,certificate, authorisation and approval, log book or document granted or required to be maintained under these rules shall, on demand for the purpose of inspection, by any magistrate, any police officer above the rank of constable, any customs officer, any

commissioned officer of the Naval, Military or Air Force of the Union, any gazetted officer of the Civil Aviation Department, or any other person authorized by the Central Government by special or general order in writing in this behalf, be produced by the licensee or, in the case of an aircraft or of a licensed aerodrome, by the owner, hirer or person-in-charge thereof.

10.4.2.16 Prevention of flights in contravention of the rules (Rule 18)

An authority authorized under Aircraft Act, 1934, to detain aircraft may do so by the issue of a written direction to the pilot or other persons for the time being in-charge of the aircraft to be detained, or by taking or causing to be taken such other steps as may, in the opinion of such authority, be necessary to make the detention effective, including the use of force, denial of access by any person to the aircraft, removal of parts and components of the aircraft, de-fuelling of the aircraft or otherwise interfering with the aircraft. If an aircraft detained by a person so authorized is housed or kept at a Government aerodrome, the housing or picketing charges normally applicable shall be payable in respect of the whole period during which it is detained.

10.4.2.17 Cancellation, suspension or endorsement of licenses, certificates, authorisation and approval (Rule 19)

Where any person is convicted of a contravention of, or failure to comply with, these rules or any direction issued in respect of any aircraft, the Central Government may cancel or suspend any certificate of registration granted under these rules relating to that aircraft. The Central Government may cancel or suspend any certificate granted under these rules relating to airworthiness of an aircraft or a Type Certificate of an aircraft component, or item of equipment, if the Central Government is satisfied that a reasonable doubt exists as to the - safety of the aircraft or the type of aircraft; or the airworthiness of the aircraft component or item of equipment in respect of which a Type Certificate exists, and may vary any condition attached to any such certificate if the Central Government is satisfied that reasonable doubt exists as to whether such conditions afford a sufficient margin of safety.

10.4.2.18 Dangerous flying (Rule 21)

No person shall fly any aircraft in such circumstances as, by reason of low altitude or proximity to persons or dwellings or for other reason, to cause unnecessary danger to any person or property.

10.4.2.19 Assault and other acts of interference against a crew member (Rule 22)

No person shall, on board an aircraft, assault, intimidate or threaten, whether physically or verbally, a crew member which may interfere with the performance of the duties of the crew member or lessens the ability of the crew member to perform those duties; refuse to follow a lawful instruction given by the Pilot-in-Command, or on behalf of the Pilot in-Command by a crew member, for the purpose of ensuring the safety of the aircraft or of any person or property on board or for the purpose of maintaining good order and discipline on board.

10.4.2.20 Assault and other acts endangering safety or jeopardizing good order and discipline. (Rule 23)

No person shall, on board an aircraft, assault, intimidate or threaten, whether physically or verbally, any person, intentionally cause damage to or destroy any of property, consume alcoholic beverages or drugs, which is likely to endanger the safety of the aircraft or of any person or jeopardizes the good order and discipline on board the aircraft.

10.4.2.21 Prohibition on consumption of intoxicating and psychoactive substances (Rule 24)

No person acting as, or carried in aircraft for the purpose of acting as pilot, commander, navigator, engineer, cabin crew or other operating member of the crew thereof, shall have taken or used any alcoholic drink, sedative, narcotic or stimulant drug or preparation within twelve hours of the commencement of the flight or take or use any such preparation in the course of the flight, and no such person shall, while so acting or carried, be in a state of intoxication or have detectable blood alcohol whatsoever in his breath, urine or blood alcohol analysis or in a state in which by reason of his having taken any alcoholic, sedative, narcotic

or stimulant drug or preparation, his capacity so to act is impaired, and no other person while in a state of intoxication shall enter or be in aircraft.

10.4.2.22 Carriage of persons suffering from mental disorders or epilepsy in aircraft (Rule 24A)

No person shall knowingly carry or permit to be carried, or connive at the carriage of, a person suffering from any mental disorder or epilepsy in any aircraft.

10.4.2.23 Carriage of prisoners in aircraft (Rule 24B)

No prisoner shall be taken aboard or carried on an aircraft except under and in accordance with a permit in writing issued by the Director-General, a Deputy Director-General, the Director of Regulations and Information or any other officer of the Civil Aviation Department authorized by the Central Government in this behalf and subject to such conditions, if any, as he may specify in the permit.

10.4.2.24 Carriage of animals, birds and reptiles in aircraft (Rule 24C)

No animal, bird or reptile shall be taken aboard or carried on any aircraft to, from and within India, except under and in accordance with a general or special permit inn writing issued by the Director-General in this behalf, and subject to such conditions, if any, as may be specified therein.

10.4.2.25. Smoking in aircraft (Rule 25)

The owner or the operator and the pilot-in-command of every aircraft registered in India, shall exhibit or cause to be exhibited in prominent place(s) in the aircraft notice(s) stating where and to what extent smoking is prohibited or permitted therein. A notice permitting smoking in such aircraft may be exhibited therein only if smoking in the aircraft is permitted by the certificate of airworthiness of the aircraft or by the direction of the Central

Government and only in accordance with the conditions relating to smoking contained in such certificate or direction.

10.4.2.26 Fuelling of aircraft (Rule 25A)

No person shall fill or replenish the fuel tanks of an aircraft from vehicles or vessels containing petroleum in bulk or from fuel hydrant installations except from vehicles or installations of a type approved by the Chief Inspector of Explosives or from barges licensed under the Petroleum Rules, 1937. During fuelling operations, which may include filling or draining of fuel tanks, the following precautions shall be observed:-

(a) Fuelling of aircraft shall be done outdoors and not less than 15 meters from any building.

(b) A "NO SMOKING" notice shall be prominently displayed.

(c) Smoking or use of an appliance employing naked flame or use of an appliance capable of producing a spark or in any other way igniting fuel vapours shall not be permitted within 30 meters of the aircraft or fuelling equipment.

(d) Aircraft engines shall not be started or turned and ignition switches shall be placed in the "OFF" position.

(e) Aircraft electrical radar and radio systems shall not be operated and the switches relating thereto shall remain in the "OFF" position:

(f) The use of ground power supply units, air conditioning units, tractors and similar equipment shall be permissible subject to compliance with certain prescribed conditions.

(g) The fuelling equipment and the aircraft shall be bonded to each other and both shall be earthed.

(h) No person other than the staff of the operator, fuelling company and officials of the Civil Aviation Department, Customs and Police, shall be permitted within 15 meters of the aircraft.

(i) Passengers may be permitted to embark, disembark, or remain in the cabin subject to the certain conditions like an attendant shall remain on duty in the cabin of the aircraft; the passenger loading ramp shall be correctly positioned at the cabin exit door and adequate provision shall be made to maintain the equilibrium of the aircraft in case all passengers attempt to leave by one exit; in case of marine aircraft, adequate means of water transport shall be stationed at cabin exit door.

(j) The handling of freight and baggage in and around the aircraft shall not proceed simultaneously with fuelling unless adequate precautions have been taken to eliminate fire risk.
(k) No aircraft maintenance shall be conducted which may provide a source of ignition for fuel vapour during fuelling operations.
(l) Fire extinguishers of adequate capacity and of suitable type, approved by the Director-General shall be available for immediate use near the aircraft.
(m) In the event of fuel being spilled, fuelling must cease and the engine of the ground power supply units must be stopped, but the electrical circuits and switches should on no account be touched except for the purpose of stopping the power unit.
(n) Fuelling operations shall cease when a turbo-jet aircraft manoeuvres so as to bring the rear jet outlets within 43 meters of the fuelling equipment or the aircraft.

10.4.2.27 Housing of aircraft (Rule 25B)

No aircraft containing dangerous petroleum in bulk in any of its tanks may be housed in a hanger unless such hangar is constructed of uninflammable material and is effectively and safely ventilated to the open air. (2) Every such hangar shall be in charge of a competent person who shall be responsible for taking all proper precautions against fire and shall prevent unauthorized persons from having access to the building.

10.4.2.28 Carriage of persons in unauthorized parts of aircraft (Rule 27)

No person shall at any time be carried on the wings or undercarriage of the aircraft, or on or in any other part thereof which is not designed for the accommodation of the personnel or passengers, or on or in anything attached externally to the aircraft.

10.4.2.29 Maximum age limit for professional pilots (Rule 28A)

No person, holding a pilot's license issued under these rules and having attained the age of sixty-five years, shall act as Pilot-in-Command or Co-pilot of an aircraft engaged in commercial air transport operations. No person holding a pilot's license issued under these

rules and having attained the age of sixty years, shall act as Pilot-in-Command or Co-pilot of an aircraft engaged in commercial air transport operations unless it is operated in a multi-crew environment and the other pilot is less than sixty years of age.

10.4.2.30 Acts likely to imperil the safety of aircraft (Rule 29)

No person shall interfere with the pilot or with a member of the operating crew of an aircraft, or tamper with the aircraft or its equipment or conduct himself in a disorderly manner in an aircraft or commit any act likely to imperil the safety of an aircraft or its passengers or crew.

10.4.2.31 Prohibition on the use of portable electronic devices (Rule 29B)

No person shall operate, nor shall the operator or the pilot-in-command of an aircraft allow the operation of any portable electronic device on board an aircraft in flight.

10.4.2.32 Certificate of airworthiness (Rule 50)

The owner or operator of an aircraft may apply to the Director- General for the issue or renewal of a certificate of airworthiness in respect of the aircraft or for the validation of a certificate of airworthiness issued elsewhere in respect of the aircraft. The Director-General may issue or renew a certificate of airworthiness in respect of an aircraft when the applicant furnishes such documents or other evidence relating to the airworthiness of the aircraft as may be specified and as the Director-General may require by special or general order, and the Director-General is satisfied that it is airworthy. The Director-General may validate a certificate of airworthiness in respect of any aircraft that may be imported. The Director-General may issue, renew or render valid a certificate of airworthiness in one or more of the categories of aircraft as may be specified. The operations of the aircraft shall be restricted in those categories authorized in the certificate of airworthiness.

10.4.2.33 Manufacture, storage and distribution of all aircraft (Rule 53A)

The manufacture, storage and distribution of aircraft, aircraft components and items of equipment or any other material used or intended to be used in an aircraft, whether or not a certificate of airworthiness has been or is required to be issued, renewed or rendered valid for such aircraft, under these rules, shall be undertaken and certified only by approved organisations, by licensed engineers or by authorized persons in this behalf. The form and manner and the distribution of the certificate and its copies and preservation thereof shall be as may be specified by the Director-General.

10.4.2.34 Suspension or cancellation of Certificate of Airworthiness and its continued validity (Rule 55)

The certificate of airworthiness of an aircraft shall be deemed to be suspended when an aircraft ceases or fails to conform with the requirement of these rules, in respect of operation, maintenance, modification, repair, replacement, overhaul, process or inspection, applicable to that aircraft; or is modified or repaired otherwise than in accordance with the provisions of these rules; or suffers major damage; or develops a major defect which would affect the safety of the aircraft or its occupants in subsequent flights.

10.4.2.35 Notification of accidents (Rule 68)

An accident in which an aircraft is involved shall be notified in accordance with the provisions of this rule if between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked any person suffers death or serious injury as a result of being in or upon the aircraft or by direct contact with the aircraft or anything attached thereto, or the aircraft receives substantial damage. Where an accident occurs which has to be notified the person-in-command of the aircraft or, if he be killed or incapacitated, the owner, the operator, the hirer or other person on whose behalf he was in command of the aircraft, as the case may be, shall- send notice thereof to the Director-General, and give information to the District Magistrate and the Officer-in-charge of the nearest Police Station. The notice to the Director-General shall contain the following information, namely the type, nationality and registration marks of aircraft; the name of the owner, operator and hirer of the aircraft; the name of the person-in-command of the aircraft; the names and description of the crew of the aircraft; the nature and purpose of the flight; the

date and time of the accident; the place where the accident occurred; the last point of departure and the next point of intended landing of the aircraft; the nature of the accident; the number and description of the persons killed and injured as a result of the accident; and the extent of known damage to the aircraft.

10.4.2.36 Report on accidents (Rule 69)

The person in command or the owner of the aircraft which has been involved in an accident shall, if so required by the Director-General, submit to him a written report on such accident in such form as he may prescribe.

10.4.2.37 Removal and preservation of damaged aircraft (Rule 70)

In the case of an accident which is required to be notified or in any other case in which the Director-General gives notice to the owner or other person in-charge of the aircraft to this effect, the aircraft shall not, except under the authority of the Director-General, be removed or otherwise interfered with. The Director-General may, for the purposes of any investigation or inquiry under these rules, authorise any person to take measures for the preservation of any aircraft involved in an accident, and such person may thereupon have access to examine or otherwise deal with the aircraft. The owner of the aircraft or his nominated representative shall have the right to be present during any examination or other action taken.

10.4.2.38 Inspector's investigation (Rule 71)

The Director-General may order the investigation of any accident involving an aircraft and may appoint any person for the purpose of carrying out such investigation.

10.4.2.39 Powers of Inspector of Accidents (Rule 72)

For the purpose of such investigation an Inspector of Accidents shall have power by summons under his hand to require the attendance of any person whom he thinks fit to call before him and examine for such purpose and to require answers or returns to any inquiries

he thinks fit to make; to require any such person to make and to sign a declaration regarding the true nature of the statements made by him; to require and enforce the production of all books, paper, documents and articles which he may consider necessary for the investigation, and to retain any such books, papers, documents and articles until completion of the investigation; to have access to and examine any aircraft involved in the accident, the place where the accident occurred or any other place, the entry upon and examination of which appears to the Inspector necessary for the purpose of the investigation.

10.4.2.40 Committee of Inquiry (Rule 74)

The Central Government may, at its discretion, appoint a Committee of Inquiry composed of two or more persons to hold an inquiry into an accident in which an aircraft is involved, and such a Committee shall have the same powers as an Inspector of Accidents.

10.4.2.41 Formal Investigation (Rule 75)

Where it appears to the Central Government that it is expedient to hold a formal investigation of an accident, it may, by order direct a formal investigation to be held.

10.4.2.42 Notification of Incidents (Rule 77B)

Where an aircraft is involved in an incident, the Pilot-in command, the owner, the operator and the hirer, if any, of such aircraft shall notify the incident to the Director-General within 48 hours of the incident. The Communication notifying the incident shall contain the following information, namely:-

(i) The type, nationality and registration marks of the aircraft;

(ii) The name of the owner, operator and hirer of the aircraft;

(iii) The name of the Pilot-in-command.

(iv) The names and description of the crew of the aircraft;

(v) The nature and purpose of the flight;

(vi) The date and time of the incident;

(vii) The place where the incident occurred;

(viii) The last point of departure and the next point of intended landing of the aircraft;

(ix) The nature of the incident.

10.4.2.43 Investigation of an incident (Rule 77C)

The Director-General may order the investigation of any incident involving an aircraft or a person associated with the maintenance and operation of aircraft, or both, and may, by general or special order, appoint a competent and duly qualified person having experience in aviation accident/incident investigation as Inquiry Officer for the purpose of carrying out such investigation. The investigation referred to be held in private. The investigation shall be conducted in such a manner that if a charge is made or is likely to be made against any person and if it appears to the Inquiry Officer to be practicable so to do that person shall be given notice that blame may be attributed to him, and thereupon he may be given a reasonable opportunity of being present and making any statement or giving any evidence and producing witnesses on his behalf and examining any witness from whose evidence it appears that blame may be attributed to him. A public notice that such investigation is taking place may be given by the Director-General in such manner as he thinks fit and every such public notice shall state that any person who may desire to make a representation concerning the circumstances or causes of the incident may do so in writing within the time specified in the notice. The Inquiry Officer shall make a report to the Director-General stating all relevant facts with regard to the incident and his conclusions with regard to the causes of the incident and adding any observations and recommendations which he may think fit to make with a view to avoidance of similar incidents in future. The Director-General shall forward the report of the Inquiry Officer to the Central Government with such comments as the Director-General may think fit to make and the Central Government may, at its discretion, make the whole or part of any such report public in such a manner as it may consider fit.

1.5.0 NATIONAL HIGHWAYS ACT, 1956

10.5.1 OBJECTIVE AND SCOPE: An Act provide for the declaration of certain highways to be national highways and for matters connected therewith.

10.5.2 RELEVANT PROVISIONS OF THE ACT

10.5.2.1 Declaration of certain highways to be national highways (Section 2)

Each of the highways specified in the Schedule except such parts thereof as are situated within any municipal area is hereby declared to be a national highway. The Central Government may, by notification in the Official Gazette, declare any other highway to be a national highway and on the publication of such notification such highway shall be deemed to be specified in the Schedule.

10.5.2.2 Definition (Section 3)

"Municipal area" means any municipal area with a population of twenty thousand or more the control or management of which is entrusted to a municipal committee, a town area committee, a town committee, or any other authority.

10.5.2.3 National highways to vest in the Union (Section 4)

All national highways shall vest in the Union, and for the purposes of this Act "highways" include-

(i) All lands appurtenant thereto, whether demarcated or not;

(ii) All bridges, culverts, tunnels, causeways, carriageways and other structures constructed on or across such highways, and

(iii) All fences, trees, posts and boundary, furlong and mile stones of such highways or any land appurtenant to such highways.

10.5.2.4 Responsibility for development and maintenance of national highways (Section 5)

It shall be the responsibility of the Central Government to develop and maintain in proper repair all national highways; but the Central Government may, notification in the Official Gazette, direct that any functions in relation to the development or maintenance of nay national highway shall, subject to such conditions, if any, as may be specified in the notification, also be exercisable by the Government of the State within which the national highway is situated or by any officer or authority subordinate to the Central Government or to the State Government.

10.5.2.5 Power to issued directions (Section 6)

The Central Government may, give directions to the Government of any State as to the carrying out in the State of any of the provisions of this Act or of any rule, notification or order made thereunder.

10.6.0 THE MERCHANT SHIPPING ACT, 1958

10.6.1 OBJECTIVE AND SCOPE : The Act aims to forester the development and ensure the efficient maintenance of an Indian mercantile marine in a manner best suited to seven the national interests and for that purpose to established a National Shipping Board and a Shipping Development Fund, to provide for the registration of Indian ships and generally to amend and consolidate the law relating to merchant shipping.

10.6.2 RELEVANT PROVISIONS OF THE ACT:

10.6.2.1 **Application of Act (Section 2)**

The provisions of this Act which apply to ships which are registered in India or which in terms of this Act are required to be s registered shall so apply wherever the ships may be.

10.6.2.2 **Definitions (Section 3)**

i. 'collision regulations" means the regulations made under section 285 for the prevention of collisions at sea;

ii. "distressed seaman" means a seaman engaged under this Act who, by reason of having been discharged or left behind from, or shipwrecked, in any ship at a place outside India, is in distress at that place;

iii. "Owner" means in relation to a ship, the person to whom the ship or a share in the ship belongs; in relation to a sailing vessel, the person to whom the sailing vessel belongs;

iv. "passenger" means any person carried onboard a ship except a person employed or engaged in any capacity on board the ship on the business of the ship; a person on board the ship either in pursuance of the obligations laid upon the master to carry shipwrecked, distressed or other persons or by reason of any circumstances which neither the master nor the character, if any, could have prevented or forestalled; a child under one year of age;

v. "valid safety convention certificate" means a certificate purporting to have been issued in accordance with the Safety Convention in respect of a ship, other than Indian ship, by the Government of the country in which the ship is registered;

10.6.2.**3 Establishment of National Shipping Board (Section 4)**

Central Government may establish a Board to be called the National Shipping Board.

10.6.2.**4 Functions of National Shipping Board (Section 5)**

The Board shall advise the Central Government on matters relating to Indian shipping, including the development thereof; and on such other matters arising out of this Act as the Central Government may refer to it for advice.

10.6.2.5 **Director-General of Shipping (Section 7)**

Central Government may appoint a person to be the Director-General of Shipping for the purpose of exercising or discharging the powers, authority or duties conferred or imposed upon the Director-General by or under this Act.

10.6.2.6 Mercantile Marine Department (Section 8)

Central Government may establish and maintain at each of the ports of Bombay, Calcutta and Madras and at such other port in India as it may consider necessary an officer of the Mercantile Marine Department for the administration of this Act.

10.6.2.7 Shipping offices (Section 11)

The Central Government may establish a shipping office at every port in India in which it thinks it necessary so to do, and shall appoint thereto a shipping master and as many deputy shipping masters and assistant shipping masters as it may consider necessary.

10.6.2.8 Formation of Shipping Development Fund (Section 14)

There shall be formed a fund to be called the Shipping Development Fund and there shall be credited thereto the amount of such grants as the Central Government may make for being credited to the Fund; the amount of any loans advanced by the Central Government to the Committee constituted under section 15 for carrying out the objects of the Fund; such sums of money as may, from time to time, be realised out of repayment of loans made from the Fund or from interest on loans or dividends from investments made from the Fund; such other sums as may be received for being credited to the Fund.

10.6.2.9 Liability of owners (Section 71)

Where any person is beneficially interested otherwise than by way of mortgage in any ship r share in a ship registered in the name of some other person as owner, the person so interested shall, as well s the registered owner, be subject to all the pecuniary penalties imposed by this or any other Act on the
owners of ships or shares therein, so nevertheless that proceedings for the enforcement of any such penalties may be taken against both or either of the said parties with or without joining the other of them.

10.6.2.10 Duties of shipping masters (Section 89)

It shall be the duty of shipping masters to superintend and facilitate the engagement and discharge of seamen in the manner provided in this Act; to provide means for securing the presence on board at the proper times of the seamen who are so engaged; to facilitate the making of apprenticeship to the sea service; to hear and decide disputes under section 132 between a master, owner or agent of a ship and any of the crew of the ship; to perform such other duties relating to seamen, apprentices and merchant ships as are for the time being committed to them by or under this Act.

10.6.2.11 Employment of children (Section 109)

No person under fifteen years of age shall be engaged or carried to sea to work in any capacity in any ship, except in a school ship, or training ship, in accordance with the prescribed conditions; or in a ship in which all persons employed are members of one family; or in a home-trade ship of less than two hundred tons gross; or where such person is to be employed on nominal wages and will be in the charge of his father or other adult near male relative.

10.6.2.12 **Receiving distressed seamen on ships (Section 163)**

The master of an Indian ship shall receive on board his ship and afford passage and maintenance to all distressed seamen whom he is required by the Indian consular officer to take on board his ship, and shall during the passage provide every such distressed seaman with accommodation equal to that normally provided for the crew of the ship and subsistence, proper to the rank or rating of the said distressed seaman. The master of a ship shall not be required to receive on board his ship a distressed seaman in terms of this section, if the Indian consular officer is satisfied that accommodation is not and cannot be made available for such seaman.

10.6.2.13 Power to exclude drunken passengers from passenger ships (Section 234)

The master of any passenger ship may refuse to receive on board thereof any person who by reason of drunkenness or otherwise is in such a state or misconduct's himself in such a manner as to cause annoyance or injury to passengers on board, and if any such person is on board, may put him on shore at any convenient place; and a person so refused admittance or put on shore shall not be entitled to the return of any fare he has paid.

10.6.2.14 Ship taking additional passengers at intermediate place (Section 256)

If any un-berthed passengers ship performing a voyage between ports or places in India takes additional un-berthed passengers on board at an intermediate port or place, the master shall obtain from the certifying officer at that port or place a
supplementary certificate stating the number of un-berthed passengers so taken on board; and that food, fuel and pure water over and above what is necessary for the crew, and the other things, if any, prescribed for the ship, have been placed on board, of the quality prescribed, properly packed and sufficient to supply the un-berthed passengers on board during the voyage which the ship is to make
(Including such detention in quarantine as maybe probable) according to the scale for the time being prescribed.

10.6.2.15 **Certain ships to carry medical officer and attendants (Section 259)**

Every ship carrying un-berthed passengers and crew not exceeding one thousand in number shall have on board as part of her complement at least one medical officer possessing such qualifications as may be prescribed. Every ship carrying un-berthed passengers and crew exceeding one thousand in number shall, in addition to a medical office have on board as part of her complement such number of medical attendants as may be prescribed. Every ship craving un-berthed passengers shall be provided with a hospital with such medical stores and equipment as may be prescribed.

10.6.2.16 Bringing passengers from foreign port in excess of authorized number prohibited (Section 260)

No owner, agent or master of an un-berthed passengers ship shall carry or cause to be carried from any port or place outside India to any port or place in India a number of passengers greater than the number allowed for the ship by or under this Part, or the number allowed by the license or certificate, if any, granted in respect of the ship at her port or place or departure, whichever number is less.

10.6.2.17 Collision regulations (Section 285)

The Central Government may make regulations for the prevention of collisions at sea, and may thereby regulate the lights and shapes to be carried and exhibited, the fog and distress signals to be carried and used, and the steering and sailing rules to be observed by Indian ships and sailing vessels registered in India. The collision regulations shall be observed by all foreign ships and sailing vessels within Indian jurisdiction, and in any case arising in any court in India concerning matters arising within Indian jurisdiction, such ships and ailing vessels shall, so far as respects the collision regulations and the aid provisions of this Act, be treated as if they were Indian ships or sailing vessels registered in India, as the case may be.

10.6.2.18 Observance of collision regulations (Section 286)

The owner or master of every ship and the owner or tindal of every sailing vessel to which section 285 applies shall obey the collision, regulations, and shall not carry or exhibit any lights or shapes or use any fog or distress signals, other than those required by the said regulations. If any damage to person or property arises from the non-observance by any such ship or sailing vessel of any of the collision regulations, the damage shall we deemed to have been occasioned by the wilful default of the person in charge of the ship or the sailing vessel, as the case may be, at the time unless it is shown to the satisfaction f the court that the circumstances of the case made a departure from the regulations necessary.

10.6.2.19 Power to make rules as to life saving appliances (Section 288)

The Central Government may make rules prescribing the life saving appliances to be carried by every Indian ship going to sea from any port or place in India. Such rules may provide for the arranging of ships into classes, having regard t the services in which they are employed, the nature and duration of the voyage and the number of persons carried ; the number, description and mode of construction of the boats, life-rafts, line throwing appliances, life-jackets and life-buoys to be carried by ships according to the classes in which the ships are arranged; the equipment to be carried by any such boats and rafts and the method to be provided to get the boats and other life saving appliances into the water, including oil for use in stormy weather; the provision in ships of a proper supply of lights inextinguishable in water and fitted for attachment to life-buoys; the quantity, quality and description of buoyant apparatus t be carried on board ships either in addition to or in substitution for boats, life-

rafts, life-jackets and life-buoys; the position and means of securing the boats, life-rafts, life-jackets, life-buoys and buoyant apparatus; the marking of boats, life-rafts, and buoyant apparatus so as to show their dimensions and the number of persons authorized to be carried on them; the manning of life boats and the qualification and certificates of life-boatmen; the provision to be made for mustering the persons on board and for embarking them in the boats ; the provision of suitable means situated outside the engine room whereby any discharge of water into the boats can be prevented; the assignment of specific duties to each member of the crew in case of emergency; the manner in which a notice given shall be communicated to the customs collector; the practice in ships of boat drills, and fire drills; the provision in ships of means of making effective distress signals by day and by night; the provision in ships, engaged on voyages in which pilots are likely to be embarked, of suitable pilot, ladders, and of ropes, light and other appliances designed to make the use of such ladders safe; the periodical examination of any appliances or equipment required by any rules \made under this Act to be carried by ships; and the fees to be charged for the grant of any certificate.

10.6.2.20 Rules relating to fire appliances (Section 289)

Central Government may make rules prescribing the methods to be adopted and the appliances to be carried by every Indian ship going to sea from any port or place in India for the prevention, detection and extinction of fire on the ship.

10.6.2.21 Carriage of dangerous goods (Section 331)

The Central Government may make rules for regulating in the interests of safety the carriage of dangerous goods in ships. Such rules may provide for the classification of such goods, the packing, marking and stowing of such goods or any class of goods and the fixing of the maximum quantity of any such class of goods which may be carried in different ships or classes of ships; The owner, master or agent of a ship carrying or intending to carry any dangerous goods as cargo and about to make a voyage from a port in India shall furnish in advance the prescribed particulars of the ship and the cargo to such authority as may be prescribed for the purpose. A surveyor may inspect the ship for the purpose of securing that any rules under this section are complied with.

10.6.2.22 Unseaworthy ship not to be sent to sea (Section 334)

Every person who sends or attempts to send an Indian ship to sea from any port in India in such an unseaworthy state that the life of any person is likely to be thereby endangered shall, unless he proves that he used all reasonable means to insure her being sent to sea in a seaworthy state or that her going to sea in such unseaworthy state was under the circumstances reasonable and justifiable, be guilty of an offence under this section. A ship is "unseaworthy" within the meaning of this Act where the materials of which she is made, her construction, the qualifications of the master, the number, description and qualifications of the crew including officers, the weight, description and stowage of the cargo and ballast, the condition f her hull and equipment, boilers and machinery are not such as to render her in every respect fit for the proposed voyage or service.

10.6.2.23 **Obligation of owner to crew with respect to seaworthiness (Section 335)**

In every contract of service, express or implied between the owner of an Indian ship and the master or any seaman thereof, and in every contract of apprenticeship whereby any person is bound to serve as an apprentice on board any such ship, there shall be implied, notwithstanding any agreement to the contrary, an obligation on the owner that such owner and the master, and every agent charged with the loading of such ship or the preparing thereof for sea, or the sending thereof to sea, shall use all reasonable means to ensure the seaworthiness of such ship for the voyage at the time when such voyage commences, and to keep her in a unseaworthy state during the voyage.

10.6.2.24 Power to detain unsafe ship and procedure for detention (Section 336)

Where an Indian ship in any port to which the Central Government may specially extend this section is an unsafe ship, that is to say, is by reason of the defective condition of her hull, equipment or machinery, or by reason of overloading or improper loading, unfit to proceed to sea without serious danger to human life, having regard to the nature of the service for which she is intended, such ship may be provisionally detained for the purpose of being surveyed and either finally detained or released.

10.6.2.25 Damages for personal injury (Section 346)

Whenever loss of life or personal injuries are suffered by any person on board a ship owing to the fault of that ship and of any other ship or ships, the liability of the owners of the ships concerned shall be joint and several.

10.6.2.26 Duty of master of ship to assist in case of collision (Section 348)

In every case of collision between two ships it shall be the duty of the master or person in charge of each ship, if and so far as be can do so without danger to his own ship, crew and passengers, if any to render to the other ship, her master, crew and passengers, if any, such assistance as may be practicable and may be necessary to save them from any danger caused by the collision and to stay by the other ship until he has ascertained that she has no need of further assistance, and to give to the masters or persons in charge of the other ships the name of his own ship and of the port to which she belongs and also the names of the ports from which she comes and to which she is bound.

10.6.2.27 Collision to be entered in official log (Section 349)

In every case of collision in which it is practicable so to do, the master of every ship concerned shall, immediately after the occurrence, cause a statement thereof and of the circumstances under which the same occurred to be entered in the official log book, if any, and the entry shall be signed by the master and also by the matte or one of the crew.

10.6.2.28 Report to Central Government of accidents to ships (Section 350)

When a ship has sustained or caused any accident occasioning loss of life or any serious injury to any person or has received any material damage affecting her seaworthiness or her efficiency either in her hull or is so altered in any part of her machinery as not to correspond with the particulars contained in any of the certificates issued under this Act in respect of the ship, the owner or master shall, within twenty-four hours after the happening of the accident or damage or as soon thereafter as possible, transmit to the Central Government or the nearest principal officer a report of the accident or damage and of the probable cause thereof stating

the name of the ship, her official number, if any, her port of registry and the place where she is.

10.6.2.29 Notice of loss of Indian ship to be given to Central Government (Section 351)

If the owner or agent of any Indian ship has reason, owing to the non-appearance of the ship or to any other circumstance, to apprehend that the ship has been wholly lost, he shall, as soon as conveniently may be, send to the Central Government notice in writing of the loss and of the probable cause thereof stating the name of the ship, her official number, if any, and her port of registry.

10.6.2.30 Limitation of liability of owner for damage (Section 352)

The owner of a ship, whether an Indian ship or not, shall not, if any loss of life or personal injury to any person, or any loss of or damage to any property or rights of any kind, whether movable or immovable is caused without his actual fault or privity, if no claim for damages in respect of loss of or damage to property or rights arises, be liable for damages in respect of loss of life or personal injury to an aggregate amount exceeding two hundred rupees for each ton of the ship's tonnage; or if no claim for damages in respect of loss of life or personal injury arises, be liable for damages in respect of loss of or damage to property or rights to an aggregate amount exceeding one hundred rupees for each ton of the ships tonnage; or if claims for damages in respect of loss of life or personal injury and also claims for damages in respect of loss of or damage to property or rights arise, be liable for damages to an aggregate amount exceeding two hundred rupees for each ton of the ship's tonnage.

10.6.2.31 Duty to report dangers to navigation (Section 354)

The master of any Indian ship on meeting with dangerous ice, a dangerous direct, a tropical storm or any other direct danger to navigation shall send information accordingly by all means of communication at his disposal and in accordance with such rules as the Central Government may make in this behalf to ships in the vicinity and to such authorities on shore as may be prescribed by those rules.

.

10.6.2.32 Obligation to render assistance on receiving signal of distress (Section 355)

The master of an Indian ship on receiving at sea a signal of distress r information from any source that a vessel or aircraft is in distress (informing them if possible that he is doing so) unless he is unable or in the special circumstances of the case considers it unreasonable or unnecessary to do so.

10.6.2.33 Shipping casualties and report thereof (Section 358)

For the purposes of investigations and inquires a shipping casualty shall be deemed to occur when on or near the coasts of India, any ship is lost, abandoned, stranded or materially damaged; on or near the coasts of India, and ship because loss or material damage to any other ship; any loss of life ensues by reason of any casualty happening to or on board any ship on or near the coasts of
India; in anyplace, any such loss, abandonment, stranding, material damage or casually as above mention occurs to or on board any Indian ship, and any competent witness thereof is found in India; any India ship is lost or is supposed to have been lost any evidence is obtainable in India as to the circumstances under which she proceeded to sea or was last heard of. The master, pilot, harbour master or other person in charge of the ship, or in charge of each ship at the time of the shipping casualty shall, on arriving in India, give immediate notice of the shipping casualty to the officer appointed in this behalf by the Central Government.

10.6.2.34 Power to investigate causes of explosion or fire on board ship (Section 388)

Whenever any explosion or fire occurs on board any ship or ear the costs India, the Central Government may direct that an investigation it no the causes of explosion or fire be made by such or persons as it thinks fit.

10.6.2.35 Report to be made regarding cause of explosion or fire (Section 389)

The person or persons referred to in section 388 may go on board the ship on which the explosion or fire has occurred with all necessary workmen and labourers , and remove any portion of the ship, or of the machinery thereof, for the purpose of the investigation, and shall

report to the Central Government or the person duly appointment by its, as the case maybe, what in his or their opinion was the case of the explosion or fire.

10.6.2.36 Prevention of overloading or overcrowding (Section 420)

The Central Government may make rules regulating the carriage of cargo or passengers in sailing vessels and the protection of life and property on board such vessels. Such rules may provide for the assignment of free board to sailing vessels; the marking of such free board on such vessels and the maintenance of such markings; the survey of the space allotted to passengers on board such vessels; the scale and type of accommodation to be provided for each passenger.

10.6.2.37 Detention of overloaded non-Indian sailing vessels (Section 432)

If any sailing vessel registered in any country outside India arrives in or proceeds from a port or place in India in an overloaded condition, the person in charge of the vessel shall be guilty of an offence under this section. A sailing vessel shall be deemed to be in an overloaded condition for the purposes of this section where the vessel is loaded beyond the limit specified in any certificate issued in the country in which she is registered; or in case no such certificate has been issued in respect of the vessel where the actual free board of the vessel is less than the free board which would have been assigned to her had she been registered under this Part. Any sailing vessel which is in an overloaded condition and is about to proceed from a port or place in India may be detained until she ceases to be in an overloaded condition.

10.6.2.38 Power to enforce detention of ship (Section 444)

Where under this Act, a ship is authorized or ordered to be detained, any commissioned officer of the Indian Navy or any port officer, pilot, harbour master, conservator of port or customs collector may detain the ship. If any ship after detention or after service on the master for any notice of, or order for, such dentition proceeds to sea before she is released any competent authority, the master of the ship shall be guilty of an offence under this section.

10.6.2.39 Inquiry into cause of death on board Indian ship (Section 452)

If any person dies on board a foreign-going Indian ship, the proper officer at the port where the crew of the ship is discharged, or the proper officer at any earlier port of call in India, shall, in the arrival of the ship at the port, inquire into the cause of death, and shall make in the official log book and endorsement to the effect, either that the statement of the cause of detain the book is in his opinion true, or the contrary, according to the result of the inquiry. If, in the course off any such inquiry, it appears to the proper officer that a death has been caused on board the ship by violence or other improper means, he shall either report the matter to the Director-General or, if the emergency of the cases requires, shall make immediate steps for bringing the off render to trial.

10.7.0 CARRIAGE BY AIR ACT 1972

10.7.1 OBJECTIVE AND SCOPE

The Act is enacted to give effect to the Convention for the unification of certain rules relating to international carriage by air signed at Warsaw on the 12th day of October, 1929 and to the said Convention as amended by the Hague Protocol on the 28th day of September, 1955 and to make provision for applying the rules contained in the said Convention to non-international carriage by air. India is a signatory to the Warsaw Convention of 1929 which is an International Agreement governing the liability of the air carrier in respect of international carriage of passengers, baggage and cargo by air. The Warsaw Convention has been given effect to in India by the enactment of the Indian Carriage By Air Act, 1934 in regard to international carriage and the provisions of that Act have been extended to domestic carriage, subject to certain exceptions, adaptations and modifications, by means of a notification issued in 1964. A diplomatic conference under the auspices of International Civil Aviation Organisation was held at Hague in September 1955, which adopted a protocol to amend the provisions of the Warsaw Convention. The Hague Protocol came into force between the ratifying States on 1st August 1963. Some of the amendments effected by the Hague Protocol to the Warsaw Convention are simplification of documents of carriage, increase in the amount specified as the maximum sum for which the carrier may be liable to a passenger,

making the carrier liable where the damage was caused by an error in piloting or in the handling of the aircraft or in navigation etc.

10.7.2 RELEVANT PROVISIONS OF THE ACT

10.7.2.1 Definitions (Section 2)

(i) "Amended Convention" means the Convention as amended by the Hague Protocol, on the 28th day of September 1955;

(ii) "Convention" means the Convention for the unification of certain rules relating to international carriage by air signed at Warsaw on the 12th day of October. 1929.

10.7.2.2Application of Convention to India (Section 3)

Rules contained in the First Schedule relating to the rights and liabilities of carriers, passengers, consignors, consignees and other persons shall, subject to the provisions of this Act. The Central Government may, by notification in the Official Gazette, certify who are the High Contracting Parties to the Convention, in respect of what territories they are parties and to what extent they have availed themselves of the provisions of rule 36 in the First Schedule and any such notification shall be conclusive evidence of the matters certified therein. Any reference in the First Schedule to the territory of any High Contracting Party to the Convention shall be construed as a reference to all the territories in respect of which he is a party. Any reference in the Fist Schedule to agents of the carrier shall be construed as including a reference to servants of the carrier.

10.7.2.3Application of amended Convention to India (Section 4)

The rules contained in the Second Schedule, being the provisions of the amended Convention relating to the rights and liabilities of carriers, passengers, consignors, consignees and other persons, shall, subject to the previsions of this Act, have the force of law in India in relation to any carriage by air to which those rules apply, irrespective of the nationality of the aircraft performing the carriage. The Central Government may, by notification in the Official Gazette, certify who are the High Contracting Parties to the amended Convention and in respect of what territories they are parties, and any such notification shall be conclusive evidence of the matters certified therein. Any reference in the Second Schedule to the

territory of any High Contracting Party to the amended Convention shall be construed as a reference to all the territories in respect of which he is a party.

10.7.2.4 Liability In case of death (Section 5)

Rules contained in the First Schedule and in the Second Schedule shall, in all cases to which those rules apply, determine the liability of a carrier in respect of the death of a passenger. The liability shall be enforceable for the benefit of such of the members of the passenger's family as sustained damage by reason of his death.

10.7.2.5 Provisions regarding suits against High Contracting Parties who undertake carriage by air (Section 7)

Every High Contracting Party to the Convention or the amended Convention, as the case may be, who has not availed himself of the provisions of the Additional Protocol thereto shall, for the purposes of any suit brought in a Court in India in accordance with the provisions of rule 28of the First Schedule, or of the Second Schedule, as the case may be, to enforce a claim in respect of carriage undertaken by him, be deemed to have submitted to the jurisdiction of that Court and to be a person for the purposes of the Code of Civil Procedure, 1908.

10.7.2.6 Application of Act to carriage by air, which is not international (Section 8)

Central Government may, by notification in the Official Gazette, apply the rules contained in First Schedule and any provision of section 3-orsection 5-orsection 6-to such carriage by air, not being international carriage by air as defined in the First Schedule, as may be specified in the notification, subject, however, to such exceptions, adaptations and modifications, if any, as may be so specified. The Central Government may, by notification in the Official Gazette, apply the rules contained in the Second Schedule and any provisions of section 4-orsection 5-orsection 6-to such carriage by air, not being international carriage by air as defined in the Second Schedule, as may be specified in the notification, subject, however, to such exceptions, adaptations and modifications, if any, as may be so specified.

THE FIRST SCHEDULE

(1) These rules apply to all international carriage of persons, luggage or goods performed by aircraft for reward. They apply also to such carriage when performed gratuitously by an air transport undertaking.

(2) In these rules, "High Contracting Party" means a High Contracting Party to the Convention.

(3) For the purposes of these rules the expression, "international carriage" means any carriage in which according to the contract made by the parties, the place of departure and the place of destination, whether or not there be a break in the carriage or a transhipment, are situated either within the territories of two High Contracting Parties, or within the territory of a single High Contracting Party, if there is an agreed stopping place within a territory subject to the sovereignty, suzerainty, mandate or authority of another Power, even though that Power is not a party to the Convention. A carriage without such an agreed stopping place between territories subject to the sovereignty, suzerainty, mandate or authority of the same High Contracting Party is not deemed to be international for the purposes of these rules.

(4) A carriage to be performed by several successive air carriers is deemed, for the purposes of these rules to be one undivided carriage, if it has been regarded by the parties as a single operation, whether it has been agreed upon under the form of a single contract or of a series of contracts, and it does not lose its international character merely because one contract or a series of contracts is to be performed entirely within a territory subject to the sovereignty, suzerainty, mandate or authority of the same High Contracting Party,

THE SECOND SCHEDULE

(1) These rules apply to all international carriage of persons, baggage or cargo performed by aircraft for reward. They apply equally to gratuitous carriage by aircraft performed by an air transport undertaking.

(2) In these rules, "High Contracting Party" means a High Contracting Party to the amended Convention.

(3) For the purposes of these rules, the expression "international carriage" means any carriage in which, according to the agreement between the parties, the place of departure and the place

of destination, whether or not there be a break in the carriage or a transhipment, are situated either within the territories of two High Contracting Parties or within the territory of a single High Contracting Party if there is an agreed stopping place within the territory of another State, even if that State is not a High Contracting Party. Carriage between two points within the territory of a single High Contracting Party without an agreed stopping place within the territory of another State is not international carriage for the purposes of these rules.

(4) Carriage to be performed by several successive air carriers is deemed, for the purposes of these rules, to be one undivided carriage if it has been regarded by the parties as a single operation, whether it had been agreed upon under the form of a single contract or of a series of contracts and it does not lose its international character merely because one contract or a series of contracts is to be performed entirely within the territory of the same State.

10.8.0 THE INLAND WATERWAYS AUTHORITY OF INDIA ACT, 1985

10.8.1 OBJECTIVE AND SCOPE

The Inland Water Ways Authority of India Act, 1985 provides for the constitution of an Authority for the regulation and development of inland waterways for purposes of shipping and navigation and for matters connected therewith or incidental thereto. The Act further provides for the Conditions of service of members of the Inland Waterways Authority of India, powers of Chairman and Vice-Chairman, removal of members, etc. The Authority is empowered to constitute such Advisory Committees, from time to time, as may be necessary for the efficient discharge of its functions.

10.8.2 RELEVANT PROVISIONS OF THE ACT

10.8.2.1 Constitution and incorporation of the Inland Waterways Authority of India (Section 3)

The Act provides for the constitution and incorporation of the Inland Waterways Authority of India by the central government. The Authority shall be a body corporate having perpetual succession and a common seal with power, subject to the provisions of this Act, to acquire, hold and dispose of property, both movable and immovable, and to contract and shall by the said name sue and be sued

10.8.2.2 Functions of the Authority (Section 14)

The Authority may-

(a) Carry out surveys and investigations for the development, maintenance and better utilisation of the national waterways and the appurtenant land for shipping and navigation and prepare schemes in this behalf.

(b) Provide or permit setting up of infrastructural facilities for national waterways.

(c) Carry out conservancy measures and training works and do all other acts necessary for the safety and convenience of shipping and navigation and improvement of the national waterways.

(d) Control activities such as throwing rubbish, dumping or removal of material, in or from the bed of the national waterways and appurtenant land, in so far as they may affect safe and efficient, shipping and navigation, maintenance of navigable channels, river training and conservancy measures.

(e) Remove or alter any obstruction or impediment in the national waterways and the appurtenant land which may impede the safe navigation or endanger safety of infrastructural facilities or conservancy measures where such obstruction or impediment has been lawfully made or has become lawful by reason of long continuance of such obstruction or impediment or otherwise, after making compensation to person suffering damage by such removal or alteration.

(f) Provide for the regulation of navigation and traffic (including the rule of the road) on national waterways.

(g) Regulate the construction or alteration of structures on across or under the national waterways.

(h) Disseminate navigational meteorological information about national waterways.

(i) Ensure co-ordination of inland water transport on national waterways with other modes of transport.

(j) Establish and maintain pilot age on national waterways.

(k) Enter into joint ventures concerning inland shipping by way of equity participation.

(l) Advise the Central Government on matters relating to inland water transport.

(m) Study the transport requirement with a view to coordinating inland water transport with other modes of transport.

(n) Carry out hydrographic surveys and publish river charts.

(o) Assist, on such terms and conditions as may be mutually agreed upon, any State Government in formulation and implementation of scheme for inland water transport development.

(p) Develop consultancy services and provide such services, on such terms and conditions as may be mutually agreed upon, in India and abroad in relation to planning and development of waterways for shipping and navigation or any facility thereat.

(q) Conduct research in matters relating to inland water transport including development of craft design mechanisation of country crafts, technique of towage, landing and terminal facilities, port installations and survey techniques.

(r) Lay down standards for classification of inland waterways.

(s) Arrange programme of technical training for inland water transport personnel within and outside the country; and

(t) Perform such other functions as may be necessary to carry out the provisions of this Act.

necessary or reject the scheme with directions to the Authority to prepare a fresh scheme according to such directions.

10.8.2.3 Power of Central Government to supersede the Authority (Section 33)

If, at any time, the Central Government is of opinion that -

(a) On account of a grave emergency, the Authority is unable to discharge the functions and duties imposed on it under the provisions of this Act; or

(b) The Authority has persistently made default in complying with any direction issued by the Central Government under this Act or;

(c) Circumstances exist which render it necessary in the public interest so to do

-the Central Government may, by notification in the Official Gazette, supersede the Authority for such period, not exceeding six months, as may be specified in the notification:

10.9.0 MOTOR VEHICLES ACT 1988

10.9.1OBJECTIVE AND SCOPE: Act aims to consolidate and amend the law relating to motor vehicles.

10.9.2 RELEVANT PROVISIONS OF THE ACT -

10.9.2.1 **Definitions**-

1**."Certificate of registration"** means the certificate issued by a competent authority on successful registration of a motor vehicle in accordance with the provisions of this Act.

2. **"contract carriage**" means a motor vehicle which carries passengers for hire or reward and is engaged under a contract for the use of such vehicle for the carriage of passengers and is entered into on a time basis or from one point to another without stopping to pick up or set down passengers anywhere during the journey.

3. "**Driving license**" means the license issued by a competent authority authorising the person specified therein to drive a motor vehicle of any specified class or description.

4. "**Transport vehicle**" means a public service vehicle, a goods carriage, an educational institution bus or a private service vehicle.

10.9.2.**2 Necessity for driving license (Section 3)** –
No person shall drive a motor vehicle in any public place unless he holds an effective driving license issued to him authorising him to drive the vehicle. No person shall drive a transport vehicle unless his driving license specifically entitles him so to do.

10.9.2.3 **Age limit in connection with driving of motor vehicles (Section 4)** –

No person under the age of eighteen years shall drive a motor vehicle in any public place. No person under the age of twenty years shall drive a transport vehicle in any public place.

10.9.2.4 **Grant of driving license (Section 9)**-

Any person who is not disqualified for holding a driving license may apply to the licensing for issue to him of a driving license.

10.9.2.5 **Extent of effectiveness of licenses, to drive motor vehicles (Section 13)**-

A learner's license or a driving license issued under this Act shall be effective throughout India.

10.9.2.**6 Power of licensing authority to disqualify from holding a driving license or revoke such license (Section 19)** –

If a licensing authority is satisfied that holder of a driving license

(a) Is a habitual criminal or a habitual drunkard; or

(b) Is a habitual addict to any narcotic drug or psychotropic substance or

(c) Is using or has used a motor vehicle in the commission of a cognizable offence;

(d) Has by his conduct shown that his driving is dangerous to the public; or

(e) Has obtained any driving license by fraud or misrepresentation; or

(f) Has committed any act which is likely to cause nuisance or danger to the public; or

(g) Has not passed the necessary tests;

Make an order disqualifying that person for a specified period for holding or obtaining any driving license or revoke any such license.

10.9.2.**7 Power of Court to disqualify (Section 20**)-

Where a person is convicted of an offence under this Act Court convicted such person can declare the persons so convicted to be disqualified from holding any driving license for a specified period.

10.9.2.8 **Necessity for registration (Section 39)**-

All vehicles have to be compulsorily registered and should display the registration mark in the prescribed manner.

10.9.2.9 **Duty to obey traffic signs (Section 119)** –

Every driver of a motor vehicle will obey the traffic signals and comply with directions given by traffic police.

10.9.2.10 **Wearing of protective headgear (Section 129)**-

Every person driving or riding shall wear a protective headgear. "Protective headgear" means a helmet which by virtue of its shape, material and construction could be expected to afford to the person driving or riding protection from injury in case of an accident and is securely fastened to the head of the wearer by means of straps.

10.9.2.11 **Duty of driver in case of accident and injury to a person (Section 134)** -

When any person is injured or any property of a third party is damaged due to accident involving a motor vehicle driver of the vehicle should take steps to bring medical help for the injured person.

10.9.2.12 **Liability to pay compensation in certain cases on the principle of no fault (Section 140)**

If death or permanent disablement of any person occurs due to an accident from any motor vehicle, the owner of the vehicle shall be jointly and severally liable to pay compensation in respect of such death or disablement. The claim for compensation is independent of any wrongful act, neglect or default of the person in respect of whose death or permanent disablement the claim has been made.

10.9.2.13 **Necessity for insurance against third party risk (Section 146) -** .

Any person using a motor vehicle in a public place should compulsorily have a insurance policy. Policy of insurance must be a policy which (a) is issued by a person who is an authorized insurer; and (b) insures the person or classes of persons specified against any liability which may be incurred by him in respect of the death of or bodily injury to any person or damage to any property of a third party; against the death of or bodily injury to any passenger of a public service vehicle (Section 147)

10.9.2.14 **Claims Tribunals (Section 165)**

State Government will constitute Motor Accidents Claims Tribunals for adjudicating upon claims of compensations under this Act.

10.10.0 THE RAILWAYSACT,1989

10.10.1 OBJECTIVE AND SCOPE

The construction of Railways in India was started in 1849 by the East India Company. With the passage of time the Government of India has for several years been striving to induce capital to undertake the construction of railways in India at their own risk and on their own responsibility. From 1869 onwards numerous railway lines were opened and worked with Government capital. The Indian Railways Act, 1890 was the first legislation of its kind to govern the law relating to railways. This Act was amended from time to time to give effect to the changes in the railway system. The need was felt by the Government of India to replace this Act by a new legislation. The Railway Bill was passed by both the Houses of Parliament and was assented by the President on 3rd June, 1989 and became The Railways Act, 1989. It came into force on 1st July, 1990. This Act was enacted to consolidate and amend the law relating to Railways.

10.10.2 **RELEVANT LEGAL PROVISIONS OF THE ACT**

10.10.2.1 Definitions

a) "Authorized" means authorized by a railway administration;
b) "Carriage" means the carriage of passengers or goods by a railway administration;
c) "Claims Tribunal" means the Railway Claims Tribunal established under section 3 of the Railway Claims Tribunal Act, (54 of 1987);
d) "Commissioner" means the Chief Commissioner of Railway Safety or the Commissioner of Railway Safety appointed under Section 5;
e) "General Manager" means the General Manager of a Zonal Railway appointed under section 4;
f) "Goods" includes-;
    (i) Containers, pallets or similar articles of transport used to consolidate ; goods; and
    (ii) Animals;

g) "Government railway" means a railway owned by the Central Government;

h) "Level crossing" means an inter-section of a road with lines of rails at the same level;

i) "Non-Government railway" means a railway other than a Government railway;

j) "passenger" means a person travelling with a valid pass or ticket;

k) "prescribed" means prescribed by rules made under this Act;

l) "railway" means a railway, or any portion of a railway, for the public carriage of passengers or goods, and includes--

i. All lands within the fences or other boundary marks indicating the limits of the land appurtenant to a railway;

ii. All lines of rails, sidings or yards or branches used for the purposes of, or in connection with, a railway;

iii. All electric traction equipments, power supply and distribution installations used for the purposes of, or in connection with, a railway;

iv. All rolling stock, stations, offices, warehouses, wharves, workshops, manufactories, fixed plant and machinery, roads and streets, running rooms, rest houses, institutes, hospitals, water works and water supply installations, staff dwellings and any other works constructed for the purpose of, of in connection with, a railway;

v. All vehicles which are used on any road for the purposes of traffic of a railway and owned, hired or worked by a railway; and

vi. All ferries, ships, boats and rafts, which are used on any canal, river, lake or other navigable inland waters for the purposes of the traffic of railway and owned, hired or worked by a railway administration,

But does not include -

i. A tramway wholly within a municipal area; and

ii. Lines of rails built in any exhibition ground, fair, park, or any other place solely for the purpose of recreation;

m) "Railway administration", in relation to -

(a) A Government railway, means the General Manager of a Zonal Railway; and

(b) A non-Government railway; means the person who is die owner or lessee of the railway or the person working the railway under an agreement;

n) "Railway servant" means any person employed by the Central Government or by a railway administration in connection with the service of a railway;
o) “Rolling stock” includes locomotives, lenders, carriages, wagons, rail cars, containers, trucks, trolleys and vehicles of all kinds moving on rail.
p) "Zonal Railway" means a Zonal Railway constituted under section 3.

10.10.2.2 Zonal Railways (Section 3)

This section confers power on the Central Government to constitute Zonal Railways for efficient functioning of administration by a notification in the Official Gazette. The Zonal Railways which were constituted under the old Act would function as such until there is any change or abolition under the Railways Act 1989. Any change or abolition of any zonal railway may be made by the Central Government under the notification in the official Gazette.

10.10.2.3 Appointment of Chief Commissioner of Railway Safety and Commissioners of Railway Safety (Section 5)

The Central Government may appoint a person to be the Chief Commissioner of Railway Safety and such other persons as Commissioners of Railway Safety.

10.10.2.4 Duties of Commissioner (Section 6)

Section 6 of the Act lays down the duties of the Commissioner which are as follows-

(a) He shall inspect any railway with a view to determine whether it is fit to be opened for the public carriage of passengers and report thereon to the Central Government as required under this Act.

(b) He shall make such periodical or other inspections of any railway or of any rolling stock used thereon as the Central Government may direct.

(c) He shall make an inquiry under this Act into the cause of any accident on a railway.

(d) He shall discharge such other duties as are conferred on him by or under this Act.

10.10.2.5 Powers of Commissioner (Section 7)

Subject to the control of the Central Government, the Commissioner, whenever it is necessary so to do for any of the purpose of this Act, may:

(a) Enter upon and inspect any railway or any rolling stock used thereon;

(b) By an order in writing addressed to a railway administration, require the attendance before him or any railway servant and to require answers or returns to such inquiries as he-links fit to make from such railway servant or from the railway administration; and

(c) Require the production of any book, document or material object belonging to or in the possession control of any railway administration which appears to him to be necessary to inspect.

10.10.2.6 Commissioner to be public servant (Section 8)

The Commissioner shall be deemed to be a public servant within the meaning of section 21 of the Indian Penal Code 1860 for the purpose of invoking penal provision against the person.

10.10.2.7 Power of railway administrations to execute all necessary works (Section 11)

A railway administration has unfettered power to execute all work relating to-

(a) Make or construct in or upon, across under or over any lands, or any streets, hills, valleys, roads, railway, tramways, or any rivers, canals, brooks, streams or other waters, or any drains, water pipes, gas-pipes, oil-pipes, sewers, electric supply lines, or telegraph lines, such temporary or permanent inclined-planes, bridges, tunnels, culverts, embankments, acquaducts, roads, lines of railways, passages, conduits, drains, piers, cuttings and fences, in-take wells, tube wells, dams, river training and protection works as it thinks proper;

(b) Alter the course of any rivers, brooks, streams or other water courses, for the purpose of constructing and maintaining tunnels, bridges, passages or other works over or under them and divert or alter either temporarily or permanently, the course of any rivers, brooks, streams or other water courses or any roads, streets or ways, or raise or sink the level thereof, in order to carry them more conveniently over or under or by the side of the railway;

(c) Make drains or conduits into, through or under any lands adjoining the railway for the purpose of conveying water from or to the railway;

(d) Erect and construct such houses, warehouses, offices and other buildings, and such yards, stations, wharves, engines, machinery apparatus and other works and conveniences as the railway administration thinks proper;

(e) Alter, repair or discontinue such buildings, works and conveniences as aforesaid or any of them and substitute others in their stead;

(f) Erect, operate, maintain or repair any telegraph and telephone lines in connection with the working of the railway;

(g) Erect, operate, maintain or repair any electric traction equipment, power supply and distribution installation in connection with the working of the railway; and

(h) Do all other acts necessary for making, maintaining, altering or repairing and using the railway.

10.10.2.8 Temporary entry upon land to remove obstruction, to repair or to prevent accident (Section 14)

A) Where in the opinion of a railway administration -

(a) There is imminent danger that any tree, post or structure may fall on the railway so as to obstruct the movement of rolling stock; or

(b) Any tree, post, structure or light obstructs the view of any signal provided for movement of rolling stock; or

(c) Any tree, post or structure obstructs any telephone or telegraph line maintained by it,

-it may take such steps as may be necessary to avert such danger or remove such obstruction and submit a report thereof to the Central Government in such manner and within such time as may be prescribed.

B) Where in the opinion of a railway administration-

(a) A slip or accident has occurred; or

(b) There is apprehension of any slip or accident to any cutting embankment or other work on a railway.

-it may enter upon any lands adjoining the railway and do all such works as may be necessary for the purpose of repairing or preventing such slip or accident and submit a report thereof to the Central Government in such manner and within such time as may be prescribed.

C) The Central Government may, on the basis of a report submitted to it direct that in the interest of public safety further action shall be stopped or the same shall be subject to such conditions as may be specified in that order.

10.10.2.9 Payment of amount for damage or loss (Section 15)

This section provides for certain pre-condition for filing a suit against a railway administration to recover any amount for any damage or loss caused to the aggrieved party in the exercise of the powers conferred by railway administration under section 11, 12, 13, 14 of the Act. These conditions are-

i) A railway administration pays or tenders payment for damages or loss to the aggrieved party, no suit will lie. But if any dispute is raised as to the sufficiency of amount so paid or tendered, the railway administration shall immediately refer the dispute for the decision of the District Judge within whose jurisdiction the subject matter of the dispute falls for his decision.

ii) if the railway administration fails to make a reference within sixty days from the date of commencement of the dispute, the District Judge may, on an application made to him by the person concerned direct the railway administration to refer the dispute for his decision.

10.10.2.10 Fences, gates and bars (Section 18)

The Central Government may, within such time as may be specified by it or within such further time, as it may grant, require that -

(a) Boundary marks or fences be provided or renewed by a railway administration for a railway or any part thereof and for roads constructed in connection therewith;

(b) Suitable gates, chains, bars, stiles or hand-rails be erected or renewed by a railway administration at level crossings;

(c) Persons are employed by a railway administration to open and shut gates, chains or bars.

10.10.2.11 Over bridges and under-bridges (Section 19)

This section provides that a railway administration shall require the State Government or local authority to consent to the construct of over bridges and under bridges across a public road in the interest of public safety. The railway administration shall also require the Stale Government or the local authority to share the cost of the work and expenses of maintenance thereof. In the case of any difference of opinion between the railway administration and the State Government or the local authority, as the case may be, it shall be referred to the Central Government, whose decision shall be Final.

10.10.2.12 Power of Central Government to give directions for safety (Section 20)

This Section empowers the Central Government to give direction to any person or authority for safety.

10.10.2.13 Temporary suspension of traffic (Section 24)

Temporary suspension of traffic is permissible when an accident occurs on a railway for the purpose of restoring communication without prior inspection by the Commissioner under the following circumstances:

(a) The railway servant in-charge of the work has certified in writing that the opening of the restored lines of rails and work, or of the temporary diversion will not in his opinion be attended with danger to the public; and

(b) A notice of the opening of the lines of rails and works or the diversion shall be sent immediately to the Commissioner.

10.10.2.14 Power to close railway opened for the public carriage of passengers (Section 25)

Where, after the inspection of any railway opened and used for the public carriage of passengers or any rolling stock used thereon, the Commissioner is of the opinion that the use of the railway or of any rolling stock will be attended with danger to the public using it, the Commissioner shall send a report to the Central Government who may thereupon direct that

(i) The railway be closed for the public carriage of passengers: or

(ii) The use of the rolling stock be discontinued; or

(iii)The railway or the rolling stock may be used for the public carriage of passengers subject to such conditions as it may consider necessary for the safety of the public.

10.10.2.15 Power to refuse to carry persons suffering from infectious or contagious diseases (Section 56)

a) A person suffering from infectious or contagious diseases, shall not enter or remain in any carriage on a railway or travel in train without the permission of a railway servant authorized in this behalf.

b) Even if permission is given the railway servant shall arrange for the separation of the person suffering from such disease from other persons in the train.

c) if such person enters or remains in a train without permission of the railway servant, such person and a person accompanying him shall be liable to the forfeiture of their passes or tickets and removal from railway by any railway servant.

10.10.2.16 Maximum number of passengers for each compartment (Section 57)

It was observed by the court in Ishwar das v. King Emperor AIR 1922 Pat 8; 23 Cr LJ 257 In order to prevent any danger to the health and life of passengers, this section provides a limit of passengers to occupy a compartment. The capacity of the compartment must be exhibited in some conspicuous place inside or outside the compartment.

10.10.2.17 Carriage of dangerous or offensive goods (Section 67)

This Section prohibits a person taking with him or her consigning on railway dangerous or offensive goods without distinctive mark on the outside of the package. A railway servant has an authority to deal with such goods. A person sending a dangerous article by railway without notifying its characters to railway servant is liable for any accident resulting from his negligence in combination with other causes which he did not contemplate. It was observed by the Court in *E.I. Rly v Kalidas Mukherjee (1899)26 Cal 465* that Fire- works are dangerous goods within the meaning of this section.

10.10.2.18 Carriage of animals suffering from infectious or contagious diseases (Section 68)A railway administration shall not be bound to carry any animal suffering from such infectious or contagious disease as may be prescribed.

10.10.2.19Railway administration against which application for compensation for personal injury is to be filed (Section 109)

An application before the Claims Tribunal for compensation for the loss of life or personal injury to a passenger, may be instituted against,

(a) The railway administration from which the passenger obtained his pass or purchased his ticket, or

(b) The railway administration on whose railway the destination station lies or the loss or personal injury occurred.

10.10**.2.20 Extent of liability of railway administration in respect of accidents at sea (Section 111)**

This section deals with extent of liability of railway administration in respect of accidents at sea where a railway administration contracts to carry passengers or goods partly by railway and partly by sea, a condition exempting the railway administration from responsibility for any loss of life, personal injury or loss of or damage to goods which may happen during the carriage by sea from act of Cod, public, enemies, fire, accidents from machinery, boilers and steam and all and every other dangers and accidents of the seas, rivers and navigation of whatever nature and kind shall, without being expressed, be deemed to be part of the contract, and, subject to that condition, the railway administration shall, irrespective of the nationality or ownership of the ship used for the carriage by sea, be responsible for any loss of life, personal injury or loss of or damage to goods which may happen during the carriage by sea, to the extent to which it would be responsible under the Merchant Shipping Act, 1958, [43 of 19581 if the ships were registered under that Act and the railway administration were owner of the ship and not to any greater extent.

The burden of proving that any such loss, injury or damage as happened during the carriage by sea shall lie on the railway administration.

10.10.2.21 Notice of railway accident (Section 113)

(1) Where, in the course of working a railway, -

(a) Any accident attended with loss of any human life, or with grievous hurt, as defined in the Indian Penal Code, [45 of 1860] or with such serious injury to property as may be prescribed; or

(b) Any collision between trains of which one is a train carrying passengers; or

(c) The derailment of any train carrying passengers, or of any part of such train; or

(d) Any accident of a description usually attended with loss of human life or with such grievous hurt as aforesaid or with serious injury to property; or

(e) Any accident of any other description which the Central Government may notify in this behalf in the Official Gazette,

occurs, the station master of the station nearest to the place at which the accident occurs or where there is no station master, the railway servant in charge of the section of the railway on which the accident occurs shall, without, delay, give notice of the accident to the District Magistrate and Superintendent of Police, within whose jurisdiction the accident occurs, the officer in charge of the police station within the local limits of which the accident occurs and to such other Magistrate or police officer as may be appointed in this behalf by the Central Government.

The railway administration within whose jurisdiction the accident occurs, as also the railway administration to whom the train involved in the accident belongs, shall without delay, give notice of the accident to the State Government and the Commissioner having jurisdiction over the place of the accident.

10. 10.2.22 Inquiry by Commissioner (Section 114)

On the receipt of a notice under section 113 of the occurrence of an accident to a train carrying passengers resulting in loss of human life or grievous hurt causing total or partial disablement of permanent nature to a passenger or serious damage to railway property, the Commissioner shall, notify the railway administration in whose jurisdiction the accident occurred of his intention to hold an inquiry into the causes that led to the accident and shall at the same time fix and communicate the date, time and place of inquiry.

10.10.2.23 Inquiry by railway administration (Section 115)

If no inquiry is held by the Commissioner under section 114 of the Act, it is the bounded duty of the concerned railway administration within whose jurisdiction the accident occurs, shall cause an inquiry to be made in accordance with the prescribed procedure.

10.10.2.24 Powers of Commissioner in relation to inquiries (Section 116)

- For the purpose of conducting an inquiry under this Chapter into the causes of any accident on a railway, the Commissioner shall, in addition to the powers specified in section 7, have the powers as are vested in a civil court while trying a suit under the Code of Civil Procedure, 1908, [5 of 1908] in respect of the following matters, namely :-

  (a) Summoning and enforcing the attendance of persons and examining them on oath;

  (b) Requiring the discovery and production of documents;

  (c) Receiving evidence on affidavits;

  (d) Requisitioning any public record or copies thereof from any court or office;

  (e) any other matter which may be prescribed.

- The Commissioner while conducting an inquiry under this Chapter shall be deemed to be a Civil Court for the purposes of section 195 of the Code of Criminal Procedure, 1973.

10.10.2.25 Statement made before Commissioner (Section 117)

No statement made by a person in the course of giving evidence in an inquiry before the Commissioner shall subject him to, or be used against him in, any civil or criminal proceeding, except a prosecution for giving false evidence by such statement :

Provided that the statement is -

(a) Made in reply to a question which is required by the Commissioner to answer.

(b) Relevant to the subject-matter of the inquiry.

10.10.2.26 Procedure, etc (Section 118)

Any railway administration or the Commissioner conducting an inquiry under this Chapter may send notice of the inquiry to persons, follow procedure, and prepare the report in a manner as may be prescribed.

10.10.2.27 No inquiry, investigation, etc, to be made if the Commission of Inquiry is appointed (section 119)

In case of appointment of Commission of Inquiry is appointed under the Commissions of Inquiry Act, 1952 to inquire into an accident, the inquiry by the Commissioner shall not be proceed with.

10.10.2.28 Inquiry into accident not covered by section 113 (Section 120)

Where any accident of the nature not specified in section 113 occurs in the course of working a railway, the railway administration within whose jurisdiction the accident occurs, may cause such inquiry to be made into the causes of the accident, as may be prescribed.

10.10.2.29 Returns (Section 121)

Every railway administration shall send to the Central Government, a return of accidents occurring on its railway, whether attended with injury to any person or not, in such form and manner and at such intervals as may be prescribed.

10.10.2.30 Power to make rules in respect of matters in this Chapter (Section 122)

The Central Government may, make rules for following matters-

(a) The injury to property which shall be considered serious under clause (a) of subsection (1) of section 113;

(b) The forms of notice of accidents to be given under section 1 13 and the particulars of the accident such notices shall contain;

(c) The manner of sending the notices of accidents, including the class of accidents to be sent immediately after the accident;

(d) The duties of the Commissioner, railway administration, railway servants, police officers and Magistrates on the occurrence of an accident;

(c) The persons to whom notices in respect of any inquiry under this Chapter are to be sent, the procedure to be followed in such inquiry and the manner in which a report of such inquiry shall be prepared;

(f) The nature of inquiry to be made by a railway administration into the causes of an accident under section 120;

(g) The form and manner of sending a return of accidents by a railway administration under section 121.

10.10.2.31 Definitions (Section 123)

(a) "Accident" means an accident of the nature described in section 124;

(b) "Dependant" means any of the following relatives of a deceased passenger, namely :-

(i) The wife, husband, son and daughter, and in case the deceased passenger is unmarried or is a minor, his parent.

(ii) The parent, minor brother or unmarried sister, widowed sister, widowed daughter-in-law and a minor child of a pre-deceased son, if dependant wholly or partly on the deceased passenger.

(iii) A minor child of a pre-deceased daughter, if wholly dependent on the deceased passenger.

(iv) The paternal grand parent wholly dependant on the deceased passenger.

(c)"untoward incident" means-

A) (i) the commission of a terrorist act within the meaning of sub-section (1) of section 3 of the Terrorist and Disruptive Activities (Prevention) Act, 1987 (28 of 1987) ,or

(ii) The making of a violent attack or tile commission of robbery or dacoity; or

(iii) The indulging in rioting, shoot-out or arson,

-by any person in or any train carrying passengers, or in a waiting hall, cloak room or reservation or booking office or on any platform or in any other place within the precincts of a railway station; or

B) The accidental falling of any passenger from a train carrying passengers.

In Union of India V. Aleykutty Devasia Air 1997 Ker 321 it was observed by the Court that death of railway passenger due to strangulation by another person while travelling in train amounts to "untoward incident".

10.10.2.32 Extent of liability (Section 124)

When, an accident occurs-

(a) in course of working a railway,

(b) Due to-

i) A collision between trains, one of which is carrying passengers, or

ii) The derailment of, or

iii) Other accident to a train or any part of a train carrying passengers,

(c) A passenger is injured or suffered a loss

-shall maintain an action and recover damages in respect thereof.

The railway administration shall, be liable to pay compensation for-

- loss occasioned by the death of a passenger dying as a result of such accident, and
- Personal injury and loss, destruction, damage or deterioration of goods owned by the passenger and accompanying him in his compartment or on the train, sustained as a result of such accident.

The basic principle on which calculations as to damages should ordinarily be made in cases of injury or death caused by a railway accident is that laid down by LORD BLACKBURN in *Livingstone V. Rawyards Coal Co.[1880]5AC 25;42 LT334* which is said to be as follows: "where an injury is to be compensated by damages, in settling the sum of money given for reparation or damages you should as nearly as possible get at that sum of money which would put the party who has been injured, or who has suffered, in the same position he would have been if he had not sustained the wrong for which he is now getting a compensation or reparation."

10.10.2.33 Compensation on account of untoward incidents (Section124A)

When in the course of working a railway untoward incident occurs, the railway administration would be liable to pay compensation to such extent as may be prescribed and to that extent only for loss occasioned by the death of, or injury to, a passenger as a result of such untoward incident.

Except-no compensation shall be payable under this section by the railway administration if the passenger dies or suffers injury due to-

(a) Suicide or attempted suicide by him;

(b) Self-inflicted injury;

(c) his own criminal act;

(d) Any act committed by him in a state of intoxication or insanity;

(c) Any natural cause or disease or medical or surgical treatment unless such treatment becomes necessary due to injury caused by the said untoward incident.

10.10.2.34 Application-for compensation (Section 125)

An application for compensation under section 124 or section 124 A may be made to the Claims Tribunal-

(a) By the person who has sustained the injury or suffered any loss, or

(b) By any agent duly authorized by such person in this behalf, or

(c) Where such person is a minor, by his guardian, or

(d) Where death has resulted from the accident or the untoward incident, by any dependant of the deceased or where such a dependant is a minor, by his guardian.

10.10.2.35 Interim relief by railway administration (Section 126)

Where a person who has made an application for compensation under section 125 desires to be paid interim relief, he may apply to the railway administration for payment of interim relief along with a copy of the application made under that section. After making inquiry if railway administration is satisfied that circumstances exist which require relief to be afforded to the applicant immediately, pay such sum as it considers reasonable for affording such relief.

10.10.2.36 Determination of compensation in respect of any injury or loss of goods

(Section 127)

- The rates of compensation payable in respect of any injury shall be determined by the Claims Tribunal.
- The compensation payable in respect of any loss of goods shall be such as the Claims Tribunal may, having regard to the circumstances of the case, determine to be reasonable.

10.10.2.36 Power to make rules in respect of matters in this Chapter (Section 129)

The Central Government may, make rules for the following matters, namely:

(a) The compensation payable for death ;

(b) The nature of the injuries for which compensation shall be paid and the amount of such compensation.

10.10.2.37 Maliciously hurting or attempting to hurt persons travelling by railway(Section 152)

This section provides for punishment if a person maliciously hurts or attempts to hurt a person travelling by railway. Persons gathering together with the object of obstructing trains and throwing stones at trains are liable to be convicted under the section as observed by the Court in *Vasudeva Mudaliar v. Emperor AIR 1929 Mad 1880*.

The quantum punishment under this section is imprisonment for life, or with imprisonment for a term which may extend to ten years.

In *Emperor v. Wati Muhammad AIR 1936 Sind 185* it was observed by the court that boys of tender age throwing stones on train would not be punished under this section.

10.10.2.38 Endangering safety of persons travelling by railway by willful act or omission (Section 153)

If any person by any unlawful act or omission or neglect, endangers the safety of any person travelling on or being upon any railway, or obstructs any rolling stock upon any railway, he shall be punishable with imprisonment for a term which may extend to five years.

10.10.2.39 Endangering safety of persons travelling by railway by rash or negligent act or omission (Section 154)

If any person in a rash and negligent manner does any act, or omits to do what he is legally bound to do, and the act or omission is likely to endanger the safety of any person travelling or being upon any railway, he shall be punishable with imprisonment for a term which may extend to one year, or with fine, or with both.

10.10.2.40 Unlawfully bringing dangerous goods on a railway (Section 164)

This section deals with an offence for unlawfully bringing dangerous goods on railway in contravention of section 67 of the Act. Person who does so shall punishable with imprisonment for a term which may extend to three years, or with fine which may extend to one thousand rupees or with both and shall also be liable for any loss, injury or damage which may be caused by reason of bringing such goods on the railways.

10.10.2.41Unlawfully bringing offensive goods on a railway (Section 165)

This section provides for punishment of an offence if any person unlawfully brings offensive goods on a railway in contravention of section 67 of the Act. He shall be punishable with fine which may extend to five hundred rupees and shall also be liable for any loss, injury or damage which may be caused by reason of bringing such goods on the railway.

10.10.2.42 Provision with respect to commission of offence by the children of acts endangering safety of person travelling on railway (Section 168)

If a person under the age of twelve years is guilty of any of the offences under sections 150 to 154, the court convicting him may require the father or guardian of such person to execute, within such time as the court may fix, a bond for such amount and for such period as the court may direct for the good conduct of such person.

If a father or guardian fails to execute a bond within the time fixed by the court, he shall be punishable with fine which may extend to fifty rupees.

10.10.2.43 Endangering the safety of persons (Section 175)

If any railway servant, when on duty, endangers the safety of any person-

(a) By disobeying any rule made under this Act: or

(b) By disobeying any instruction, direction or order under this Act or the rules made there under; or

(c) By any rash or negligent act or omission.

-he shall be punishable with imprisonment for a term which may extend to two years, or with fine which may extend to one thousand rupees, or with both.

10.11.0 CENTRAL MOTOR VEHICLES RULES, 1989

10.11.1 OBJECTIVE AND SCOPE: The rules formulated under the Motor Vehicles Act, 1988 regulate conditions of issue of license, and persons authorized to be issued license and other provisions pertaining to motor vehicles.

10.11.2 RELEVANT Provisions:

10.11.2.1 Definitions (Rule 2):

1. "International Driving Permit" means the license issued by a licensing authority in India under Chapter II of the Act to an Indian National authorising the person specified therein to drive any categories of motor vehicles as specified in Form 6-A in the areas or territories of countries other than India but excluding the countries with whom there are no diplomatic relations.

10.11.2.2 **Preliminary Test (Rule 11):**

Every applicant has to appear for a test to prove that the applicant possesses adequate knowledge and understanding of:—
(a) The traffic signs, traffic signals and the rules of the road regulations made under Section 118;
(b) The duties of a driver when his vehicle is involved in an accident resulting in the death or bodily injury to a person or damage to property of a third party;
(c) The precautions to be taken while passing an unmanned railway crossing; and
(d) The documents he should carry with him while driving a motor vehicle.

10.11.2.3 Driving test (Rule 15):

For a person to appear for the test of competence to drive he should have held a learner's license for a period of at least thirty days. The test of competence to drive shall be conducted by the licensing authority or such other person as may be authorized in this behalf by the State Government in a vehicle of the type to which the application relates. The applicant shall satisfy the person conducting the test that he is able to—

(a) Adjust rear-view mirror;

(b) Take suitable precautions before starting the engine;

(c) Move away safely and smoothly straight ahead at an angle, while at the same time engaging all gears until the top gear is reached;

(d) To change to the lower gears quickly from the top gear when the traffic conditions warrant such change;

(e) Change quickly to lower gears when driving downhill;

(g) Overtake, allow to be overtaken, meet or cover the path of other vehicles safely and take an appropriate course of the road with proper caution giving appropriate signals;

(h) Give appropriate traffic signals at the appropriate time, in clear and unmistakable manner by hand or by electrical indicators fitted to the vehicle;

(i) Change the lanes with proper signals and with due care;

(j) Stop the vehicle in an emergency or otherwise, and in the latter case, bring it to rest at an appropriate course on the road safely, giving appropriate signals;

*(k) In th*e case of vehicle having a reverse gear, driving the vehicle backwards, reverse it into a limited opening either to the right or left under control and with reasonable accuracy;

(/) cause the vehicle to face in the opposite direction by means of forward and reverse gears;

(m) Take correct and prompt action on the signals given by traffic signs, traffic lights, traffic controllers, policemen and take appropriate action on signs given by other road users;

(n) Act correctly at pedestrian crossings, which is not regulated by traffic lights or traffic police, by giving preference to persons crossing the roads;

(o) Keep well to the left in normal driving;

(p) Regulate speed to suit varying road and traffic conditions;

(q) Demonstrate general control of the vehicle by confident steering and smooth gear changing and braking as and when necessary;

(r) Make proper use of the rear-view mirror before signalling, beginning manoeuvring, moving away, altering the course to overtake, turning right or stopping;

(s) Use proper side when driving straight, turning right, turning left and at junction of the road;

(t) Make proper use of accelerator, clutch, gears, brakes (hand and foot) steering and horn;

(U) Anticipate the actions of pedestrians, drivers of other vehicles and cyclists;

(v) Take precautions at cross roads and on road junctions with regard to:—

(i) Adjustment of speed on approach,

(ii) Proper use of rear-view mirror,

(iii) Correct positioning of the vehicle before and after turning to the right or left,

(iv) Avoidance of cutting right hand corners,

(v) Looking right, left and right again before crossing or emerging;

(w) Concentrate in driving without his attention being distracted and to demonstrate the presence of mind;

(x) Show courtesy and consideration for the safety and convenience of other road users, such as pedestrians, drivers of other motor vehicles or cyclists.

10.11.2.4 Disqualification (Rule 21)-

The commission of the following acts by holder of a driving license shall constitute nuisance or danger to the public, namely:—

(1) Theft of motor vehicle.

(2) Assault on passengers.

(3) Theft of personal effects of passengers.

(4) Theft of goods carried in goods carriages.

(5) Transport of goods prohibited under any law.

(6) Driver, while driving a transport vehicle, engages himself in activity which is likely to disturb his concentration.

(7) Abduction of passengers.

(8) Carrying overload in goods carriages.

(9) Driving at speed exceeding the specified limit.

(10) Carrying persons in goods carriage, either inside the driver's cabin in excess of its capacity or on the vehicle, whether for hire or not.

(11) Failing to comply with the provisions of section 134.

(12) Failure to stop when signaled to do so by any person authorized to do so.

(13) Misbehaviour with and showing discourtesy to passengers, intending passengers or consignors and consignees of goods.

(14) Smoking while driving public service vehicles.
(15) Abandoning vehicle in a public place causing inconvenience to other road users or to passengers in the vehicle.
(16) Driving vehicle while under the influence of drink or drugs.
(17) Interfering with any person mounting or preparing to mount upon any other vehicle.
(18) Allowing any person to sit or placing things in such a way as to impede the driver from having a clear vision of the road or proper control of the vehicle.
(19) Not stopping a stage carriage at approved stopping places for a sufficient period of time in a safe and convenient position upon demand or signal of the conductor or any passenger desiring to alight from the vehicle and unless there is no room in the vehicle, upon demand or signal of any person desiring to becoming a passenger.
(20) Loitering or unduly delaying any journey and not proceeding to the destination as near as may be in accordance with the time table pertaining to the vehicle, or, where there is no such time table, with all reasonable despatch.
(21) Not driving a contract carriage, in the absence of a reasonable cause, to the destination named by the hirer by the shortest route.
(22) The driver of a motor cab not accepting the first offer of hire which may be made to him irrespective of the length of the journey for which such offer is made.
(23) The driver of a motor cab demanding or extracting any fare in excess to that to which he is legally entitled or refusing to ply motor cab.
(24) Abandoning a transport vehicle as a mark of protest or agitation of any kind or strike in a public place or in any other place in a manner causing obstructions and inconvenience to the public or passengers or other users of such places.
(25) Using mobile phone while driving a vehicle.

10.11.2.5 Endorsement in driving license (Rule 22):

A Court convicting a holder of a license shall endorse or cause to be endorsed in the driving License, the particulars of such conviction, namely:—
(a) Driving without a license, or without a license which is effective, or without a license applicable to the vehicle driven (section 3).
(b) Allowing a license to be used by another person (section 6(2)).
(c) Driving when disqualified (section 23).
(d) Driving an unregistered vehicle (section 39).

(e) Driving a transport vehicle not covered by a certificate of fitness (section 56).

(f) Driving a transport vehicle in contravention of section 66.

(g) Driving in contravention of rule 118.

(h) Failure to comply with provisions of section 114.

(i) Refusing or failing within specified time to produce license or certificate of registration (section 130).

(j) Failing to stop vehicle as required under section 132.

(k) Obtaining or applying for a license without giving particulars of endorsement (section 182).

(l) Driving at excessive speed (section 183).

(m) Driving dangerously (section 184).

(n) Driving while under the influence of drink or drugs (section 185).

(o) Driving when mentally or physically unfit to drive (section 186).

(p) Abetment of an offence punishable under section 183 or 186.

(q) Abetment of offence specified in section 188.

(r) Taking part in an unauthorized race or trial of speed, (section 189).

(s) Using vehicle in unsafe condition (section 190).

(t) Driving vehicle exceeding punishable limit or weight (section 194).

(u) Altering a license or using an altered license.

(v) An offence punishable with imprisonment in the commission of which a motor vehicle was used.

10.11.2.6 State Register (Rule 23):

Each State Government shall maintain a State Register of driving licenses in respect of driving licenses issued and renewed by the licensing authorities in the State.

10.11.2.7. Duration of a license and renewal thereof (Rule 25):

A license granted shall be in force for a period of five years and may be renewed on an application made to the licensing authority which granted the license not less than sixty days before the date of its expiry.

10.11.2.8 General conditions to be observed by the holder of a license (Rule 27):

The holder of a license granted shall,—

(a) Maintain on an annual basis, a register and an alphabetical list of the names of the students admitted during the year;

(b) Conduct the training course according to the syllabus;

(d) Issue to every student who has completed the course a certificate;

(e) Submit to the licensing authority which granted the license such information or return as may be called for by it from time to time;

(f) Not shift the school or establishment from the premises mentioned in the license without the prior approval in writing of the licensing authority, which granted the license;

(g) Keep the premises of the school or establishment and the record and registers maintained by it at all reasonable times open for inspection by the licensing authority or by any person authorized in this behalf by the licensing authority;

(h) Exhibit in a conspicuous manner on all the motor vehicles used for imparting instructions the name, full address of the school or establishment and the telephone number, if any, in bold letters;

(i) Maintain a record separately for each trainee showing the number of driving hours spent every day;

(j) Display at a prominent place in its office the following:—

(i) The license in original issued to the school or establishment by the licensing authority, and

(ii) The names and addresses of instructors employed by the school or establishment;

(k) Not act in a manner calculated to mislead any person making an application to receive instructions from the school or establishment as to his ability to procure a license for such person other than in accordance with these rules or to connive with any person in acts of commission or omission with a view to circumventing provisions.

10.11.2.9 Power of the licensing authority to suspend or revoke license (Rule 28):

If the licensing authority which granted the license is satisfied, after giving the holder of the license an opportunity of being heard, that he has—

(a) Failed to comply with the requirements specified in sub-rule (3) of rule 24; or

(b) Failed to maintain the vehicles in which instructions are being imparted in good condition; or

(c) Failed to adhere to the syllabus specified in rule 31 in imparting instruction; or

(d) violated any other provision of rule 27, it may, for reasons to be recorded in writing, make an order,—

(i) Suspending the license for a specified period; or

(ii) Revoking the license.

(2) Where the license is suspended or revoked under sub-rule (1), the license shall be surrendered to the licensing authority by the holder thereof.

10.11.2.10 Condition for exemption from registration (Rule 33):

A motor vehicle in the possession of a dealer shall be exempted from the necessity of registration subject to the condition that he obtains a trade certificate from the registering authority having jurisdiction in the area in which the dealer has his place of business in accordance with the provisions.

10.11.2.11 Transfer of ownership on death of owner of the vehicle (Rule 56):

Where the owner of a motor vehicle dies, the person succeeding to the possession of the vehicle may for a period of three months, use the vehicle as if it has been transferred to him where such person has, within thirty days of the death of the owner informs the registering authority of the occurrence of the death of the owner and of his own intention to use the vehicle.

10.11.2.12 Transfer of ownership of vehicle purchased in public auction (Rule 57):

The person who has acquired or purchased a motor vehicle at a public auction conducted by or on behalf of the Central Government or a State Government shall make an application within thirty days of taking possession of the vehicle to the registering authority accompanied by—

(a) The appropriate fee as specified in rule 81;

(b) The certificates of registration and insurance;

(c) The certificate or order confirming the sale of the vehicle in his favour duly signed by the person authorized to conduct the auction; and

(d) The certified copy of the order of the Central Government or State Government authorising the auction of the vehicle.

10.11.2.13 State register of motor vehicles (Rule 75):

Each State Government shall maintain a State register of motor vehicles in respect of motor vehicles registered in the State.

10.11.2.14 Speedometer (Rule 117):

Every motor vehicle (including construction equipment vehicle), other than an invalid carriage] or a vehicle, the designed speed of which does not exceed thirty kilometres per hour, shall be fitted with an instrument so constructed and fixed in such a position as to indicate to the driver of the vehicle the speed at which the vehicle is travelling.

10.11.2.15 **Safety devices in motor cycle (Rule 123):**

No motor cycle, which has provision for pillion rider shall be constructed without provision for a permanent hand grip on the side or behind the driver's seat and a foot rest and a protective device covering not less than half of the rear wheel so as to prevent the clothes of the person sitting on the pillion from being entangled in the wheel.

10.11.2.16 Quality certificate by manufacturer (Rule 127):

The sale of every motor vehicle manufactured shall be accompanied by a certificate of road-worthiness issued by the manufacturer.

10.11.2.17 **Transportation of goods of dangerous or hazardous nature to human life (Rule 129):**

Every owner of a goods carriage transporting any dangerous or hazardous goods shall,
in addition to complying with the provisions of any law for the time being in force in relation to any category of dangerous or hazardous goods, comply with the following conditions, namely:—

(i) Every such goods carriage, carrying the same type of dangerous or hazardous goods

(Whether in bulk or in packages), shall display a distinct mark of the class label appropriate to the type of dangerous or hazardous goods specified

ii) Every package containing dangerous or hazardous goods shall display the distinct class labels appropriate to the type of dangerous or hazardous goods specified;

(iii) In the case of packages containing goods listed in Table 111 in rule 137 and which Represents two hazards as given in column 2 thereof, such packages shall display distinct labels to indicate both the hazards;

(iv) Every goods carriage carrying any dangerous or hazardous goods shall be equipped with safety equipments for preventing fire, explosion or escape of hazardous or dangerous goods.

10.11.2.18. **Responsibility of the consignor for safe transport of dangerous or hazardous Goods (Rule 131):**

It shall be the responsibility of the consignor intending to transport any dangerous or hazardous goods to ensure the following, namely:—

(a) The goods carriage has a valid registration to carry the said goods;

(b) The vehicle is equipped with necessary first-aid, safety equipment and antidotes as may be necessary to contain any accident;

(c) That the transporter or the owner of the goods carriage has full and adequate information about the dangerous or hazardous goods being transported; and

(d) That the driver of the goods carriage is trained in handling the dangers posed during transport of such goods.

10.11.2.19 **Responsibility of the transporter or owner of goods carriage (Rule 132):**

It shall be the responsibility of the owner of the goods carriage transporting any dangerous or hazardous goods to ensure the following, namely:—

(a) That the goods carriage has a valid registration to carry the said goods and the said carriage is safe for the transport of the said goods; and

(b) The vehicle is equipped with necessary first-aid, safety equipment, tool box and antidotes as may be necessary to contain any accident.

(2) Every owner of a goods carriage shall, before undertaking the transportation of dangerous or hazardous goods in his goods carriage, satisfy himself that the information given by the

consignor is full and accurate in all respects and correspond to the classification of such goods specified.

(3) The owner of a goods carriage shall ensure that the driver of such carriage is given all the relevant information in writing as given in Annexure V of these rules in relation to the dangerous or hazardous goods entrusted to him for transport and satisfy himself that such driver has sufficient understanding of the nature of such goods and the nature of the risks involved in the transport of such goods and is capable of taking appropriate action in case of an emergency.

(4) The owner of the goods carriage carrying dangerous or hazardous goods, and the consignor of such goods shall lay down the route for each trip which the driver shall be bound to take unless directed or permitted otherwise by the Police Authorities. They shall also fix a time table for each trip to the destination and back with reference to the route so laid down.

(5) It shall be the duty of the owner to ensure that the driver of the goods carriage carrying dangerous or hazardous goods holds a driving license as per provisions.

(6) It shall be sufficient compliance of the provisions of these rules if the consignor transporting dangerous or hazardous goods and the owner of the goods carriage or the transporter, abides by these conditions within six months after the date of coming into force of the Central Motor Vehicles (Amendment) Rules, 1993.]

10.11.2.20. Driver to report to the police station about accident (Rule 136):

The driver of a goods carriage transporting any dangerous **or** hazardous goods shall, on the occurrence of an accident involving any dangerous or hazardous goods transported by this carriage, report forthwith to the nearest police station and also inform the owner of the goods carriage or the transporter regarding the accident.

10.11.2.21 Establishment of fund (Rule 151):

Each of the authorities shall establish a fund for meeting any liability arising out of the use of any motor vehicle of that authority or any person in its employment may incur to third parties including liability arising under the Workmen's Compensation Act, 1923.

10.11.2.22. Amount of the fund (Rule 152):

The fund shall be established with an initial amount of not less than rupees five lakhs and the said amount shall be kept in deposit with a bank or the Government. The authority shall pay into the fund at the beginning of each accounting year in respect of its vehicles in running condition a sum of not less than rupees two hundred per vehicle.

10.12.0 THE RAILWAY ACCIDENTS AND UNTOWARD INCIDENTS (COMPENSATION) RULES, 1990

10.12.1 OBJECTIVE AND SCOPE

In exercise of the powers conferred by section 129 of the Railways Act, 1989 (24 of 1989) read with Section 22 of the general clauses Act, 1897 and in suppression of the Railway accidents (Compensation) Rules1989, except in respect of things done or omitted to be done before such suppression, the Central Government hereby makes the Railway Accidents and Untoward Incidents (Compensation) Rules, 1990. These Rules were further amended in the year 1997.

10.12.2 RELEVANT PROVISION OF THE RULE

10.12.2.1 Definition

a) "Accident" means an accident of nature described in section 124 of the Railways Act, 1989.

b) "Claims Tribunal" means Railways Claims Tribunal established under section 3 of the Railway Claims Tribunal Act, 1987.

c) "Untoward incident" means an incident defined in clause (c) of Section 123 of the Railways Act, 1989.

10.12.2.2 Amount of Compensation

a) The amount of compensation payable in respect of death and injuries is specified in the Schedule.

b) If the amount of compensation payable in respect of injury is not specified in the Schedule but which, in the opinion of the Claims Tribunal is such as to deprive a person of all capacity to do any work, shall be rupees four lakh.

c) The amount of compensation payable in respect of any injury (other than specified above) resulting in pain and suffering, shall be such as the Claims Tribunal may after taking into consideration medical evidence, besides other circumstances of the case, determine to be

reasonable. If more than one injury is caused by the same accident, compensation shall be payable in respect of each such injury.

d) where compensation has been paid for any injury which is less than the amount which would have been payable as compensation if the injured person had died and the person subsequently died as a result of the injury, a further compensation equal to the difference between the amount payable for death and the already paid shall become payable.

e) Compensation for loss, destruction or deterioration of goods or animals shall be paid to such extent as the claims tribunal may, in all the circumstances of the case, determine it to be reasonable.

In Rakesh saini V. Union of India AIR 2004 Del 107 passangers were hit by running train when they were boarding another train. There was total failure of electricity at railway station at the material point of time. The deceased along with other passengers were compelled to cross railway track meant for incoming train to board train standing on outgoing track. Compensation was awarded to the dependent of the deceased.

10.12.2.3 Limit of Compensation (Rule 4)

The total compensation payable in Rule 3 shall not exceed rupees four lakhs in respect of any one person.

SCHEDULE

Compensation Payable for Death and Injuries

		Amount of Compensation (in rupees)
	PART I	
	For death	4,00,000
	PART II	
1	For loss of both hands and amputation at higher sites.	4,00,000
2	For loss of hand and a foot	4,00,000
3	For double amputation through leg or thigh or amputation through leg or thing on one side and loss of other foot.	4,00,000
4	For loss of sight to such an extent as to render the claimant	4,00,000

	unable to perform any work for which eyesight is essential.	
5	For very severe facial disfigurement	4,00,000
6	For absolute deafness	4,00,000
	PART III	
1	For amputation through shoulder joint	3,60,000
2	For amputation below shoulder with stump less than 8" from tip of acromion	3,20,000
3	For amputation from 8" from tip of acromion to less than 4 1/2" below tip of olecranon	2,80,000
4	For loss of a hand or the thumb and four fingers of one hand or amputation from 4 1/2" below space tip of olecranon	2,40,000
5	For loss of thumb	1,20,000
6	For loss of thumb and its metacarpal bone	1,60,000
7	For loss of four fingers of one hand	2,00,000
8	For loss of three fingers of one hand	1,20,000
9	For loss of two fingers of one hand	80,000
10	For loss of terminal phalanx of thumb	80,000
11	For amputation of both feet resulting in end bearing stumps	3,60,000
12	For amputation through both feet proximal to the metatarsophalangeal joint	3,20,000
13	For loss of all toes of both feet through the metatarso-phalangeal joint.	1,60,000
14	For loss of all toes of both feet proximal to the proximal interphalangeal joint	1,20,000
15	For loss of all toes of both feet distal to the proximal interphalangeal joint	80,000
16	For amputation at hip	3,60,000
17	For amputation below hip with stump not exceeding 5" in length measured from tip of great trenchanter but not beyond middle thigh.	3,20,000

18	For amputation below hip with stump exceeding 5" in length measured from tip of great trenchanter but not beyond middle thigh.	2,80,000
19	For amputation below middle thigh to 3 1/2" below knee	2,40,000
20	For amputation below knee with stump exceeding 3 1/2" but not exceeding 5"	2,00,000
21	Fracture of Spine with paraplegia	2,00,000
22	For amputation below knee with stump exceeding 5"	1,60,000
23	For loss of one eye without complications the other being normal	1,60,000
24	For amputation of one foot resulting in end-bearing	1,20,000
25	For amputation through one foot proximal to the metatarso-phalangeal joint	1,20,000
26	Fracture of Spine without paraplegia	1,20,000
27	For loss of vision of one eye without complications of disfigurement of eye ball, the other being normal	1,20,000
28	For loss of all toes of one foot through the metatarso-phelangeal joint	80,000
29	Fracture of Hip-joint	80,000
30	Fracture of Major Bone Femur Tibia Both limbs	80,000
31	Fracture of Major Bone Humerus Radius Both limbs	60,000
32	Fracture of Pelvis not involving joint	40,000
33	Fracture of Major Bone Femur Tibia one limb	40,000
34	Fracture of Major Bone Humerus Radius Ulna One limb	32,000

(File No.97/TC-III/86/1)

H.C. PUNIA,

Jt.Secy.

Footnote: The principal rules were notified vide No.G.S.R. 552(E) dated the 7th June, 1990 and subsequently amended vide G.S.R. 592(E) dated 21st July, 1994 .

10.13.0 RAILWAY (NOTICES OF AND INQUIRIES INTO ACCIDENTS) RULES, 1998

10.13.1 OBJECTIVE AND SCOPE

In exercise of the powers conferred by Section- 122 of the Railways Act, 1989 (24 of 1989), the Central Government hereby makes the Railway (Notices of and Inquiries into Accidents) Rules, 1998.They came into force on 2nd January 1999 by publication in the Official Gazette.

10.13.2 RELEVANT PROVISION OF THE RULE

10.13.2.1 Particulars to be given in the notices (Rule 2)

The notices mentioned in Section-113 of the Railways Act, 1989 (hereinafter referred to as the Act), shall contain the following particulars, namely-

(i) Kilometerage, or station or both, at which the accident occurred;

(ii) Time and date of the accident;

(iii) Number and description of the train; or trains;

(iv) Nature of the accident;

(v) Number of people killed or injured, as far as is known;

(vi) Cause of the accident, as far as is known; and

(vii) Probable detention to traffic.

10.13.2.2 Responsibility for sending notices, to whom to be sent and mode thereof (Rule 3)

Whenever any accident, as falls under Section-113 of the Act (hereinafter referred to as Reportable train accident) occurs in the course of working a Railway-

- the Station Master nearest to the place at which the accident has occurred, or, where there is no Station Master, the Railway servant incharge of the Section of the Railway on which the accident has occurred or any other Station Master In-chargeof a Section of a Railway to whom the report of the accident is made,

- shall give notice of the accident by telegraph

- to the Commissioner of Railway Safety, the District Magistrate and the District Superintendent of Police of the district in which the accident has occurred or such other Magistrate or Police Officer as may be appointed in this behalf by the State Government concerned and by telegraph, telephone or through special messenger or such other quick means as may be available, to the Superintendent of Railway Police and to the officer-in- charge of the police station within the local limits of which the accident has occurred.

10.13.2.3 Mode of sending notices to the State Government (Rule 4)

The notice of accidents, required under Section-113 of the Act, to be sent without delay by the Railway Administration, shall be sent to the State Government-

(a) By telegram in the case of-

(i) Accidents deemed, under the Explanation to Rule-3, to be serious by reason of loss of human life;

(ii) Accidents by reason of which the permanent way is likely to be blocked for more than twenty four hours; and

(iii) Train wrecking or attempted train-wrecking; and

(b) By letter in all other cases

10.7.2.4 Railway servant to report accidents (Rule 5)

Every Railway servant shall report, every accident occurring in the course of working the Railway which may come to his notice and such report shall be made to the nearest Station Master, or, where there is no Station Master, to the Railway Servant incharge of the section of the Railway on which the accident has occurred.

10.13.2.5 Station Master or Railway Servant in-charge of the Section to report accidents (Rule 6)

The Station Master or the Railway servant in-charge of the section, shall report all accidents in accordance with the rules laid down by the Railway Administration concerned for the reporting of accidents.

10.13.2.6 A Responsibility of ensuring correct reporting of accidents (Rule 6A)

The responsibility of ensuring correct reporting of accidents shall be of the Divisional Railway Manager (DRM) at Divisional level and the General Manager (GM) at the Zonal level.

10.13.2.7 Railway Administration to report serious accidents (Rule 7)

A) Whenever a serious accident, occurs, the Railway Administration concerned , as soon after the accident as possible, by telegraph, supply to the Press such particulars as are mentioned in Rule-2 and as are till then available, and by supplementary telegrams, if necessary, immediately after further information is available. A copy shall be sent simultaneously by Express Telegrams, to the Railway Board, the Commissioner of Railway Safety of the circle concerned and the Chief Commissioner of Railway Safety. In addition, the Commissioner of Railway Safety shall be informed, telephonically, of any serious accident, by the control of the Division in which the accident has occurred.

B) For the purpose, an accident shall be serious Railway accident where

(i) Accident to a train carrying passengers which is attended with loss of life or with grievous hurt to a passenger or passengers in the train, or with serious damage to Railway property of the value exceeding Rs.25,00,000/- .

(ii) An accident involving a train carrying passengers leads to loss of life or grievous injury to any Railway Servant irrespective of whether he was travelling in that passenger train or not, it shall come under the purview of inquiry by the Commission of Railway Safety and shall be treated as a Serious Railway Accident .

Provided that

(a) Cases of trespassers run over and injured or killed through their own carelessness or of passengers injured or killed through their own carelessness, and

(b) Cases involving persons being Railway servant or holding valid passes/ tickets or otherwise who are killed or grievously injured while travelling outside the rolling stock of a passenger train such as on foot broad or roof or buffer but excluding the inside the vestibules between coaches, or run over at a Level Crossing or elsewhere on the Railway track by a passenger train, and

(c) Collision between a Road Vehicle and a passenger train at a Level Crossing where no passenger or Railway Servant is killed or grievously hurt shall not be treated as a Serious Railway Accident even if those travelling in the road vehicle are killed or grievously hurt shall not be treated as serious Railway Accident.

10.13.2.8 Facility for reaching the site of the accident (Rule 8)

Whenever any accident has occurred in the course of working a Railway, the Head of the Railway Administration concerned shall give all reasonable aid –

- to the District Magistrate or the Magistrate appointed or deputed under Rule-17 or to the Commission of Inquiry appointed under the Commissions of Inquiry Act-1952 (60 of 1952), or
- any other authority to whom all or any of the provisions of the said Act have been made applicable, and
- to the Commissioner of Railway Safety, medical officers, police and other concerned

-to enable them to reach the scene of the accident promptly, and shall also assist those authorities in making inquiries and in obtaining evidence as to the cause of the accident.

10.13.2.9 Medical aid to the persons grievously hurt in accidents (Rule 9)

Whenever any accident, occurring in the course of working a Railway, has been attended with grievous hurt, it shall be the duty of the Head of the Railway Administration-

- to afford medical aid to the sufferers,
- to see that they are properly and carefully attended to till they are removed to their homes or handed-over to the care of their relatives or friends.

In any such case, or in any case in which any loss of human life or grievous hurt has occurred, the nearest available local medical officer shall be sent for if such medical officer is nearer at hand than the Railway medical officer.

10.13.2.10 Action to be taken by Head of the Railway Administration on receipt of the report of Commissioner of Railway Safety (Rule11)

Whenever the Head of the Railway Administration concerned receives a copy of the report of the Commissioner of Railway (Notices of and Inquiries into Accidents) Rules, 1998 Railway Safety under Rule-4 of the Statutory Investigation into Railway Accidents Rules-1998, he shall at once acknowledge its receipt, and-

(a) Submit his remarks, on the views expressed in the Report, to the Chief Commissioner of Railway Safety with copy to the Commissioner of Railway Safety immediately on receipt of the Report by the Railway Administration and if he is not able to submit his remarks immediately he shall in his acknowledgement of the report indicate his intention to submit his remarks later as early as possible;

(b) If the Head of the Railway Administration concerned agrees with the views expressed in the Report and considers the prosecution of any persons desirable, he shall immediately forward a statement of such persons to the District Magistrate of the district in which the accident occurred, or to such other officer as the State Government may appoint in this behalf and to the concerned police authorities;

(c) In case the District Magistrate or Police authorities require copies of the Report, it may be sent to them and the confidentiality of the report should be made clear to the District/Police Authorities, and the Police Authorities shall, as soon as possible, intimate the Head of the Railway Administration concerned about their decision regarding launching any prosecution.

10.13.2.11 Joint Inquiry (Rule 13)

(1) Whenever a Reportable train accident, has occurred in the course of working a Railway, the Head of the Railway Administration concerned shall cause an inquiry to be promptly made by a Committee of Railway Officers (to be called a Joint Inquiry) for a thorough investigation of the causes which led to the accident.

Such an inquiry may be dispensed with-

(a) If any inquiry is to be held by the Commissioner of Railway Safety under Rule-2 of the Statutory Investigation into Railway Accidents Rules-1998, or a Commission appointed under the Commissions of inquiry Act-1952 (60 of 1952), or any other authority appointed by the Central Government to which all or any of the provisions of the said Commission of Inquiry Act have been made applicable under Rule-2 of the said Statutory Investigation into Railway Accidents Rules, or

(b) If there is no reasonable doubt as to the cause of the accident; or

(c) If any department of the Railway Administration concerned intimates that it accepts all responsibility in the matter.

(2) Where such inquiry is dispensed with under Clause-(b) or Clause(c) of the provision to Sub-Rule-(1), it shall be the duty of the Head of the Department of the Railway Administration responsible for the accident to make such inquiry (to be called a departmental inquiry) as he may consider necessary and, if his staff or the system or working is at fault, to adopt or suggest such measures as he may consider necessary for preventing a recurrence of similar accidents.

10.13.2.12 Notice of joint Inquiry (Rule 14)

(1) Whenever a joint inquiry is to be made, the Head of the Railway Administration concerned shall cause notice of the date and hour at which the inquiry will commence, to be given to the following officers, namely :-

(a) The District Magistrate of the district in which the accident occurredor such other officer as the State Government may appoint in this behalf, the Superintendent of the Railway Police and the District Superintendent of Police;

(b) The Commissioner of Railway Safety for the section of the Railway on which the accident occurred; and

(c) The Head of the Railway Police having jurisdiction at the place where the accident occurred; or, if there are no Railway Police, the Officer in- charge of the police station having jurisdiction at such place.

10.13.2.13 Report of joint inquiry or departmental inquiry to be sent to the Head of the Railway Administration and the action to be taken thereon (Rule 15)

(1) As soon as any joint inquiry or departmental inquiry has been completed, the President of the Committee of Railway Officers or the Head of the department, as the case may be, shall send to the Head of the Railway Administration concerned a report containing inter alia:-

(a) Brief description of the accident;

(b) Description of the locality of the accident;

(c) Detailed statement of the evidence taken;

(d) The conclusions arrived at together with a note of dissent; if any;

(e) Reasons for conclusion arrived at;

(f) The nature and extent of the damage done;

(g) When necessary, a sketch illustrative of the accident;

(h) The number of Railway servants killed or injured;

(i) The number of passengers killed or injured.

(j) An Appendix containing extracts of the rules violated by the staff responsible for the accidents.

(2) The Head of the Railway Administration concerned shall forward, with his remarks as to the action that is intended to be taken in regard to the staff responsible for the accident or for the revision of the rules or the system of working, a copy of the report referred

(a) To the Commissioner of Railway Safety for the section of the Railway on which the accident occurred;

(b) If no inquiry or investigation has been made under Rule-17 or if a joint or departmental inquiry has been held first, to the District Magistrate or the Officer appointed under clause (a) of sub-rule (1) of rule-14; and

(c) If any judicial inquiry is being made, to the magistrate making such inquiry.

10.13.2.4 Reports of inquiries into accidents not covered by Section-113 to be forwarded to Commissioner of Railway Safety (Rule 16)

Whenever any accident, not of the nature specified in Section-113 of the Act, such as averted collisions, breaches of block rules or other technical accidents, occurs in the course of working a Railway, the Railway Administration concerned may cause an inquiry, either a joint inquiry or a departmental inquiry, to be held into the accident.

10.13.2.15 Magisterial Inquiry (Rule 17)

Whenever an accident, such as is described in Section-113 of the Act, has occurred in the course of working a Railway, the District Magistrate or any other Magistrate who may be appointed in this behalf by the State Government, may either -

(a) Himself make an inquiry into the causes which led to the accident; or

(b) Depute a sub-ordinate Magistrate, who if possible, should be a Magistrate of the first class, to make such an inquiry; or

(c) Direct investigation into the causes which led to the accident, to be made by the police.

But where, having regard to the nature of the accident, the Central Government has appointed a Commission of Inquiry to inquire into it under the Commission of Inquiry Act, 1952 (60 of 1952), or has appointed any other authority to inquire into it and for that purpose has made all or any of the provisions of the said Act applicable to that authority, a Magistrate or a police officer shall not make his inquiry or investigation under this rule.

10.13.2.16 Notice of Magisterial Inquiry (Rule 18)

Whenever it is decided to make an inquiry under the District Magistrate, he shall inform the Head of the Railway Administration concerned and the Divisional Railway Manager by telegraph, of the date and hour at which the inquiry will commence so as to enable the Railway Administration to summon the requisite expert evidence, he shall proceed to the scene of the accident and conduct the inquiry.

10.13.2.17 Judicial Inquiry (Rule 19)

A Magistrate, making an inquiry under Rule-17, may summon any Railway servant, and any other persons whose presence he may think necessary, and after taking the evidence and completing the inquiry, if he considers that there are sufficient grounds for holding a judicial inquiry, take the requisite steps for bringing to trial any person whom he consider to be criminally liable for the accident.

10.13.2.18 The result of magisterial inquiry to be communicated to the Head of the Railway Administration (Rule 20)

The result of every inquiry or investigation made under Rule-17 shall be communicated by the, to the Head of the Railway Administration concerned and to the Commissioner of Railway Safety.

10.13.2.19 Procedure for summoning Railway servants to assist the Magistrate holding judicial inquiry (Rule 21)

In the course of any judicial inquiry into an accident occurring in the course of working of Railway, the Magistrate holding such inquiry desires the assistance of the Commissioner of Railway Safety or Head of the Railway Administration concerned-

- He shall issue a requisition to the Chief Commissioner of Railway Safety or the Railway Board, for their presence, stating at the same time the nature of the assistance required, and if the assistance of any Railway Officer is required the Magistrate shall issue a requisition to the Head of the Railway Administration for his attendance in the Court.

- The Requisition shall state the nature of the assistance required. In summoning Railway Officials.
- The Magistrate shall take care not to summon on the same day so large a number of the employees, especially of one class, as to cause inconvenience to the working of the Railway.
- In the case of serious accidents, the Magistrate may obtain reports from the Commissioner of Railway Safety and the Head of the Railway Administration concerned in regard to the accident, before finally concluding the judicial inquiry.

10.13.2.20 Communication of the decision of judicial inquiry to the Railway Administration, Commissioner of Railway Safety and the State Government (Rule 22)

On the conclusion of the judicial inquiry, the Magistrate shall send a copy of his decision to-

- The Head of the Railway Administration
- The Commissioner of Railway Safety,
- The State Government.

10.13.2.21 Police investigation (Rule 23)

When to be dispensed with report on loss of life, grievous hurt, or damage to Railway Property The Railway Police will make an investigation into the causes which led to any accident occurring in the course of working a Railway and shall do so whenever:-

(a) Any such accident is attended with loss of human life or with grievous hurt, or with serious damage to Railway property of the value exceeding Rs. 25,00,000/- or has prima facie been due to any criminal act or omission; or

(b) The District Magistrate has directed to investigate into accident.

(c) He shall report, to the nearest Station Master, or where there is no Station Master, to the Railway servant in-charge of the Section of the Railway, on which the accident has occurred.

Except, when, the Central Government has-

- appointed a Commission of Inquiry to inquire into it under the Commission of Inquiry Act 1952,or
- appointed any other authority to inquire, or
- where a magisterial inquiry is being made

10.13.2.22 Status of Police Officer investigating the accident (Rule 24)

In the following situations, investigation shall be conducted by the Head of the Railway Police of

the area in which the accident has occurred, or if that officer is unable to conduct the investigation himself, by an officer to be deputed by him :

- accidents claiming human life or
- causing grievous hurt, or
- serious damage to railway property of the value exceeding twenty five lakh Rupees, or
- in pursuance of a direction given under clause (c) of rule 17

The Officer so deputed shall be the senior officer available and shall whenever possible be a Gazetted Officer, not lower than the rank of an Inspector.

It is however provided that the investigation may be carried out by an officer-in-charge of a Police station in the following cases:

- a case referred to in clause (a) of sub rule (1), if the number of affected person does not exceed or
- damage to railway property does not exceed twenty five lakh rupees has been caused or
- damage to railway property does not exceed twenty five lakh rupees or
- there is no reason to suspect that any servant of the railway has been guilty of neglect of any rule relating to the working of the railway; or
- in the case referred to in clause (b) of sub-rule(I), if the District Magistrate so directs.

10.13.2.23 Notice of police investigation (Rule 25)

The officer who is to conduct an investigation shall inform the Head of the Railway Administration Concerned and the Divisional Railway Manager by telegraph of the date and hour at which the investigation will commence so that, the presence of a railway official may be arranged for to watch the proceedings and to aid the officer making the investigation, and thereafter, he shall proceed to the scene of the accident and conduct the investigation there; so, however, that the absence of a railway official shall not, be allowed to delay the investigation which shall be conducted as soon as possible after the accident has taken place.

10.13.2.24 Assistance by the District Police (Rule 26)

a) Immediate information shall be given by the Railway Police of the area to the District Police, who, shall afford all necessary assistance and shall, carry the investigation beyond the limits of the railway Premises. But the Railway Police of the area shall primarily be responsible for Carrying on the investigation within such limits.

b) Subject to the provisions of these rules, the further prosecution of the case on the conclusion of the police investigation shall rest with the Railway Police.

10.13.2.25 Communication of the result of police investigation (Rule 27)

The result of every police investigation shall be reported to the -

- District Magistrate or other officer appointed in this behalf by the State government,
- Head of the Railway Administration concerned or other officer appointed by him, and
- Commissioner of Railway Safety.

10.13.2.26 District Police to discharge duties of Railway Police (Rule 28)

Where there is no Railway Police in the area the duty of the Railway Police , shall be discharged by the District Police or by the District Superintendent of Police, as the case may be.

10.14.0 STATUTORY INVESTIGATION INTO RAILWAY ACCIDENTS RULES 1998

10.14.1 OBJECTIVE AND SCOPE

In exercise of the powers conferred by section 122 of the Railways Act, 1989 (24 of 1989), the Central Government had make Statutory Investigation into Railway Accidents Rules 1998.

10.14.2 RELEVANT PROVISIONS OF THE RULE

10.14.2.1 Inquiry into a serious accident by the Commissioner of Railway Safety (Rule 2)

(1) (a) Where the Commissioner of Railway Safety receives notice under section 113 of the Railways Act 1989 of the occurrence of an accident which is of a serious nature, he shall, , notify the Chief Commissioner of Railway Safety, the Railway Board and the Head of the Railway Administration concerned of his intention to hold an inquiry and shall, at the same time, fix and communicate the date time and place for the inquiry. He shall also issue a Press Note in this behalf inviting the public to tender evidence at the inquiry and send information relating to the accident to his office address.

(b) While notifying his intention to hold an inquiry as aforesaid, the Commissioner of Railway Safety shall also inform or cause to inform the Chief Secretary of the State, the District Magistrate and the Superintendent of Police of the district concerned.

(2) For the purpose of this rule every accident to a train carrying passengers which is attended with loss of life of a passenger or passengers in the train or with grievous hurt, as defined in the Indian Penal Code to a passenger or passengers in the train or with serious damage to railway property of a value exceeding twenty five lakh rupees and any other accident which in the opinion of the Chief Commissioner of Railway Safety or the Commissioner of Railway Safety requires the holding of an inquiry shall be deemed to be an accident of such a serious nature as to require the holding of an inquiry. These accidents shall be termed as "Serious train accidents".

(3) However, for any accident the Chief Commissioner may either hold the inquiry himself or direct any Commissioner of Railway Safety to do so.

(4) When any accident requiring the holding of an inquiry occurs at a station where the jurisdictions of two or more Commissioners of Railway Safety meet, the duty of complying with this rule shall devolve on the Commissioner of Railway Safety within whose jurisdiction the railway working such station lies. At other such locations where the issue cannot be resolved then it shall be finalised by the Chief Commissioner of Railway Safety.

(5) (a) If, for any reason the concerned Commissioner of Railway is unable to hold an inquiry at an early date after the occurrence of such an accident, he shall intimate by the fastest means of communication without any delay to the Chief Commissioner of Railway Safety of the reasons why the inquiry cannot be held by him. The Chief Commissioner may choose to conduct the inquiry himself or direct any other Commissioner to take up the inquiry or decide to let the inquiry be conducted by the Railway Administration. The concerned Commissioner shall notify the Railway Administration and the Railway Board accordingly.

(b) On receipt of the proceedings of the joint inquiry (inquiry made by a Committee of Railway officers) from the Head of the Railway Administration in accordance with rule 15 of Railway (Notices of and inquiries into Accidents) Rules, 1998, the Commissioner of Railway Safety shall scrutinise the same, and in case he agrees with the findings of the joint inquiry,

shall forward a copy of the report to the Chief Commissioner of Railway Safety alongwith his views on the findings and recommendations made. In case the Commissioner feels, he may direct the Railway Administration either to conduct inquiry de-novo or re-examine specific issues and submit revised findings.

On the other hand the Commissioner of Railway Safety, after examination of the joint inquiry proceedings, considers that an inquiry should be held by himself, he shall, notify the Chief Commissioner of Railway Safety, the Railway Board, and the Head of the Railway Administration concerned, of his intention to hold an inquiry and he shall at the same time fix and communicate the date, time and place for the inquiry.

(6) (a) Having regard to the nature of the accident, the Central Government has appointed a Commission of Inquiry to inquire into the accident under the Commission of Inquiry Act 1952 (60 of 1952), or has appointed any other authority to inquire into it and for that purpose has made all or any of the provisions of the said Act applicable to that authority, the Commissioner of Railway Safety to whom notice of the accident has been given shall not hold his inquiry and where he has already commenced his inquiry he shall not proceed further with it and shall hand over the evidence, records or other documents in his possession, relating to the inquiry, to such authority as may be specified by the Central Government in this behalf.

(b) If, as a result of the Police investigation a regular case is lodged in a Criminal Court by the Police or arising out of the accident, a case is lodged in a Civil Court by interested person (s), the Commissioner shall finalise his Report and circulate the same as per rules 4, as a strictly confidential document.

10.14.2.2 Commissioner of Railway Safety to submit a brief preliminary narrative report (Rule 3)

Where a Commissioner of Railway Safety has held an inquiry in respect of any of the accidents described in above mentioned rule, he shall submit a brief preliminary narrative report to the Chief Commissioner of Railway Safety and the Railway Board simultaneously. In case Chief Commissioner of Railway Safety has held an inquiry in terms of rules 2(3) and 2(5) he shall submit the brief preliminary narrative Report to the Railway Board. The report shall be factual and shall not contain any reference to persons implicated.

10.14.2.3 Commissioner of Railway Safety to submit a report (Rule 4)

a) Whenever the Commissioner of Railway Safety has made an inquiry under rule 2, he shall submit a confidential report in writing to the Chief Commissioner of Railway Safety and shall forward copies of the report to-

(i) the Railway Board;

(ii)the Railway Administration of all the Zonal Railways,

(iii)in the case of a railway under the control of a State Government or Local Administration to such Government or Administration if the accident has occurred in that Railway,

(iv)other Commissioner of Railway Safety,

(v) the Director, Intelligence Bureau, Ministry of Home Affairs, Government of India, if the Commissioner of Railway Safety find that the accident was caused by sabotage or train wrecking.

b) In case inquiry has been held by the Chief Commissioner of Railway Safety he shall forward his Report to the Authorities mentioned above.

10.14.2.4 Publication of report (Rule 5)

Recommendations in regard to the publication of reports shall be made by the Chief Commissioner of Railway Safety and Railway Board (Ministry of Railways) informed accordingly. In case the Railway Board has reservations on the recommendations of the Chief Commissioner, the matter shall be finally decided by the Central Government (Ministry of Civil Aviation).

10.14.2.5 District Magistrate or his representative to attend the inquiry conducted by Commissioner of Railway Safety (Rule 6)

Where no Magisterial inquiry is being made under clause (a) or (b) of rule 17 of the Railway (Notices of and Inquiries into Accidents) Rules, 1998, the District Magistrate shall, as far as possible attend the inquiry conducted by the Commissioner of Railway Safety personally or depute some other officer to represent him at the inquiry.

10.14.2.6 District Superintendent of Police or his representative (Rule 7)

The District Superintendent of Police shall, also attend the inquiry conducted by the Commissioner of Railway Safety personally or depute some other officer to represent him at the inquiry.

10.14.2.7 Commissioner of Railway Safety to assist the Magistrate of the Commission of inquiry etc. in clarifying technical matters (Rule 8)

The Commissioner of Railway Safety, assist any Magistrate making-

a) a judicial inquiry or
b) an inquiry under rule 17 of Railway (Notices of and inquiries into Accident) Rules 1998 or
c) a Commission of inquiry appointed under the Commission of Inquiry Act 1952 (60 to 1952),or
d) any other authority appointed by the Central Government

-to which all of the provisions of the said Act have been made applicable, whenever he may be called upon for the purpose of clarification of any technical matters.

10.15.0 CARRIAGE BY ROAD ACT, 2007

10.15.1OBJECTIVE AND SCOPE

The Carriage by Road Act 2007 replaced the Carriers Act 1865. This Act explains the relationship, responsibility and legal liability of common carrier/ Transport Company / goods booking agent/ logistic firm with the consignor / trader in transportation of goods by road against payment of freight to the common carrier by the consignor / consignee in the country. The Act was published on 29th September 2007.

Act provide for the regulation of common carriers, limiting their liability and declaration of value of goods delivered to them. It determine their liability for loss of, or damage to, such goods occasioned by the negligence or criminal acts of themselves, their servants or agents

10.15.2 RELEVANT PROVISIONS OF THE ACT

10.15.2.1 Persons not to engage in business of common carrier without registration (Section 3)

No person shall engage in the business of a common carrier without registration.

10.15.2.2 Provision for carriage of goods of dangerous or hazardous nature to human life. (Section 13)

a) All goods of dangerous or hazardous nature to human life shall be carried by a common carrier according to the procedure and after complying with safeguards as prescribed by the Act.
b) The Central Government will specify-
   i. The goods of dangerous or hazardous nature to human life, and
   ii. The label or class of labels to be carried in, or displayed on, the motor vehicle or such goods in the course of transportation.
c) Every common carrier shall scrutinise and ensure before starting transportation of any consignment containing goods of dangerous or hazardous nature to human life that the consignment is covered by, one or more insurance policies under a contract of insurance in respect of such goods providing relief in case of death or injury to a person or damage to any property or the consignment, if an accident takes place.

10.15.2.3 Punishment for contravention in relation to non-registration, carrying goods of dangerous or hazardous nature, or prohibited goods. (Section 18)

Anyone who contravenes the provisions of section 3, section 13 or a notification issued under section 14 shall be punishable for the first offence with fine which may extend to five thousand rupees, and for the second or subsequent offence with fine which may extend to ten thousand rupees.

10.16.0 CARRIAGE BY ROAD RULES 2011

10.16.1 OBJECTIVE AND SCOPE: The Rules have been enacted in exercise of the powers conferred by section 20 of the Carriage by Road Act, 2007 by the Central Government.

10.16.2 RELEVANT PROVISIONS OF THE ACT

10.16.2.1 DEFINITION (Rule 2)

i. 'Act' means the Carriage by road Act 2007

10.16.2.2 Application for grant or renewal of certificate of registration (Rule 3)

An Application for grant or renewal of certificate of registration shall be made in Form I to the registering authority

10.16.2.3 Conditions for grant of registration (Rule 4)

A person applying for registration shall produce registration certificate of two commercial vehicles registered in his name or in the name of the Organization or in the name of a partner or proprietor or director.

10.16.2.4 Suspension, revocation or cancellation of certificate of registration (Rule 7)

The registering authority may revoke the certificate of registration for contravention of any of the provisions of section 5.

10.16.2.5 Procedure and safeguards for carrying goods of dangerous or hazardous nature (Rule 11)

A common carrier shall while carrying goods of dangerous or hazardous nature comply with the safeguards under the Central Motor Vehicles Rules1989.

CHAPTER ELEVEN

STAMPEDE: DISASTER FROM FAULTY CROWD MANAGEMENT

"The death toll in the stampede at Allahabad railway station reached 36 today, with 14 more people succumbing to their injuries." – Thus ran the headlines of Times of India on February 11, 2013 reporting the stampede which occurred near the foot over bridge in the station.

This was not an isolated incident. At least 111 people were killed and over 100 injured in a stampede during Navratri festivities near atemple in Madhya Pradesh's Datia district. This was triggered by rumours that a river bridge the devotees were crossing wasabout to collapse.

Days after the stampede in *Datia*, the National Disaster Management Agency (NDMA) released a set of guidelines for crowd control at places of mass gatherings, suggesting deployment of snake line approach, constant monitoring of crowds for developing hazard points, alternative routes to release crowd pressure and accessibility of emergency exits at all times[29].

The guidelines, which form part of a position paper prepared by IIM Ahmedabad based on a study commissioned by the NDMA, require the organizers of crowded events/venue managers to discourage general admissions and have plans to handle VIP visitors or, alternatively, refuse entry to VIPs where it adds to safety concerns. A public address system, with loudspeakers installed at all crowded points, has been recommended to communicate with the crowds.

The fact that the rows of shops along approach routes to religious places could block emergency evacuations, the guidelines suggest that there should be a 3-4 metre gap in between a row of 5-6 shops, though which pilgrims can escape during an unexpected rush. Many religious places are located atop hills or mountains. Therefore, the guidelines also call upon the authorities to have separate tracks for pilgrims travelling by foot and those covering the journey on ponies/mules.

[29] A Guide for Administrators and Organizers of Events and Venues of Mass Gathering- A Guide for State Government, Local Authorities, Administrator and Organisers, NDMA

The guidelines, which list the roles and responsibilities of various stakeholders, say the event organizers and venue managers should develop, implement, review and revise the disaster management plan in coordination with others including local administration and police. This would require them to secure all the necessary approvals and update administration about event schedule, venue, transport, medical, food, hygiene and emergency facilities.

The police should actively participate in venue assessment and preparedness checks and guide crowd and traffic movements. Event/venue managers can involve NGOs and civil defense in traffic control, people flow control, medical assistance, sanitation and mobilization of local resources in case of disaster.

The guidelines also suggest setting up of medical first-aid rooms and emergency operations centres to handle post-disaster emergencies.

According to NDMA, it embarked on formulation of an integrated and structured approach to crowd management as "the recurring stampedes, including (at) religious places, railway stations, sports/social/political events are a great concern".

A set of generic guidelines were put together to minimize a repeat of similar crowd disasters.[30]

The legislations which are in place to prevent stampede or other disasters from faulty crowd management are discussed briefly hereunder:

11.1.0 THE POLICE ACT 1861

11.1.1 OBJECTIVE AND SCOPE

The word " Police" is generally applied to the internal regulations of large cities and towns; whereby individuals of the State, generally members of all governed family are bound to conform their general behavior to the rules of property and good neighbourhood. It is the department of state charged with the preservation of public peace, law and order, the safety and health of community. British India was divided into police districts in which the general system of regular police organization resembles in most respects to that of the police of Great Britain. However, there are certain variations in minor details in the various provinces.

[30]Available http://www.ndma.gov.in/images/pdf/managingcrowdsguide.pdf last visited on 14 July, 2014.

The necessity for re-organising the police and making it more effective instrument for the prevention and detection of the crime was felt by law makers of the State. In order to full that vacuum the present Act was enacted.

11.1.2 RELEVANT PROVISION OF THE ACT

11.1.2.1 Quartering of additional police in disturbed or dangerous districts (Section 15)

- It shall be lawful for the Government, to declare that any area subject to its authority has been found to be in a disturbed or dangerous state, or from the conduct of the inhabitants of such area or of any class or section of them, it is expedient to increase the number of police.
- It shall be lawful for the Inspector-General of Police, or other officer authorized by the Government in this behalf, with the sanction of the Government, to employ any police-force in addition to the ordinary fixed complement to be quartered in the area specified in such proclamation as aforesaid.

11.1.2.2 Appointment of residents of neighborhood as special police officer during the period of disturbances (Section 17)

When it appear that any unlawful assembly, or riot or disturbance of the peace has taken place or an offence under the Prevention of Smuggling Act, 1952, has been committed and that the police-force ordinarily employed for preserving the peace or for prevention of an offence under the Prevention of Smuggling Act, 1952, is not sufficient, in that case it will be lawful, for any police-officer not below the rank of an Inspector to apply to the nearest Magistrate and for the District Magistrate or the Sub- divisional Magistrate to appoint so many of the residents of the neighborhood, as such police-officer require or the District Magistrate or the Sub-divisional Magistrate may deem proper for such situation.

The names of the special police-officers appointed shall forthwith be forwarded to the District Superintendent.

11.1.2.3 Duties of police officers (Section 23)

It shall be the duty of every police officer to obey and execute all orders and warrants lawfully issued to him by any competent authority-

- to collect and communicate intelligence affecting the public peace;
- to prevent the commission of offences and public nuisances;
- to detect and bring offenders to justice and
- To apprehend all persons whom he is legally authorized to apprehend, and for whose apprehension sufficient ground exists.
- For any of the purpose mentioned in this section, any police- officer, without a warrant enter and inspect any drinking- shop, gaming- house or other place or resort of loose and disorderly characters.

11.1.2.4 Regulation of public assemblies and processions and licensing of the same (Section 30 and 30 A)

The District Superintendent or Assistant District Superintendent of Police may direct the conduct of all assemblies and processions

- on the public roads, or
- in the public streets or
- thoroughfares

and prescribe the routes by which, and the times at which, such processions may pass.

He may also, on being satisfied that any persons forming

- an assembly in any such road, street or thoroughfare, or
- to form a procession

which would, in the judgment of the Magistrate of the district, or of the sub-division of a district, if uncontrolled, be likely to cause a breach of the peace, require by notice that the persons convening such assembly shall apply for a license.

On such application being made, he may issue a license specifying the names of the licensees and defining the conditions on which alone such assembly or procession is to be permitted and this will not involve any fees.

Procession which violates the conditions may be stopped by

- any Magistrate or
- District Superintendent of Police or

- Assistant District Superintendent of Police or
- Inspector of Police or
- any police officer in charge of a station

and may order it to disperse. Any procession or assembly which violates the conditions shall be deemed to be an unlawful assembly.

11.1.2.5 Police duty bound to keep order on public roads (Section 31)

It shall be the duty of the police to keep order on-

- the public roads,
- the public streets,
- thoroughfares,
- ghats and landing-places, and
- at all other places of public resort,

to prevent obstructions on the occasions of assemblies and processions on the public roads and in the public streets, or in the neighborhood of places of worship, during the time of public worship, and in any case when any road, street, thoroughfare, ghat or landing-place may be thronged or may be liable to be obstructed.

CHAPTER TWELVE
EPIDEMIC DISEASES

Disasters and other emergencies often result in significant impacts on people's health, including the loss of many lives. Every new threat reveals new challenges for managing health risks and effects of emergencies and disasters. Deaths, injuries, diseases, disabilities, psychosocial problems and other health impacts can be avoided or reduced by disaster risk management measures involving health and other sectors.Disaster risk management for health is multi-sectoral and refers to the systematic analysis and management of health risks, posed by emergencies and disasters, through a combination of

(i) hazard and vulnerability reduction to prevent and mitigate risks,
(ii) preparedness,
(iii) response and
(iv) recovery measures.

The traditional focus of the health sector has been on the response to emergencies. The ongoing challenge is to broaden the focus of disaster risk management for health from that of response and recovery to a more proactive approach which emphasises prevention and mitigation, and the development of community and country capacities to provide timely and effective response and recovery. Resilient health systems based on primary health care at community level can reduce underlying vulnerability, protect health facilities and services, and scale-up the response to meet the wide-ranging health needs in disasters.

Need for *Disaster Management* in health sector:

Natural, biological, technological and societal hazards put the health of vulnerable populations at risk and the potential to cause significant harm to public health. Examples of these hazards are as follows:

- Natural: earthquake, landslide, tsunami, cy-clones, flood or drought.
- Biological: epidemic disease, infestations of pests.
- Technological: chemical substances, radiological agents, transport crashes.
- Societal: conflict, stampedes, acts of terrorism.

Disasters, emergencies, and other crises may cause ill-health directly or through the disruption of health systems, facilities and services, leaving many without access to health care in times of emergency. They also affect basic infrastructure such as water supplies and safe shelter which are essential for health.

International disasters are regarded as barriers to progress on the health-related Millennium Development Goals (MDGs), as they often act as impediments to hard earned development gains in health and other sectors.

Disaster risk management for health: key considerations

The key consideration in dealing with the aforementioned risk of disaster is development of national and community health emergency and disaster risk management systems with emphasis on primary prevention, vulnerability reduction and strengthening community, health facility, and health system resilience by reinforcing a community-centred primary health care approach.

The development of further evidence-based technical guidance and training programmes for the advancement of health emergency and disaster risk management capacities, including priority technical areas is needed on a priority basis.

Also, partnerships need to be strengthened between nations. Institutional capacities and coordination mechanisms among health and related sectors for global, regional, national and community health emergency and disaster risk management need to be developed.

The legislations dealing with mitigating risks from such disasters are discussed as follows:

12.1.0 THE EPIDEMIC DISEASES ACT, 1897

12.1.1 OBJECTIVE AND SCOPE

The Act provides power to exercise for the control and to prevent any epidemic or spread of epidemic in the States or Country. The states may authorise any of its officers or agency to take such measures if the state feel that the public at large is threaten with an outbreak of any dangerous epidemic. Person who is inspecting, is empowered to determine about the process and authority to take responsibility of all expenses incurred in compensation, traveling, temporary accommodation, segregation of infected person, etc.

12.1.2 RELEVANT LEGAL PROVISIONS OF THE ACT

12.1.2.1To take special measures and prescribe regulations as to dangerous epidemic diseases (Section 2)

(a) When at any time the State Government is satisfied that the State is threatened with, an outbreak of any dangerous epidemic disease, the State Government, if it thinks that the ordinary provisions of the law for the time being in force are in sufficient for the purpose, may take, or require or empower any person to take, such measures and, by public notice, prescribe such temporary regulations to be observed by the public or by any person or class of persons as it shall deem necessary to prevent the outbreak of such disease or the spread thereof, and may determine in what manner and by whom any expenses incurred (including compensation if any) shall be defrayed.

(b) The inspection of persons travelling by railway, and the segregation, in hospital, temporary accommodation, of persons suspected by the inspecting officer of being infected with any such disease.

12.1.2.2 Power of Central Government (Section 2A)

When the Central Government is satisfied that India or any part thereof is visited by, or threatened with, an outbreak of any dangerous epidemic disease and the ordinary provisions of the law for the time being in force are insufficient to prevent the outbreak of such disease or the spread , the Central Government may take measures and prescribe regulations for the inspection of any ship or vessel leaving or arriving at any port in the territories to which this Act extends and for such detention thereof, or of any person intending to sail therein, or arriving thereby, as may be necessary.

12.1.2.3 Penalty (Section 3)

Any person disobeying any regulation or order made under this Act shall be deemed to have committed an offence punishable under section 188 of the Indian Penal Code.(45 of 1860).

12.1.2.4 Protection to persons acting under Act (Section 4)

No suit or other legal proceeding shall lie against any person for anything done or in good faith intended to be done under this Act.

CHAPTER THIRTEEN

DROUGHT

Drought is a natural hazard that differs from other hazards. It is an extended period of months or years when a region notes a deficiency in its water supply. Generally, this happens when the actual rainfall in an area is significantly less than the climatological mean of that area. It can have a substantial impact on the ecosystem and agriculture of the affected region. Although droughts can persist for several years, even a short, intense drought can cause significant damage and harm the local economy. This global phenomenon has a widespread impact on agriculture. Apart from drought due to the meteorological reasons, there are two other types of drought that occur in India, viz, Hydrological Drought (due to a marked depletion of surface water causing very low stream flow and drying of lakes, rivers and reservoirs) and Agricultural Drought (due to inadequate soil moisture resulting in acute crop stress and fall in agricultural productivity). While droughts due to shortage of rainfall are common, agricultural droughts due to lack of sufficient soil moisture have also been noted.

India, due to its geographical location and climatic conditions which vary widely across the country, is susceptible to various natural disasters including drought. Drought in India has resulted in tens of millions of deaths over the course of the 18th, 19th, and 20th centuries. Indian agriculture is heavily dependent on the climate of India: a favorable southwest summer monsoon is critical in securing water for irrigating Indian crops. In some parts of India, the failure of the monsoons result in water shortages, resulting in below-average crop yields. This is particularly true of major drought-prone regions such as southern and eastern Maharashtra, northern Karnataka, Andhra Pradesh, Orissa, Gujarat, and Rajasthan.

In the past, droughts have periodically led to major Indian famines, including the Bengal famine of 1770, in which up to one third of the population in affected areas died; the 1876–1877 famine, in which over five million people died; and the 1899 famine, in which over 4.5 million died.

Drought vulnerability is a product of a region's risk of water shortage and the exposure of the communities to the problems arising thereafter. If nations and regions are to make progress in reducing the serious consequences of drought, they must improve their understanding of the hazard and the factors that influence vulnerability. It is critical for countries to better understand this hazard and how it varies temporally and spatially to establish comprehensive

and integrated drought early warning systems that incorporate climate, soil, and water supply functions such as precipitation, temperature, soil moisture, snow pack, reservoir and lake levels, ground water levels, and stream flow.

13.1 JUDGEMENTS OF SUPREME COURT RELATING TO DROUGHT

1.Kishen Pattnayak and Anr. vs. State of Orissa 1989 Supp(1) SCC258 : AIR 1989 SC 677

The Hon'ble Supreme Court in*Kishen Pattnayak and Anr. vs. State of Orissa* [1989 Supp(1) SCC 258 : AIR1989 SC 677] considered a letter written to the Hon'ble Chief Justice of India, highlighting the miserable condition of the inhabitants of the district of Kalahandi in the State of Orissa on account of extreme poverty, by the petitioners as a writ petition. This writ petition was taken along with another writ petition filed by Indian People's Front alleging starvation deaths, drought diseases and famine in the districts of Koraput and Kalahandi due to utter negligence and callousness of the administration and the Government of Orissa. In order to ascertain the correct state of affairs, the Hon'ble Court was pleased to direct the District Judge of Kalahandi to enquire as to whether the State Government has, in fact, implemented the social welfare measures in the district of Kalahandi and whether such measures were adequate to meet the needs of the people there. The report was however not considered. The Learned Advocate General of Orissa drew the attention of the Court to the Orissa Relief Code which in paragraphs 39 and 40 deals with the methods of handling any reports of starvation and verification of press reports and issue of contradiction, if any, respectively.

The Hon'ble Supreme Court held that a district-level Natural Calamities Committee consisting of the Collector, other officials and the popular representatives like MPs and MLAs of the district, who are required to review the progress of relief work and the measures taken to meet the drought conditions from time to time was sufficient and no new committee was required to be formed. The Government of Orissa was directed to nominate the names of at least five persons belonging to recognised voluntary organisations and registered voluntary agencies as members of the said Natural Calamities Committee of the district. The Committee was to hold at least one meeting every two months and the function of the Committee would not be confined only to the cases of

starvation deaths, but it shall be responsible for looking after the welfare of the people of the district.

2. M.K. Balakrishnan (2) And Othersvs . Union Of India And Others .(2009) 5 SCC 511

In case of*M.K. Balakrishnan (2) And Others .vs Union Of India And Others .[(2009) 5 SCC 511]* The Hon'ble Supreme Court while suo motu expanding the scope of writ petition originally filed for protection of wetlands in the country for preservation of the environment and maintaining the ecology underlined the terrible water shortage faced by people in India. Sharp decline in the ground water level, Perennial River turning seasonal and acute shortage of clean drinking water are some of the stark realities today which threaten the guaranteed fundamental right to get water as a part of right to life under Art.21 of the constitution of India. Their Lord ships directed the Central Government to constitute a committee which shall do scientific research on a war footing for solving the acute water shortage faced by people in most parts of the country. The case was monitored from time to time by the Hon'ble Supreme Court. In particular the committee was directed to:-

- To find out an inexpensive method or methods of converting saline water into fresh water.
- Find out methods of harnessing and managing monsoon rain water and also to manage the flood waters and to conduct research in rain water harvesting and treatment of waste water.
- Suggested methods for preservation and protection of wetlands.

CHAPTER FOURTEEN

CLOUD BURST

A **cloudburst** is an extreme amount of precipitation, sometimes with hail and thunder, which normally lasts no longer than a few minutes but is capable of creating flood conditions and Landslides. Colloquially, the term cloudburst may be used to describe any sudden heavy, brief, and usually unforecastable rainfall.

Meteorologists say the rain fall rate equal to or greater than 100 mm (3.94 inches) per hour is a cloudburst. The associated convective cloud, can extend up to a height of 15 km above the ground.

During a cloudburst, more than 20 mm of rain may fall in a few minutes. When there are instances of cloudbursts, the results can be disastrous. Cloudbursts are also responsible for Flash flood creation.

Rapid precipitation from cumulonimbus clouds is possible due to so called Langmuir precipitation process in which large droplets can grow rapidly by coagulating with smaller droplets which fall down slowly. It is not essential that cloudbursts occur only when a cloud clashes with a solid body like a mountain. They can also occur when hot water vapor mingles into the cold resulting in sudden condensation.

Cloud burst in the Indian Sub Continent

In the Indian subcontinent, a cloudburst usually occurs when a pregnant monsoon cloud drifts northwards, from the Bay of Bengal or Arabian Sea across the plains, then onto the Himalaya and bursts, bringing rainfall as high as 75 millimeters per hour. Instances of disaster relating to cloud burst in India are:-

- On September 28, 1908 - A Cloudburst resulted in a flood where the Musi River was swollen up to 38–45 m. About 15,000 people were killed and around 80,000 houses were destroyed along the banks of this river.
- In July, 1970 — Cloudburst in the upper catchment area led to a 15 metre rise in the Alaknanda river in Uttarakhand. Entire river basin, from Hanumanchatti near the pilgrimage town ofBadrinath to Haridwar was affected. An entire village was swept away.

- On August 15, 1997, 1500 people were killed when a cloud burst came bustling and trail of death are all that is left behind in Chirgaon in Shimla district, Himachal Pradesh.
- On August 17, 1998 — A massive landslide following heavy rain and a cloudburst at Malpa village killed 250 people including 60 Kailash Mansarovar pilgrims in Kali valley of the Kumaon division, Uttarakhand. Among the dead was Odissi dancer Protima Bedi.
- On July 16, 2003, About 40 persons were killed in flash floods caused by a cloudburst at Shilagarh in Gursa area of Kullu, Himachal Pradesh.
- On July 6, 2004, At least 17 people were killed and 28 injured when three vehicles were swept into the Alaknanda river by heavy landslides triggered by a cloudburst that left nearly 5,000 pilgrims stranded near Badrinath shrine area in Chamoli district, Uttarakhand.
- On 26 July 2005, A cloudburst caused approximately 950 millimetres (37 in) of rainfall in Mumbai.[12] over a span of eight to ten hours; the deluge completely paralysed India's largest city and financial centre leaving over 1000 dead.
- On August 14, 2007, 52 people were confirmed dead when a severe cloud burst occurred in Bhavi village in Ganvi 15/20, Himachal Pradesh.
- On August 7, 2009, 38 people were killed in a landslide resulting from a cloudburst in Nachni area near Munsiyari in Pithoragarh district of Uttarakhand.
- On August 6, 2010, in Leh, a series of cloudbursts left over 1000 persons dead (updated number) and over 400 injured in the frontier Leh town of Ladakh region in Jammu and Kashmir.
- On September 15, 2010 cloud burst in Almora in Uttrakhand has drowned away two villages one of them being Balta, leaving a few people alive and rest entire village dead and drowned. Almora has been declared as a town suffering from the brunt of cloudburst by authorities of Uttrakhand.
- On September 29, 2010, a cloudburst in NDA (National Defense Academy), Khadakwasla, Pune, in Maharashtra state left many injured, hundreds of vehicles and buildings damaged due to this flash flood.
- Again on October 4, 2010, a cloudburst in Pashan, Pune, in Maharashtra state left 4 dead, many injured, hundreds of vehicles and buildings damaged. The record books as the historical highest rainfall in intensity and quantity of the Pune city recorded since 118 years old (record of 149.1 mm in 24 hours)of October 24, 1892. In the history of IT (Information Technology) hub Pune, first time this flash flood also anable Pune people to

for over night stay (sleep) in their vehicle, officies and what ever available shelter in the traffic jam.

- October 4, 2010, a cloudburst in Pashan, Pune may be the world's first predicted cloudburst, in well advanced. Since 2.30 pm in the afternoon of the day, a young weather scientist Kirankumar Johare, in the city was frantically sending out SMSes to the higher authorities warning of an impending cloudburst over the Pashan area. After taking the necessary precautions still 4 persons were dead including one young scientist.It might be the world's first predicted cloudburst in advance, which saved thousands of lives in Pune City.

- On June 9, 2011, near Jammu, a cloudbursts left 4 persons dead and over several injured in Doda-Batote highway, 135 km from Jammu.Two restaurants and many shops were washed away
- On 20 July 2011, a cloudburst in upper Manali, 18 km away from Manali town in Himachal Pradesh state left 2 dead and 22 missing.[16]
- On September 15, 2011 a cloudburst was reported in the Palam area of the National Capital Territory of Delhi. The Indira Gandhi International Airport's Terminal-3 was flooded with water at the Arrival due to the immense downpour. Even though no lives were lost in the rain that lasted an hour was enough to enter the record books as the highest rainfall in the city since 1959.[*citation needed*]
- On September 14, 2012 there was a cloudburst in Rudraprayag district killing 39 people.
- On June 15, 2013 a cloudburst was reported in Kedarnath and Rambada region of Uttarakhand State. Over 1000 killed to date, it is feared that the death toll may rise to 5000. Debris is still being cleared and thousands as still are still missing as of June 30, 2013. It left approximately 84000 people stranded for several days. Indian Army and it's Northern Command launched one of the largest and most extensive human rescue missions launched in its history. Spread over 40,000 square kilometres, 45 helicopters were deployed to rescue the stranded.[18][19] According to a news report this incident was falsely linked with cloud burst, rather it was caused due to disturbance in the two glaciers near Kedarnath.(Source-Isro Report)

Legislation relating to cloud Burst are-

14.1.0 DAM SAFETY BILL:

The Govt. of India constituted the National Committee on Dam Safety (NCDS) in October, 1987 under the Chairmanship of Chairman, CWC to oversee dam safety activities in various States and suggest improvements to bring dams safety practices in line with the latest state-of-art practices. Guidelines for Preparation of Emergency Action Plan, approved in the 27 th meeting of NCDS, which was held on 27 th September 2005, were circulated to dam owning States/Agencies. The 29 the meeting of NCDS was held on 12 th December, 2008 in which major dam safety issues, the necessity of Dam Safety Act, preparation of Emergency Action Plan, setting up of hydrological study units etc. were discussed. Government of India constituted a Standing Committee in 1982, under the Chairmanship of Chairman, Central Water Commission to review the existing practices and to evolve unified procedures of dam safety for all dams in India. The Standing Committee submitted its report titled "Report on Dam Safety Procedures" in July 1986. One of the recommendations of Committee was the 'enactment of Dam Safety Legislation '. As a follow up, a draft "Dam Safety Act (1987)" was prepared by CWC and circulated to National Committee on Dam Safety (NCDS) members in 1988. Comments/ suggestions were received from 12 states. Accordingly, modified Bill (2000) was prepared by CWC, approved by Ministry of Water Resources (MOWR) & vetted by Ministry of Law. It was circulated to four Dam Safety Assurance and Rehabilitation Project (DSARP) participating states (Madhya Pradesh, Orissa, Rajasthan & Tamil Nadu) for adoption as Bill. This modified Draft Bill- as per suggestions of Tamil Nadu & Madhya Pradesh - discussed in 23rd NCDS (March 2002) meeting. Subsequently, a Draft Bill- 2002, approved by MOWR, circulated to all states.

The States have responded well to the Draft Bill. The Government of Bihar has passed the Dam Safety Act 2006 on line with the Draft Bill circulated by MOWR / CWC, and the same was published in the Bihar Gazette on 4.5.2006. The Government of Andhra Pradesh has adopted a Resolution on 24 th March 2007 that the Dam Safety Resolution should be regulated in the State of Andhra Pradesh by Parliament by Law. The Government of West Bengal has also passed a similar Resolution on 24 th July 2007 empowering the Parliament of India to pass the necessary Dam Safety Act. Government of Madhya Pradesh, Maharashtra, Orissa and Uttar Pradesh are in the process of adopting similar resolution. Draft Dam Safety Bill 2002, was renamed as Dam Safety Bill-

2007(without any other modification). The same was circulated by MOWR for fresh comments. In February 2008, copies of Draft Bill were circulated to Prime Minister's Office, Planning Commission, Ministry of Power, Ministry of Finance (Dept. of Expenditure), Ministry of Law & Justice, Ministry of Home Affairs, National Disaster Management Authority and Central Water Commission (CWC) for their comments. In response, CWC in June 2008 furnished a modified version of the Draft Bill. The Draft Bill modified by CWC was then sent by MOWR to the Ministry of Law and Justice for their concurrence. Subsequently, and after detailed discussion with CWC officials, Ministry of Law and Justice finalized the Dam Safety Bill 2009. The comments of Ministry of Finance (Dept. of Expenditure), National Disaster Management Authority and Ministry of Home Affairs were also received. The Ministry of Law and Justice, Govt. of India has given their concurrence on the Dam Safety Bill 2009 on 22 and August 2009 and presently the Bill is under the purview of MOWR for getting the approval of the Cabinet before its placement to the Parliament.

Besides these, the NDMA has come up with guidelines on management of flood.

CHAPTER FIFTEEN
PEST ATTACK

Farmers in the tropics lose up to 50% of their crops to pests — including insects and plant pathogens — compared with just 25–30% in Europe and the United States. Part of the problem is that pests are a year-round problem in the tropics, and farmers are often poorer and rarely have access to safe and effective pesticides, robust varieties of plants and adequate irrigation.

A pest attack is nothing short of a disaster considering the lives affected by the same. Thus, *pest attacks* need to be dealt with while analyzing disasters in India.

Recent droughts in tropical areas are a cause of concern as an already dire situation could worsen. In 2011 and 2012, the Horn of Africa experienced its worst drought for 60 years. Crop failures contributed to the deaths of nearly 260,000 Somalis, and millions of people across the region were malnourished.

Climatologists expect droughts to become more frequent in other arid regions too. The International Panel on Climate Change predicts that over the next 90 years, rainfall in some parts of North Africa and western Asia will decline by 30% and the average temperature will increase by 4 °C.

The effects of climate change are already being seen. It is of concern that the cereal leaf miner, which was once restricted to Syria, can now be found throughout neighbouring Jordan and Iraq. The hessian fly, a pest of wheat, has crossed the Mediterranean from North Africa into Spain, Portugal and southern France.

The outbreaks of potato tuber moth are more severe in years that are hotter and drier than usual. There is less rain to wash the moths off the leaves and stems of the potato plant, and the dry conditions mean the larvae can crawl down through cracks in the soil to burrow into the tuber. Peru has been the worst hit. As the planet warms, the moth may move to higher elevations.

As global temperatures rise, pests that are now confined to the tropics may spread to cooler parts of the world. Farms at mid-latitudes may face a doubling of crop loss due to pests by the end of this century, according to a preliminary model developed by Tewksbury, David Battisti, an atmospheric scientist at the University of Washington in Seattle, and Curtis

Deutsch, an atmospheric scientist at the University of California, Los Angeles. Their model projects global pest damage to wheat, maize and rice, and is based on the relationship between insect population growth and temperature, and incorporates projections about climate change over the century. If the predictions are accurate, solutions are desperately needed for agriculture in temperate zones.

In today's global world, India is not shielded from other countries and the phenomenon is not limited to tropical or temperate regions.

Brinjal, a commonly used vegetable, accounts for the highest use of insecticides among all the vegetables in India. This is mainly because farmers have no option but to spray insecticides on a weekly basis 15 to 20 times in the six months of the crop life to save the yield as brinjal is highly susceptible to the "shoot and fruit borer" (*leucinodes orbonalis*) attack. This pest causes 30 to 100 per cent crop loss.

To end this problem, which is not only affecting human health and environment but also causing a huge drain on the farmers' revenues in terms of crop losses and high costs of insecticides, the Indian Institute of Horticultural Research (IIHR) has come out with a method of biological control of the pest.

Under this system, an insect parasite*Trichogramma chilonis* that predates on this deadly pest is mass produced and released into the brinjal fields in a systematic manner at regular intervals.

In all, it would require 10 to 15 lakh parasites over six months to handle the pests in one hectare of land in addition to two sprays of Bt.

This bio friendly method of controlling pests is a boon to the farmers. The *brinjal* case is not an isolated incident.

An extended dry spell in India's main coffee growing regions has promoted the spread of a crop pest, which is a threat to the coffee industry.

The white stem borer affects mainly arabica crops, which farmers uproot and destroy to prevent further spreading. Outbreaks spread quicker during prolonged periods of dryness.

The South Indian state of Karnataka is the country's largest coffee producer, accounting for 70% of national output. Its neighboring states of Kerala and Tamil Nadu are also large producers.

The fall in production isn't likely to buttress prices, as demand has been weak due to the sputtering global economic recovery, particularly in Europe. India exports almost 70% of its output, and European countries account for half of total shipments.

The problems if not tackled head front will spell doom for the respective industries and will affect the lives of people associated with the trade in some way or the other. To avoid such disasters in coming years, adequate sum needs to be allocated and facilities created for research to foresee and guard against such threats.

15.1.0 THE DESTRUCTIVE INSECTS AND PESTS ACT, 1914

15.1.1 OBJECTIVE AND SCOPE

This act was enacted to prevent the introduction into and the transport from one state to another in India of any insects, fungus or other pest which is or may be destructive to crops. It was passed by the governor general of India in council. The Act received the assent of the governor-general on the 3rd, February, 1914.

15.1.2 RELEVANT PROVISIONS OF THE ACT

15.1.2.1 Definitions

d) "Crops" includes all agricultural or horticultural crops, and all trees, bushes or plants;
e) "Import" means the bringing or taking by sea, land or air, across any customs frontier defined by the Central Government;
f) "Infection" means infection by any insect, fungus or other pest injurious to crops.

15.1.2.2 Power of the Central Government to regulate or prohibit the import of articles likely to infect (Section 3)

The Central Government may, by notification in the Gazettee of India, prohibit or regulate, subject to such restrictions and conditions as the Central Government may impose, the import into India, of any articles or class of articles likely to cause infection to any crop or of insects generally or by class of insects.

A notification shall specify any article or insect with reference to the country of origin, or the route by which it is imported

15.1.2.3 Power of Central Government to regulate or prohibit transport from State to State of Insects or articles likely to infect (Section 4A)

The Central Government may, prohibit or regulate, subject to such conditions as the Central Government may impose, the export from a State or the transport from the State to another State in India of any article likely to cause infection to any crop or of insects generally.

15.1.2.4 Refusal to carry article of which transport is prohibited (Section 4B)

When a notification issued under section 4 A:

- prohibits export or transport or
- imposes conditions upon export or transport

the person responsible for the booking of goods or parcels at any railway station or inland steam vessel station shall refuse to receive for

- carriage at, or
- to forward or
- knowingly allow to be carried on the railway or inland steam vessel from that station

anything, of which import or transport is prohibited, consigned to any place in India outside the state in which such station is situated ; and

he shall also refuse export or transport, unless the consignor produces, or the thing consigned is accompanied by a document or documents of the prescribed nature showing that the conditions imposed by the notifications are satisfied.

15.1.2.5 Power of Central Government to make rules (Section 4D)

The Central Government may, by notification in the Official Gazettee, make rules prescribing the nature of the documents which shall accompany any article or insect the export or transport whereof is subject to conditions imposed under section section 4A, or which shall be held by the consignor or consignee thereof, the authorities which may issue such documents and the manner in which the documents shall be employed.

15.1.2.6 Power of State Government to make rules (Section 5)

1. The State Government may make rules for the detention, inspection, disinfection or destruction of any insect or any article in respect of which a notification has been issued under section 3 or under section 4 A or of any article which may have been in contact or proximity thereto, and for regulating the powers and duties of the officers whom it may appoint in this behalf.

2. In making any rule under this section the State Government may direct that a breach shall be punishable with fine, which may extend to one thousand rupees.

15.1.2.7 Penalties (Section 5A)

Any person-

- who knowingly exportsany article or insect from a State or
- transports any article or insect from one State to another in India

-in contravention o f a notification issued under section 4A,

or

-attempts so to export or transport any article or insect, and any person responsible for the booking of goods or parcles at a railway or inland steam vessel station who knowingly contravenes the provisions of section 4B

- shall be punishable with fine which may extend to two hundred and fifty rupees and upon any subsequent conviction, with fine which any extend to two thousand rupees.

15.1.2.8 Protection to persons acting under Act (Section 6)

No suit, protection or other legal proceedings shall lie against any person for anything in good faith done or intended to be done under this Act.

15.2.0 THE INSECTICIDES ACT, 1968

15.2.1 OBJECTIVE AND SCOPE:

The Insecticides Act, 1968 is an act to regulate the import, manufacture, sale, transport, distribution and use of insecticides in order to prevent risk to human beings or animals and for similar connected matters. Act 46 of 1968 was amended by the Insecticides (Amendment) Act, 1972, Insecticides (Amendment) Act, 1977, Insecticides (Amendment) Act, 2000. As a measure to check food poisoning etc. on the recommendation of the enquiry commission by justice J.C Shah the present legislation was given effect.

Act to regulate the import, manufacture, sale, transport, distribution and use of insecticides in order to prevent risk to human beings or animals and for similar connected matters.

15.2.2 RELEVANT PROVISION OF THE ACT

15.2.2.1Definitions (Section 3)

b) "Insecticide" is defined in section 3(e) to include

Any substance included in the schedule *or*

i. *Other substances as the Central Government may by notification in the official Gazette, include in the schedule from time to time; or*
ii. *Any preparation containing any one or more of the above stated substances.*

15.2.2.2 The Central Insecticides Board (Section 4)

Constituted by the Central Government to advise the Central and State Governments on:-

e) Technical matters arising out of administration of the Act
f) Other functions assigned to the Board by or under this Act.
g) The risk to human being or animals involved in the use of insecticides and the safety measures necessary to prevent such risk.
h) The manufacture, sale, storage, transport and distribution of insecticides with a view to ensure safety to human beings or animals

15.2.2.3 Registration of insecticides (Section 9)

c) Any person desiring to import or manufacture any insecticide may apply to the Registration Committee for the registration of such insecticide and there shall be separate application for each such insecticide.
d) It is pertinent to be mentioned that that if the Committee is of opinion that the precautions claimed by the applicant as being sufficient to ensure safety to human beings or animals are not such or that notwithstanding the observance of such precautions the use of the insecticide involves serious risk to human beings or animals it may refuse to register the insecticide.

15.2.2.4 Licensing officers (Section 12)

The State Government may, by notification in the Official Gazette, appoint such persons as it thinks fit to be licensing officers for the purposes of this Act and define the areas in respect of which they shall exercise jurisdiction.

15.2.2.5 Insecticide Inspectors (Section 20)

d) The Central Government or a State Government may appoint persons in such number as it thinks fit and possessing such technical and other qualifications as may be prescribed to be Insecticide Inspectors.
e) Every Insecticide Inspector shall be deemed to be a public servant within the meaning of Sec. 21 of the Indian Penal Code and shall be officially subordinate to such authority as the Government appointing him may specify in this behalf.
f) Sections 42 of the Code of Criminal Procedure, 1973 shall, as far as may be, apply to any search or seizure under this Act and an Insecticide Inspector may exercise the powers of a police officer as in section 94 of the Code of Criminal Procedure, 1973.

15.2.2.6 Notification of poisoning (Section 26)

The State Government may, by notification in the official Gazette, require any person or class of persons specified therein to report all occurrences of poisoning, through the use or handling of any insecticide, coming within his or their cognizance to such officer as may be specified in the said notification.

15.2.2.7 Prohibition of sale, etc. of insecticide for reasons of public safety (Section 27)

c) On receipt of a report under Sec. 26 or otherwise, if the Central Government or the State Government is of opinion that the use of any insecticide is likely to involve such risk to human beings or animals as to render it necessary to take immediate action then that Government may, by notification in the official Gazette, prohibit the sale, distribution or use of the insecticide or batch in such areas, to such extent and for such period (not exceeding sixty days) as may be specified in the notification pending investigation into the matter.

d) On conclusion of investigation if the Government is satisfied that the use of the said insecticide or batch is or is not likely to cause any such risk, it may pass such order as it deems fit, depending on the circumstances of the case.

In Ashok (Dr.) v . Union of India [(1997) 5SCC 10] Amongst the several chemicals used industrially, some insecticides, colour additives and food additives (the chemicals) were approved for use in India even though they were banned in "advanced countries" as they carried carcinogenic properties.

These facts were mentioned in a letter sent by Dr. Ashok (the Petitioner) to the Chief Justice of India. The Court treated the letter as a petition under Article 32 of the Constitution and took up the matter as public interest litigation. Article 32 guarantees the right to move the Supreme Court for the enforcement of fundamental rights. Along with the letter, the Court clubbed another petition challenging a notification by the Central Government which called for progressively phasing out the manufacture and use of Benzene Hexachloride (BHC) by cancelling certificate of registration from a future date. In this matter, the Central Government had set up an expert committee to review the use of those pesticides which were either banned or restricted for use in other countries.

The Court's analysis centered on the interpretation of the Insecticide Act, 1968 and the application of Article 21of the Constitution which establishes the right to life and liberty and from which the Court derived the right to health. On the relation between use of the chemicals and health, the Court noted that even though these chemicals could be used to fight epidemics like plague and dengue, this could not be used as an excuse for allowing their manufacture when their use is grossly detrimental to the human health. The Court went on to hold that excessive use of such hazardous products was a danger to the health and safety of living beings especially agricultural workers. Stressing on the importance of public health within the framework of Article 21, the Court relied on M.C.Mehta v. Union of India & others ((1987) 4 SCC 463), where it held that "life, public health and ecology

have priority over problems of unemployment and loss of revenue."Regarding the need for an intervention by the administrative machinery of the State, the Court noted that there was no coordination between the different ministries involved. It, therefore, directed that within two months from the order, a committee of four senior officers from the four different ministries involved be set up. The purpose of the committee would be to deliberate upon and take "suitable measures" in respect of insecticides and chemicals which is found to be hazardous to health. The Court did not issue directions with regard to the chemicals mentioned in the petition. As to the question of BHC and certificates of registration, the Court held that the order of the Central Government cancelling certificates of registration for the formulation of BHC 10% was within its jurisdiction and did not suffer with any legal infirmity. It, however, held that the Central Government had no power to cancel certificates of registration issued in respect of BHC which "is one of the substances specified in the schedule and as such is an insecticide"

The Court further held that the Central Government had no power to cancel certificates of registration with respect to substances specified in the Schedule even if there was scientific evidence that the use of such a substance was grossly detrimental to human health. It held this to be a lacuna in the legislation and therefore steps should be taken for appropriate amendment to the legislation.

"The excessive use of chemicals and pesticides for optimising agricultural production created alarming danger to health and safety of living beings in general and agriculture workers in particular." "Right to Life enshrined in Article 21 means right to have something more than survival and not mere existence or animal existence. It includes all those aspects of life which go to make a man's life meaningful, complete and worth living." "By giving an extended meaning to expression 'life' in Article 21 this court has brought health hazards due to pollution within it and so also the health hazards from use of harmful drugs."

15.2.2.8 Powers of Governments to make rules (Sections 36 and 37)

The Central and State Governments may make rules respectively after consultation with the Board and subject to the condition of previous publication under sections 36 and 37 of the Act.

Note: India regulates its pesticides under the Insecticides Act 1968. This Act, however, hasn't been able to stop the pesticides from contaminating the environment and having a deleterious

impact on health. The Pesticides Management Bill 2008 is introduced in the parliament and is presently pending.

15.3.0 THE INSECTICIDES RULES, 1971

15. 3.1OBJECTIVE AND SCOPE:

In exercise of the powers conferred by section 36 of the Insecticides Act, 1968 (46 of 1968), the Central Government, after consultation with the Central Insecticides Board, makes The Insecticides Rules, 1971. It came into force on 30th of October 1971.

15.3.2. RELEVANT PROVISIONS OF THE RULES:

15.3.2.1 Functions of the Board (Rule 3)

The Board shall, in addition to the functions assigned to it by the Act, carry out the following functions, namely;

a. Advise the Central Government on the manufacture of insecticides under the Industries (Development and Regulation) Act, 1951 (65 of 1951);

b. Specify the uses of the classification of insecticides on the basis of their toxicity as well as their being suitable for aerial application;

c. Advise tolerance limits for insecticides, residues and an establishment of minimum intervals between the application of insecticides and harvest in respect of various commodities;

d. Specify the shelf-life of insecticides;

e. Suggest colorization, including colouring matter which may be mixed with concentrates of insecticides, particularly those of highly toxic nature;

f. Carry out such other functions as are supplemental, incidental or consequential to any of the functions conferred by the Act or these rules.

Functions of Registration Committee (Rule4)

The Registration Committee shall, in addition to the functions assigned to it by the Act, perform the following functions, namely;

a. Specify the precautions to be taken against poisoning through the use or handling of insecticides;

b. Carry out such other incidental or consequential matters necessary for carrying out the functions assigned to it under the Act or these rules.

15.3.2.2 Functions of Laboratory (Rule 5)

The functions of the Laboratory shall be as follows:

a. To analyze such samples of insecticides sent to it under the Act by any officer or authority authorized by the Central or State Governments and submission of certificates of analysis to the concerned authority;

b. To analyze samples of materials for insecticides residues under the provisions of the Act;

c. To carry out such investigations as may be necessary for the purpose of ensuring the conditions of registration of insecticides;

d. To determine the efficacy and toxicity of insecticides;

e. To carry out such other functions as may be entrusted to it by the Central Government or by a State Government with the permission of the Central Government and after consultation with the Board.

15.3.2.3 Segregation and disposal of date-expired pesticides (Rule 10 A)

a. Immediately after the date of expiry all such stocks after being segregated and stamped ";not for sale" or ";not for use" or ";not for manufacture", as the case may be, shall be kept by the licensee in a separate place specially demarcated for the purpose with a declaration date-expired insecticide, to be exhibited on the conspicuous part of the place.

b. All such stocks then shall be disposed off in such a manner as may be specified from time to time by the Central Government in consultation with the Central Insecticide Board.

15.3.2.4 Prohibition against sale or storage of insecticides in certain places (Rule 10 C)

No person shall manufacture, store or expose for sale or permit the sale or storage of any insecticide in the same building where any articles consumable by human beings or animals are manufactured, stored or exposed for sale.

15.3.2.5 Prohibition of sale or distribution unless packed and labeled (Rule 16)

No person shall stock or exhibit for sale or distribute any insecticide unless it is packed and labeled in accordance with the provisions of these rules.

15.3.2.6 Packaging of insecticides (Rule 17)

Every package containing the insecticides shall be of a type approved by the Registration Committee.

15.3.2.7 Leaflet to be contained in a package (rule 18)

The packing of every insecticide shall include a leaflet containing the following details, namely:

a. The plant disease, insects and noxious animals or weeds for which the insecticide is to be applied, the adequate direction concerning the manner in which the insecticide is to be used at the time of application;

b. Particulars regarding chemicals harmful to human beings, animals and wild life, warning and cautionary statements including the symptoms of poisoning suitable and adequate safety measures and emergency first-aid treatment where necessary;

c. Cautions regarding storage and application of insecticides with suitable warning relating to inflammable, explosive or other substance harmful to the skin;

d. Instructions concerning the decontamination or safe disposal of used containers;

e. A statement showing the antidote for the poison shall be included in the leaflet and the label;

f. If the insecticide is irritating to the skin, nose, throat, or eyes, a statement shall be included to that effect.

g. Common name of the insecticide as adopted by the International Standards Organization and where such a name has not yet been adopted such other name as may be approved by the Registration Committee.

15.3.2.8 Duties of Inspectors specially authorized to inspect manufacture of Insecticides (Rule 28)

Among the other duties of inspector it shall be the duty of any Inspector to report the Government all occurrences of poisoning.

15.3.2.9 Conditions to be specified for storage of insecticides (Rule 36)

1. The package containing insecticides shall be stored in separate rooms or premises away from the rooms or premises used for storing articles or shall be kept in separate almaries under lock and key depending upon the quantity and nature of the insecticides.

2. The rooms or premises meant for storing insecticides shall be well built, dry, well-lit and ventilated and of sufficient dimension.

15.3.2.10 Medical Examination (Rule 37)

All persons who are engaged in the work of handling, dealing or otherwise coming in contact with the insecticides during manufacture / formulation of insecticides or being engaged in spraying during operation shall be examined medically before their employment. Any person showing symptoms of poisoning shall be immediately examined and given proper treatment.

15.3.2.11 First aid measures (Rule 38)

In all cases of poisoning first-aid treatment shall always be given before the physician is called.

The workers also should be educated regarding the effects of poisoning and the first aid treatment to be given.

15.3.2.12 Respiratory devices (Rule 40)

For preventing inhalation of toxic dusts, vapours or gases the workers shall use any of the following types of respirators or gas-masks suitable for the purpose, namely:

a. Chemical cartridge respirator

b. Supplied air respirator

c. Demand flow, type respirator

d. Full face or half face gas masks with canister

In no case shall the concentrates of insecticides in the air where the insecticides are mixed exceed the maximum permissible values.

15.3.2.13 Manufacturers, etc. to keep sufficient quantities of antidotes and first-aid medicines (Rule41)

The manufacturers and distributors of insecticides and persons who undertake to spray insecticide on a commercial basis shall keep sufficient stocks of such first-aid tools, equipments, antidotes, injections and medicines as may be required to treat poisoning cases arising from inhalation, skin, contamination, eye contamination and swallowing.

15.3.2.14 Training of Workers (Rule42)

The manufacturers and distributors of insecticides and operators shall arrange for suitable training in observing safety precautions and handling safety equipment provided to them.

15.3.2.15 Disposal of used packages, surplus materials & washings of insecticides (Rule 44)

1. It shall be the duty of manufacturers, formulators of insecticides and operators to dispose packages or surplus materials and washing in a safe manner so as to prevent environmental or water pollution.

2. The used packages shall not be left outside to prevent their re-use.

3. The packages shall be broken and buried away from habitation.

CHAPTER SIXTEEN
FROST AND COLD WAVE

Occurrences of extreme low temperature in association with incursion of dry cold winds from north into the sub continent are known as cold waves. The northern parts of India specially the hilly regions and the adjoining plains are influenced by transient disturbances in the mid latitude westerlies which often have weak frontal characteristics. These are known as western disturbances. The cold waves mainly affect the areas to the north of 20 degree N but in association with large amplitude troughs, cold wave conditions are sometimes reported from States like Maharashtra and Karnataka as well.

Cold wave/frost is a localised seasonal phenomenon prevalent in the country except in Southern India. Frost damage to crops occurs when moisture within the plant is frozen, gets crystallized and expands. This causes cells to rupture and fluid to leak out, thus the watery appearance of plant tissue or seed after a damaging frost. Different parts of plant, different stages of development of plant, and different types of plants can have varying levels of these 'antifreeze' compounds that result in a range of susceptibility to frost.

The extent of damage caused by cold wave depends on temperature, length of exposure, humidity levels, and the speed at which freezing temperature is reached. It is difficult to predict a definite temperature level upto which crops can tolerate cold wave/frost because many other factors also affect it. For example, when air temperature reaches zero (0) degree centigrade, crop itself can be 4 or 5 degree cooler, because plants lose heat faster than the surrounding air temperature. Frost and cold waves greatly impacts pulse crops. During flowering stages, these crops are likely to be adversely affected at temperature of -2 to -3 degree C. Those in podding stage are a bit more tolerant but are likely to be damaged at a temperature of -3 to -4 degree C. As pulses often mature from bottom of the plant towards the top, frost injury may be much greater on plant tops.

The Government of India has approved the inclusion of cold wave/ frost in the list of eligible calamity for assistance from SDRF and NDRF. Condition/ criteria stipulated as under will be taken into account while considering the assistance from SDRF/ NDRF for the calamity of cold wave / frost:-

a) Severe cold wave conditions would be said to prevail in an area:

(i) If minimum temperature is lower than 7° C in an area where normal minimum temperature is 10° C or above; and

(ii) If minimum temperature is lower than 5° C in an area where normal minimum temperature is less than 10° C.

b) Frost conditions would be said to prevail when temperature falls below 0 degree C in an area where it is an abnormal phenomenon during the kharif/ rabi season.

c) For declaring a district affected by frost/ cold wave conditions by the State Government concerned, the meteorological data on departure of normal minimum temperature in the affected area, as released by the India Meteorological Department (IMD) shall be taken into consideration, for prevalence of frost/ cold wave conditions.

d) Areas which suffer crop loss of 50% or more by cold wave/frost conditions will be eligible for assistance from SDRF/ NDRF, as is now allowed in the case of damage due to drought, hailstorm, pest attack and other natural calamities. Similarly, animal husbandry, including poultry sector, would get assistance from SDRF/ NDRF in the wake of cold wave/frost.

e) The composition of the Central Team will be same as the Central Team constituted for the purpose of drought/hailstorm. The Central Team would make a field visit for assessment of damage to agriculture and horticulture production due to cold wave/ frost and shall take into consideration of all concomitant factors such as crops cutting experiment, fall in normal production, Normalized Differential Vegetation Index (NDVI) status of crops in the affected area, crops sown in the area affected, the vulnerability of the cold wave/ frost on standing agriculture/ horticulture crops etc. in the guidelines. The Ministry of Agriculture will be the nodal Ministry for natural calamity of cold wave/ frost.

PART C

CHAPTER SEVENTEEN

WEST BENGAL

17.1.0 WEST BENGAL STATE DISASTER MANAGEMENT POLICY & FRAME WORK

The policy begins with a discussion on the vulnerability of the State to natural calamities like flood,cyclone, hail storm, thunder squall, drought, landslide, erosion and sometimes to earthquakes because of its geo-morphological, climatic and seismic conditions. It highlights the aim of the West Bengal State Disaster Management Policy which is to establish necessary systems, structures, programs, resources, capabilities and guiding principles for reducing disaster risks and preparing for and responding to disasters and threats of disasters in the State of West Bengal in order to save lives and property, avoid disruption of economic activity and damage to environment and to ensure the continuity and sustainability of development. The objective of the Policy as provided is to assess the risks and vulnerabilities associated with various disasters; to develop appropriate disaster prevention and mitigation strategies; to provide clarity on roles and responsibilities for all stakeholders concerned with disaster management so that disasters can be managed more effectively; to develop and maintain arrangements for accessing resources, equipment, supplies and funding in preparation for disasters that might occur; to ensure that arrangements are in place to mobilize the resources and capability for relief, rehabilitation, reconstruction and recovery from disasters; to create awareness and preparedness and provide advice and training to the agencies involved in disaster management and to the community; to strengthen the capacities of the community and establish and maintain effective systems for responding to disasters; to ensure co-ordination with agencies related to disaster management in other Indian States and those at the national and international level; to ensure relief assistance to the affected without any discrimination of caste, creed, community or se; to establish and maintain a proactive programme of risk reduction, t develop and implement programmes for risk sharing and risk transfer for all types of disasters; to address gender issues in disaster management with special thrust on empowerment of women towards long term disaster mitigation; to develop disaster management as distinct management discipline and creation of a systematic and streamlined disaster management cadre.

17.1.1 Key elements of the West Bengal State Disaster Management Policy are:

a. Government of West Bengal will have the prerogative to define the occurrence of a disaster and define the boundaries of the disaster-affected site by issuing a "disaster declaration". The declaration can be made on the recommendation of State Relief Commissioner (SRC) or District Magistrate (DM).
b. Government of West Bengal views disaster management as a long-term process that involves the creation of disaster management and mitigation capacity in the State, in addition to developing systems and processes designed to provide relief and rehabilitation.
c. The formation of State Disaster Management Authority under the Chairmanship of Hon'ble Chief Minister and District Disaster Management Authority both at the State and District level serves effectively the purpose of overall supervision and management of Natural Calamities in the State, to mitigate the sufferings of the distressed people and to formulate advance planning for their prevention, precaution and post-disaster restoration.
d. The Disaster Management Department as the Nodal Department for management of natural disasters and the District Magistrates along with relevant Govt. Departments will be responsible for implementing emergency relief measures and rehabilitation after a disaster. State Executive Committee under the State Disaster Management Authority will facilitate, co-ordinate and monitor the activities related to disaster management at this phase.
e. State Relief Commissioner and District Magistrates will be provided special powers to deal with emergency situations created by disasters. When a disaster impacts an area covering several towns and cities within a district, the Government personnel and their facilities shall be placed under the operational control of the respective District Magistrate for the duration of the emergency.
f. Government Departments will simplify procedures to mobilize resources in these emergency situations.
g. Development planning will incorporate disaster management principles as an integral part of the overall planning process.

h. Government of West Bengal will look at all aspects of risk sharing and risk transfer to ensure that the costs associated with managing disasters are distributed across a wider population.

i. Links will be established between the nodal agency, Department of Disaster Management, Government Departments, local authorities, NGOs, research agencies, public sector, private sector, community groups and other stakeholders to share knowledge, establish coordination mechanisms and augment capacity of all the stakeholders.

j. A mechanism of continuous feedback shall be instituted so that learnings can be translated into more effective relief, rehabilitation and reconstruction efforts and the process of capacity creation and relief, rehabilitation and reconstruction feed into each other.

k. Self-reliance shall be developed by promoting and encouraging the sprit of self help and mutual assistance among local authorities and constituents

l. All Blocks and Districts of the State will develop and maintain documented plans of their disaster management functions and activities.

m. To ensure that all responsible agencies, their staff and the public area familiar with policy, plans and procedures related to disaster management, periodic exercises and drills shall be conducted at all levels, with specific emphasis at the district and local levels.

17.2.0 DISASTER MANAGEMENT MANUAL ISSUED BY THE DEPARTMENT OF DISASTER MANAGEMENT, GOVERNMENT OF WEST BENGAL

The Manual is an extensive coverage on the different types of disasters, West Bengal is prone and is divided into different chapters covering different types of disasters. The initial chapter delineates the general approach towards disaster management and the general vulnerability of the State. Due to its geographical location, West Bengal is prone to flooding. Besides this, cyclones, landslides, earthquakes and droughts too have often played havoc in the State. West Bengal lies along the Bay of Bengal which is exposed to cyclone-related hazards. Districts on the western part of the State, especially Purulia, Bankura, parts of Paschim Medinipur and Birbhum, are drought-prone because of receipt of inadequate rainfall. Landslides are common disaster phenomena in the district of Darjeeling. Northern districts of the State are affected by

massive earthquakes occurring in the Sikkim and Nepal region. Earthquakes in Bangladesh and the Ganga delta in North Bihar have also shaken the State.

Chapter five onwards deals with specific types of disasters. Chapter five discusses the prevailing scenario in the State pertaining to floods. Discussion on floods includes reference to the different types of floods, causes of floods, approach to flood management and measures to be adopted at the block level. This is followed by a discussion on cyclones under chapter six. This chapter focuses on the warning system in place in the State, measures to be adopted at Block Level and other measures to be followed in such emergency situation. The seventh and the eighth chapter deal with drought and earthquake situation in the State. Drought has been defined as an insidious hazard that results from a departure of precipitation from expected or normal level that when a season or longer period of time extended over, is insufficient to meet the demands of human, plant and animal activities. The chapter discusses the onset type and warning, typical effects of it and the main mitigation strategies which includes drought monitoring, land use, water supply augmentation and conservation, livelihood planning and drought planning. Measures to be incorporated to check this disaster includes early warning system, contingency planning for agriculture, drinking water, provisions relating to water resources, employment generation, plans for adequate employment generation, public health and special measures for women and children. Earthquake has been defined as a major demonstration of the power of the tectonic forces caused by endogenic thermal conditions of the interior of the earth Different types of earthquake, measurement, causes of earthquake, seismic profile of West Bengal, elements at risk, typical effects and mitigation strategy have been adequately covered under the chapter discussing State's vulnerability to earthquake. Landslides and erosions are covered under the ninth chapter. Landslides are common phenomena in Darjeeling. The most common occurrence in different parts of Darjeeling is along the springs which invariably cut across the roads, at coal mining sites, in tea gardens and at urban agglomeration. The different causes of landslides which include geological weak material, erosion, intense rainfall, human excavation, earthquake shaking, volcanic eruption etc. are discussed. The typical effects of landslides are also discussed. Accidental fires, heat waves, tsunami hazards are covered under chapter ten, eleven and twelve respectively. The numerous causes of fire listed include heating sources, cooking accidents, electrical wiring, rubbish and waste materials, combustible Materials such as packing materials, glues, solvents,

flammable liquids or gases stored in workplace, arson or deliberate fire setting and smoking. Heat wave has been defined as a complex phenomenon resulting from a certain combination of temperature, humidity, air movement and duration. Simply stated, a heat wave is an extended period of very high summer temperatures with the potential to adversely affect communities. The chapter also discusses the human effects of heat wave which includes heat cramps, heat exhaustion and heat stroke. Chapter twelve on tsunami covers the onset type and causes of tsunami, warning, elements at risk, typical effects and the specific preparedness measures necessary for meeting with such conditions. The concluding chapters deals with crisis management, relief organization, relief assistance, role of Panchayat Raj Institutions, training and minimum standards of relief assistance at Relief camps and Gruel Kitchens.

17.3.0 THE WEST BENGAL FIRE SERVICES ACT, 1950

17.3.1 OBJECTIVE AND SCOPE

The Act was enacted to provide for the maintenance of a Fire brigade, for the licensing of warehousesand for certain other matters.

17.3.2 RELEVANT PROVISIONS OF THE ACT

17.3.2.1 Definition

i. "The Collector" means, in relation to Calcutta, the Collector of Stamp Revenue and in relation to any other local area the Collector of the district within which the local area is comprised.
ii. "The Commissioner" in relation to the Collector means the divisional Commissioner to whom the Collector is subordinate.
iii. "Director" means the Director of Fire Services appointed by the State Government;
iv. "The fire brigade" means the fire brigade maintained by the State Government under section 3.
v. "Fire fighting appliances" mean fire engines, fire escapes, accoutrements, equipments, tools, implements and things whatsoever used for fire fighting and include motor cars, motor cycles, tailors and other means of transport.
vi. "Magistrate' means a Metropolitan Magistrate or Magistrate of the First class.

17.3.2.2 Fire Brigade to be maintained (Section 3)

The State Government shall maintain a fire brigade for fire service in the local areas in which this Act is in force.

17.3.2.3 Power of State Government to make orders with respect to the Fire-Brigade(Section 4)

The State Government may from time to time make such general or special order as it thinks fit,—

- For furnishing the fire brigade with such fire-fighting appliances as it deems proper.
- For building or providing stations, or hiring places, for accommodating the members of the fire brigade and keeping its fire-fighting appliances.
- For giving rewards to persons who, have given notice of fires and to those who have rendered effective service to the fire brigade on the occasion of fires.
- For the training, discipline and good conduct of the members of the fire brigade.
- For the speedy attendance of members of the fire brigade with necessary fire-fighting appliances on the occasions of any alarm of fire.
- For sending the members of the fire brigade with necessary fire-fighting appliances, beyond the limits of any local area in which this Act is in force, in order to extinguish fire in the neighborhood of such limits on such terms and conditions as it deems proper.
- For the employment of the members of the brigade with necessary firefighting appliances, in work other than extinguishing fire, on such terms and conditions as it deems proper.
- For enforcing discipline and imposing punishment on any member of the fire brigade who may infringe orders; for regulating and controlling the powers, duties and functions of the Director.
- For the maintenance of the fire brigade in a due state of efficiency.

17.3.2.4 Powers exercisable on the occasion of a fire (Section 5)

On the occasion of a fire, the Director or the officer in charge of the members of the fire brigade on the spot may—

(a) Remove or may order any member of the fire brigade to remove, any persons who by their presence interfere with the due operations of the fire brigade.

(b) By himself or by members of the fire brigade, break into or through, or pull down, any premises for the purpose of putting an end to the fire, doing as little damage as possible.

(c) Cause the mains and pipes of any area to be shut off so as to give greater pressure of water in the place where the fire has occurred.

(d) Exercise the same powers for dispersing any assembly of persons likely to obstruct the operation of the fire brigade, as if he were an officer in charge of a police station and as if such an assembly were an unlawful assembly and shall be entitled to the same immunities and protection as such an officer, in respect of the exercise of such powers.

(e) Take such measures as may appear necessary for the preservation of life and property.

17.3.2.5 Police officer to aid the Fire Brigade in execution of its duties (Section 6)

Police-officers of all grades shall be authorized and bound to aid the fire brigade in the execution of its duties.

They may close any street in or near which a fire is burning and they may, on their own motion or on the request of the Director or any member of the fire brigade, remove any persons who interfere by their presence with the operations of the fire brigade.

17.3.2.6 Enquiry into origin of fire and report to Magistrate (Section 8)

In the case of any fire occurring within any local area in which this Act is in force, the senior most officer in rank among the members of the fire brigade in that local area ascertain the facts as to the origin and cause of such, fire and make a report to the Magistrate having jurisdiction in the place in which such fire shall have occurred.

17.3.2.7License for letting off rockets, etc (Section 9)

No person shall let off rockets or send up fireballoons, or sell fire-works within any local area in which this Act is in force, without a license. A license for letting off rockets or sending up fire-balloons shall indicate the place from where the rockets are to be let off or the fire-balloons sent up.

17.3.2.8 Who may grant license, fee for license (Section 10)

The power of granting a license under section 9 shall be exercised by the Collector.

17.3.2.9 License for warehouse or work-shops (Section 12)

No building or place shall be used as a warehouse or as a workshop unless the owner or occupier has previously obtained under this Act, a license for such use from the Collector.

17.3.2.10 Erection of temporary structures or pandals (Section 23 A)

A person who intends to erect a temporary structure or pandal with roof or walls made of straw, hay, grass, golpata, hogla, darma, mat, canvas, 1[tarpaulin, polythene sheets and high density polythene] or other like material, for use" as a place where members of the public may assemble, shall apply to the Director for permission to erect such structure or pandal and such permission shall not be refused if the structure or pandal conforms to the conditions that may be prescribed in this behalf and the fee as may be prescribed in this behalf is paid.

17.3.2.11Penalty for letting off rockets, etc.(Section 24)

- Punishable, on conviction before a Magistrate, with fine which may extend to one hundred rupees for every offence.

17.3.2.12 Penalty for erecting structure, etc. in contravention of Section 23 A(Section 33 A)

Any person who erects any structure or pandal in contravention of the provisions of subsection

(2) of section 23A, shall be punishable, on conviction before a Magistrate, with fine not exceeding one thousand rupees or with imprisonment for a term which may extend to six months or with both, and with further fine not exceeding one hundred rupees for each day

17.4.0 WEST BENGAL FIRE SERVICES (DUTIES OF DIVISIONAL OFFICER, STATION OFFICER, SUB-OFFICER, LEADER, FIRE-ENGINE OPERATOR-CUM-DRIVER AND FIREMAN) REGULATIONS, 1968,

17.4.1OBJECTIVE AND SCOPE:

These regulations may be called the West Bengal Fire Services (Duties of Divisional Officer, Station Officer, Sub-Officer, Leader, Fire Engine Operator-cum-Driver and Fireman) Regulations, 1968. These are issued under clause (b) of sub-section (3) of section 3 of The West Bengal Fire Services Act, 1950. These Regulations provide for the General duties of the Station Officers and Sub-Officers in charge of a fire station, General duties of a Leader, General duties of a Fire Engine Operator-cum-Driver, and General duties of Fireman etc.

17.4.2 RELEVANT PROVISIONS OF THE REGULATIONS[31]:

17.4.2.1General duties of the Station Officers and Sub-Officers in charge of a fire station:

Some of the general duties of the Station Officer and the Sub-Officer in charge of a fire station of the West Bengal Fire Services are -

i. Be available and hold themselves in readiness for any duty they may be called upon to perform by their superior officers at any time, and keep their superior officers acquainted with all matters coming to their knowledge, affecting their own fire station or the Fire Services Directorate in general;
ii. Obey implicitly all orders of their superior officers.
iii. Take charge and be responsible for all appliances, stores, equipments, etc. issued to the fire station
iv. See that all appliances and equipment are kept clean and in proper working order stowing them properly for immediate use in times of fires and other emergencies without loss of time;
v. Instruct and drill all men under their charge in the use and main tenance of fire appliances and equipment;
vi. See that the men placed on fire station and sentry duties are properly dressed and are acquainted with their duties;
vii. See that the communication system is in proper Working order, and send an immediate report to appropriate authority in case of any defect or failure;
viii. Keep themselves and other staff on duty in readiness at all times to receive superior officers and give, if required, an accurate account of all matters connected with the station under their charge;
ix. See that the fire pumps in the fire station which have not otherwise worked during a week have water passed through them at least once every week;
x. Report at once to the superior officer and the police any damage or casualty that may have occurred as a result of accident;
xi. Keep themselves and their staff acquainted with the water supply within the area under their charge. In cases where fire hydrants, fire alarm, underground reservoirs, fire fighting tubewells are provided, it shall be their duty to examine,

[31]Available at, http://wbfes.in/home/regulations last visited on 14th January 2014.

with the help of their staff, those hydrants and water supply arrangements falling within their jurisdiction periodically as may be fixed from time to time;

xii. Keep themselves and their staff acquainted with the network of communication system as may be existing in the service;

xiii. Keep themselves and their staff acquainted as far as possible with the topography of their own and adjoining areas, as well as fire risks in such areas;

17.4.2.2. General duties of a Leader:

Some of the duties of the Leader of a fire brigade of the West Bengal Fire Services shall—

i. Be available at the fire station, to which he is posted, while on duty;

ii. Obey implicitly all orders of his superior officers and exact the strictest obedience and civility from those serving under him;

iii. See that the men placed under him on duty are properly dressed and are assigned duties pertaining to the lire station, and fire appliances, and such other duties that may be incidental to the efficient working of the fire station. He shall also be responsible for maintaining the fire station premises clean and tidy and appliances and equipment in neat and efficient working condition, and ready for immediate use;

iv. Keep his superior officers acquainted with all matters coming to his knowledge affecting the fire station staff or the Fire Services Directorate in general;

v. Keep himself alert to attend to fires, special services like rescue jobs, stand-by duties at exhibitions, fairs, puja pandals, pumping out water from water-logged areas, tanks or ditches, destroying films, fire drills, and removing overhead signboards constituting public danger etc., in the shortest possible time on the alarm being sounded, and to carry out any order given by an officer in this connection to perform the work promptly;

vi. Carry out any duty when ordered by an officer on the fire ground, to efficiently and promptly extinguish the fire or to perform any rescue work;

vii. Perform round duties at night to pay surprise checks on the sentry, fire station properties and guard rooms and report any discrepancy immediately to the control room and to the officer on duty;

17.4.2.3. General duties of a Fireman:

Some of the duties of the Fireman of Fire Brigade of the West Bengal Fire Services are -

i. Be available at the fire station, to which he is posted, while on duty;

ii. Obey implicitly all orders of his superior officers and hold himself in readiness to carry out all duties as may be assigned to him by his superior officers promptly and efficiently;

iii. Keep himself and his quarters, if provided, neat and clean;

iv. Devote whole-hearted attention to his duties;

v. Be alert and keep himself in readiness to attend to fires, special services like rescue jobs, stand-by duties at exhibitions, fairs, puja pandal's, pumping out water from water-logged areas, tanks or ditches, destroying films, fire drills, removing overhead signboards constituting public danger, etc. in the shortest possible time on alarm being sounded, and carry out any orders given by an officer in this connection to perform the work promptly;

vi. Keep himself acquainted with topography of his own and adjoining areas as well as fire risk in such areas;

17.5.0 THE WEST BENGAL CINEMAS (REGULATION) ACT, 1954

17.5.1 OBJECTIVE AND SCOPE

The Act was enacted to provide for the regulation of cinemas in West Bengal

17.5.2 RELEVANT PROVISIONS OF THE ACT

17.5.2.1 Cinematograph Exhibitions to Be Licensed (Section 3)

No person shall give an exhibition by means of cinematograph elsewhere than in a place licensed under this part of the Act or otherwise than in compliance with any conditions and restrictions imposed by the licenses.

17.5.2.2 Licensing Authority (Section 4)

The authority having power to grant licenses shall be the District Magistrate.

"District Magistrate" includes a DeputyCommissioner and in relation toCalcutta, the Commissioner of Police, Calcutta.

17.5.2.3 Restrictions on Powers of Licensing Authority (Section 5)

The licensing authority shall not grant a license under, unless it is satisfied that adequate precautions have been taken in the place, in respect of which the license is to be given, to provide for the safety of persons attending exhibitions therein.

17.5.2.4 Power of State Government or District Magistrate to Suspend Exhibition of Films in Certain Cases (Section 6)

The State Government in respect of whole of West Bengal and a District Magistrate in respect of are within his jurisdiction, if he is of opinion that any film which is being publicly exhibited is likely to cause a breach of the peace, by order, suspend the exhibition of the film by an order for a period of two month and during such suspension the film shall be deemed to be an uncertified film in the State, part or district, as the case may be.

17.5.2.5 Penalties for contravention of this Act (section 7)

If the owner or occupier permits the place to be used in contravention of the provision of this Act or the rules made there under or of the condition and restrictions upon or subject to which any license has been granted under this Act, he shall be punishable with fine which may extend to one thousand rupees and, in the case of a continuing offence, with a further fine which may extend to one hundred rupees for each day during which the offence continues.

17.5.2.6 Power to Make Rules (Section 9)

The State Government may, make rules providing for the regulation of cinematograph exhibitions for securing the public safety.

17.6.0 THE WEST BENGAL MAINTENANCE OF PUBLIC ORDER ACT, 1972

17.6.1 OBJECTIVE AND SCOPE:

This Act was enacted to provide for special provisions for the maintenance of public order by the prevention of illegal acquisition, possession or use of arms and the suppression of subversive activities endangering public safety and tranquility and for matters connected therewith or incidental thereto.

17.6.2 RELEVANT PROVISIONS OF THE ACT

Public Safety and Order (Chapter IV)

17.6.2.1 Punishment for carrying or possessing any corrosive substance (section 10)

Any person who possess arms, ammunition or military stores as definedin the Arms Act, 1959, or explosive substances as defined in the Explosive Substances Act, *1908* or corrosive substance, be punishable with imprisonment for a term which may extend to seven years, to which fine may be added.

17.6.2.2 Definition of looting (Section 11)

Whoever commits dacoity, robbery, theft, or theft in a building, or vessel or vehicle or criminal misappropriation, if the commission of such offence takes place-

(a) During a riot or any disturbance of the public peace at or in the neighbourhood of theriot, or the place at which suchdisturbance of the public pence occurs or,

(b) In any area in which a riot or disturbance of the public peace has occurred and before law and order has been completely restored in such area, or,

(c) In such circumstances that a person whose property is stolen or criminally misappropriated is not as a consequence ofrioting or any other disturbance of the public peace, present or able to protect such property.

-Is said to commit the offence of looting.

17.6.2.3 Definition of raiding (Section 12)

Whoever commits mischief by fire or any explosive substance on any property of Government or my local authority or of any corporation owned or controlled by Government or of any educational establishment is said to commit the offence of raiding.

17.6.2.4 Use of force to stop looting or raiding (Section 13)

Any police officer may use such force as may be necessary in order to stop the commission of the offence of looting or raiding within his view.

17.6.2.5 Power to arrest without warrant (Section 15)

Any police officer may, without an order from a Magistrate and without a warrant, arrest any person who is reasonably suspected of having committed any offence under this Act.

17.7.0 THE BENGAL FAMINE INSURANCE FUND ACT, 1938

17.7.1 OBJECTIVE AND SCOPE:

This Act was enacted to provide for the establishment and maintenance in Bengal of a Fund called the Bengal Famine Insurance Fund for the expenditure upon relief of, and insurance against famine and distress caused by serious drought, flood, earthquake or other natural calamities.

17.7.2 RELEVANT PROVISIONS OF THE ACT:

17.7.2.1 Establishment of the West Bengal Famine Insurance Fund (Section 3)

The State Government shall establish for the West Bengal a fund, called the West Bengal Famine Insurance Fund.

The Fund shall consists of –

i. The contribution by the State Government by section 4.
ii. Such other sums contributed by the State Government.
iii. The interest which may from time to time accrue on the securities in which the sums to the credit of the Fund may be invested or re-invested under section 6.

17.7.2.2 Initial contribution to the Famine Insurance Fund by the State Government (section 4)

The State Government shall for the purpose of establishment of this fund make an initial contribution of rupees ten lakhs.

17.7.2.3 Purposes for which the Fund may be utilized (Section 5)

The Fund shall be utilized for the purpose of relief of famine and the relief of distress caused by serious drought, flood, earthquake and other natural calamities.

17.7.2.4 Investment and re-investment of the amount required (Section 6)

The State government shall from time to time invest or re-invest its own securities or securities of the Central Government all sums to the credit of the Fund, which may not be immediately required for any purposes mentioned in section 5.

17.7.2.5 Power of the State Government to make rules (Section 9)

The State Government may make rules, consistent with this act, for the purpose of giving effect to the provisions of this Act.

17.8.0 THE BENGAL WATER HYACINTH ACT, 1936

17.8.1 OBJECTIVE AND SCOPE:

Act provides for the destruction of water hyacinth in Bengal. The Act aims to prevent the spread of water hyacinth in Bengal and for its destruction. The previoussanction of the Governor General had been obtained for enactment of the Act.

17.8.2 RELEVANT PROVISIONS OF THE ACT:

17.8.2.1Extent (Section 1)

Act extends to the whole of West Bengal.

17.8.2.2 Definitions (Section 2)

i. "Authorized Officer" includes the Collector and any person authorized by the Collector in exercise of the functions of an Authorized Officer under section 7,8, 9 and 13A.
ii. "Collector" includes any person appointed by the State Government to exercise all or any of the functions of a Collector under this Act.
iii. "Occupier" means the person in actual occupation of any land, premises or water or, if there is no one in actual occupation, the person having the right of occupation of the land, premises or water or his authorized agent; and includes a local authority, a railway administration and a company in actual occupation or having such right of occupation;
iv. "Water hyacinth" means the plant botanically known as Eichhornia crassipes – Solms and includes the seed and any part of the plant.

17.8.2.3 Prohibition of bringing water hyacinth into West Bengal (Section 3)

No person shall himself or by any other person on his behalf, bring water hyacinth into West Bengal.

17.8.2.4 Prohibition of sale etc. Of water hyacinth (Section 4)

No person shall sell water hyacinth.

17.8.2.5 Prohibition of growing or cultivation of water hyacinth (Section 5)

No person shall grow or cultivate water hyacinth in any garden or in any ornamental water or receptacle.

17.8.2.6 Prohibition of removing water hyacinth from one place to another (Section 6)

No person shall remove any water hyacinth to any land, premises or water in his occupation except for destroying it. The expression "remove water hyacinth" includes the causing of it to float by water from one place to another.

17.8.2.7 Power of State Government to prohibit occupiers from allowing water hyacinth to exist within certain local area (Section 7)

The State Government can direct that within such local area, no occupier shall allow water hyacinth to exist on any land, premises or water in his occupation. On receiving such direction, every occupier in the notified area shall cause any water hyacinth present on any land, premises or water in his occupation to be removed or destroyed. If any occupier fails to comply with the provisions of this section in respect of any land, premises or water in his occupation, any Authorized Officer may enter on such land, premises or water and take such measures as are in his opinion necessary for removing or destroying the water hyacinth.

17.8.2.8 Cutting of branches of trees or scrubs to facilitate discovery or destruction of water hyacinth (Section 8)

An Authorized Officer can with a view to facilitating the discovery or destruction of water hyacinth, direct an occupier of any land, premises or water within a notified area to cause any branches of trees or scrubs on any land or premises which overhang the edge of

any river, stream, waterway, ditch, marsh, bil, lake, tank, pond, pool or pit to be cut back and any undergrown or jungle thereon to be removed from such edge, within a distance specified in the notice or any vegetation appearing above the surface of any such water to be removed from the water.

17.8.2.9 Power to authorized Officer to enter on land etc. in certain circumstances (Section 9)

An Authorized Officer may enter on any land, premises or water in any notified area and take action to ascertain whether any water hyacinth is present and whether the measures prescribed for the removal or destruction of water hyacinth or any direction issued to the occupier have been carried out.

17.8.2.10 Construction of fences, barriers etc. (Section 13)

Collector may permit or cause fences, barriers or storage ponds to be constructed in or along the edge of any river, stream, waterway, lake, tank, marsh or bil whether private or public within a notified area and booms or floating barriers to be placed for checking or diverting the movement of water hyacinth. No person shall remove or damage any fences, barriers, storage pounds, booms and floating barriers so constructed, maintained or placed.

17.8.2.11 Power of Collector to use land for destruction of water hyacinth (Section 16)

If the Collector feels that it is necessary to use any waste or arable land in a notified area for the destruction thereon of water hyacinth removed from any water in the same or notified area, he may take possession of the land and use it or permit it to be used for the said purpose. If any material damage or injury is caused thereby to the occupier of such land, the Collector shall pay to him such compensation as shall be agreed upon.

17.8.2.12 Keeping of water hyacinth for the purpose of destruction (Section 17)

Any occupier in a notified area may keep on any land or in any water in his occupation water hyacinth for destruction.

17.8.2.13 Sale, etc, of water hyacinth in certain circumstances (Section 18)

Any person authorized by the State Government may sell, remove or keep water hyacinth for a prescribed purpose.

17.8.2.14 Method of removal or destruction of water hyacinth (Section 19)

When water hyacinth is to be removed or destroyed under the provisions of this Act, such removal or destruction shall be in the prescribed manner.

17.9.0 THE WEST BENGAL PRIVATE FORESTS ACT, 1948

17.10.1 OBJECTIVE AND SCOPE:

Act provides for the conservation of private forests and for afforestation in certain cases of waste-lands in West-Bengal.

17.9.2 RELEVANT PROVISIONS OF THE ACT:

17.9.2.1 Extent (Section 1):

Act extends to the whole of West-Bengal.

17.9.2.2 Definitions (Section 2)

i. "Conservation" used in reference to a forest, includes such measures as are necessary in the opinion of the Regional Forest-Officer for the prevention or remedying of the erosion of the soil or any flood or landslide.
ii. "Controlled forest" means a forest in respect of which a working plan has been approved under sub-section (1) of section 4.
iii. "Forest" includes any land recorded as forest in a record of rights prepared under Chapter X of the Bengal Tenancy Act, 1885.
iv. "Forest-Officer" means any person whom the State Government or any officer empowered by the State Government in this behalf, may appoint to carry out all or any of the purposes of this Act.
v. "Forest Settlement Officer" means an officer who shall ordinarily be a Revenue Officer appointed by the State Government to perform the functions of a Forest Settlement officer under this Act.
vi. "Private forest" means a forest which is not the property of the Government or over which the Government has no proprietary right.

vii. "Vested forest" means a forest of which the control has been vested in a Regional Forest-Officer.

viii. "Waste- Land" means a waste-land which is not the property of the Government or over which the Government has no proprietary right.

17.9.2.3 Preparation of working plans for private forest (Section 3)

State Government may direct that every owner of a private forest which is not a vested forest but which is situated within such area as may be specified shall prepare and submit to the Regional Forest-Officer a working plan for the conservation of such private forest.

17.9.2.4 Approved Working Plan (Section 4)

If the Appellate Committee accepts any working plan under Section 3 such Committee or officer shall approve such working plan and every working plan so approved shall be deemed to be an approved working plan.

17.9.2.5 Prohibition of leases and extension of terms of existing leases of private forests after issue of notification (Section 5)

After the publication of a notification under Section 3, no owner of a private forest in the notified area shall enter into any lease or extend the term of any existing lease in respect of such forest until the working plan in respect of such forest has been approved.

17.9.2.6 Prohibition of removal of trees of private forests after issue of notification under Section 3(1) (Section 5A)

After the publication of a notification under Section 3, no owner of a private forest in the notified area or other person shall fell from such forest any trees until the working plan in respect of such forest has been approved under Section 4 except after obtaining the permission of the Regional Forest Officer.

17.9.2.7 Penalty for violation of working plan (Section 6)

If after an approved working plan in respect of any private forest has been sent to the owner of such forest such owner fails to carry out the terms of such plan he

shall be punishable with imprisonment which may extend to three months or with fine which may extend to one thousand rupees or with both.

17.9.2.8 Vesting of forests in a Regional Forest-Officer (Section 7)

If the State Government is satisfied that the conservation of any private forest in a notified area should not be left to the owner thereof, the State Government may direct that the control of such forest shall be vested in such Regional Forest-Officer.

17.9.2.9 Amalgamation of two or more vested forests under one working plan (Section 9)

If after consultation with the Conservator of Forests of the forest circle within which the forests are situated, a Regional Forest-Officer is of the opinion that it is impossible otherwise to secure the conservation of two or more forests, belonging to different owners, of which the control has been vested in him, he may record an order that such forests shall be managed under one working plan as if they belonged to one owner.

17.9.2.10 Afforestation of land adjoining a forest (Section 10)

State Government may if it is satisfied on application made by the owner of a controlled forest or by the Regional Forest-Officer in whom the control of a private forest is vested, that any land adjoining such forest has not been cultivated during the three years immediately preceding the year in which such application is made and that such land is suitable for afforestation announce its intention to declare such land to be liable to be made over to the owner of such controlled forest or vested forest, as the case may be.

17.9.2.11 Afforestation of other land (Section 11)

If it appears from the report of a Regional Forest-Officer that any waste-land which is lying uncultivated for not less than three years in suitable for afforestation and that the owner of such land is unwilling or unable to cultivate it , State Government may direct that the control of such land shall be vested in a Regional Forest-Officer for the purpose of afforesation.

17.9.2.12 Apportionment of rents of forests held under a lease jointly with other lands and the division of the tenure or holding comprising a forest (Section 12)

Where a private forest or any waste-land is at the date of publication of a notification vesting the control thereof in a Regional Forest-Officer held under a lease granted by the owner of such forest or held by the owner of such forest or land as part of a tenure or holding jointly with other lands, the Collector of the district may apportion the rent payable under the lease between the areas included within the vested forest and other areas comprised within the lease on the basis of their respective assets or direct the division of such tenure or holding in such manner that a separate tenure is formed with the lands included within the vested forest and also direct such distribution of the rent payable in respect of such tenure between the two separate tenures so formed as he deems fair and equitable.

17.9.2.13 Power to order a vested forest to be formed into a separate estate (Section 14)

State Government may direct the Collector to partition off that part of an estate which comprises a vested forest into a separate estate and the demand in respect of land-revenue and cess for which the original estate was liable shall on such partition be assessed upon and divided between the two separate estates so formed respectively.

17.9.2.14 Release of vested forest to the owner (Section 18)

If the owner of a vested forest satisfies the Appellate Committee at any time after the expiry of fifteen years from the date of the notification by which the control of such forest has been vested in a Regional Forest- Officer that the control of such forest may be restored to him without undue risk of detriment to its conservation and the cost of its management has been recovered in full or at any time after the expiry of thirty years from the date of such notification, that the cost of management of such forest has been recovered the Appellate Committee shall by order direct that the control of such forest shall cease to be vested in the Regional Forest Officer.

17.9.2.15 Control and demarcation of vested forest (Section 19)

If a notification has been published in respect of any forest under Section 6, 7 or 11, the control of such forest shall be vested in the Regional Forest Officer who shall forthwith proceed to demarcate it.

17.9.2.16 Appointment of Forest Settlement Officer (Section 20)

A Forest Settlement Officer shall be appointed by the State Government in respect of every forest of which the control is vested in a Regional Forest-Officer.

17.9.2.17 Penalties for breach of rules (Section 29)

Any person who fells, girdles, loops, taps or burns any tree in a controlled or vested forest; quarries any stone or burns any lime or charcoal, or collects, or removes any forest produce from a controlled or vested forest; breaks up or clears for cultivation any land in a controlled or vested forest; sets fire to a controlled or vested forest or kindles a fire without taking all reasonable precautions to prevent its spreading or permits cattle to damage any tree in a controlled or vested forest shall be punishable with imprisonment for a term which may extend to six months or with fine which may extend to five hundred rupees or with both.

17.9.2.18 Seizure of property liable to confiscation (Section 32)

When there is reason to believe that a forest offence has been committed in respect of any forest- produce, such produce together with all tools, boats, motor vehicles, carts or cattle used in committing any such offence, may be seized by any Forest- officer or Police- officer.

17.9.2.19 Information to the Magistrate and Procedure thereupon (Section 34)

The Regional Forest-Officer may cause information to be given to a Magistrate regarding any forest- offence which he has reason to believe to have been committed in respect of any forest- produce and upon receipt of any such information, the Magistrate shall with all convenient despatch, tae such measures as may be necessary for the arrest and trial of the offender and the disposal of the property according to law.

17.9.2.20 Punishment for wrongful seizure (Section 44)

Any Forest-officer or Police-Officer who vexatiously and unnecessarily seizes any property on pretence of seizing property liable to confiscation under this Act shall be punishable with imprisonment for a term which may extend to six months, or with fine which may extend to five hundred rupees or with both.

17.9.2.21 Power to prevent commission of offence (Section 48)

Every Forest-officer and Police-officer shall prevent, any may interfere for the purpose of preventing the commission of any forest-offence.

17.9.2.22 State Government may invest Regional Forest-officers with certain powers (section 53)

State Government may invest any Regional Forest-officer with the power to enter upon any land, or to authorise any officer to enter thereon and to survey, demarcate and make a map of the same; the powers of a Civil Court to compel the attendance of witnesses and the production of documents and material objects; power to issue a search – warrant and power to hold an enquiry into forest-offences and to receive and record evidence.

17.10 .0 THE BENGAL EMBANKMENT ACT, 1882

17.10 .1 OBJECTIVES AND SCOPE:

This Act was enacted to make better provision for the construction, maintenance and management of embankments and water-courses in the territories subject to the Lieutenant-Governor of Bengal.

17.10.2 RELEVANT PROVISIONS OF THE ACT:

17.10.2.1 Definition:

a. "Collector" means any Revenue-officer in independent charge of a district or portion of a district, or specially appointed by the State Government of West Bengal to perform the functions of a Collector under this Act.
b. “District” means the local area throughout which a Collector is authorized his ordinary functions.
c. “Embankments” includes –

Every bank, dam, wall and dyke made or used for excluding water from, or for retaining water upon, any land;

Every sluice, spur, groyne, training -wall, berm or other work annexed to, or portion of, any such embankment.

Every bank, dam, dyke, wall, groyne or spur made or erected for the protection of any such embankment or of any land from erosionor overflow by or of rivers, tides, waves or waters.

and also all buildings intended for purposes of inspection and supervision.

17.10.2.2 Public embankments, etc to be vest in Government (Section 4)

Every public embankments and every public water course, maintained by the State Government, shall vests in the State Government.

17.10.2.3 Powers of a Collector (Section 7)

i. To take charge of embankments by Government which connects public embankments
ii. To repair embankments
iii. To remove any embankment or obstruction, which endangers the stability of a public embankment or the safety of a town or village, or which is likely to cause loss of property by interfering with the general drainage or the flood drainage of any tract of land.
iv. Changing line of embankment.
v. Improvement of drainage.
vi. Alteration of roads and construction of water courses

Proper procedure to be followed by the collector for doing above mentioned work.

17.10.2.4 Procedure in case of eminent danger to life and property (Section 25)

Whenever the Collector is of opinion that the delay in the execution of work occasioned by proceedings commenced by section 7 will cause grave and eminent danger to life and property, he may cause the execution of such work to be begun in anticipation of completion of such proceedings.

17.11.0 THE WEST BENGAL MINING SETTLEMENTS (HEALTH AND WELFARE) ACT, 1964

17.11.1 OBJECTIVE AND SCOPE:

Act provides for the better control and sanitation of mining settlements in West Bengal.

17.11.2 RELEVANT PROVISIONS OF THE ACT

17.11.2.1 Extent (Section 1)

Act extends to the whole of West Bengal.

17.11.2.2Definition (Section 3)

'Owner', when used in relation to a mine, means any person who is in occupation of the mine or any part thereof and carries on the business or is a contractor for the working of such mine and includes the Government.

17.11.2.3 Declaration of areas as mining settlements (Section 4)

Whenever it appears to the State Government that it is necessary in the public interest to provide for the planned construction of buildings and structures, proper sanitation and water supply and prevention of the outbreak and spread of epidemic diseases, in any area, not being or not forming part of any mine, within such persons employed in a mine or mines reside, the State Government may publish a notice of its intention to declare such area to be a mining settlement for the purposes of this Act.

17.11.2.4 Establishment and incorporation of Mines Board of Health (Section 6)

State Government may establish a Mines Board of Health for a mining settlement.

17.11.2.5 Health Officers (Section 12)

A Board shall appoint a Health Officer or if so required by the State Government, more than one Health Officer for the mining settlement.

17.11.2.6 Sanitary inspectors and other officers and servants of the Board (Section 13)

A Board may with the approval of the State Government determine the number of Sanitary Inspectors and other Officers and servants necessary for its administration.

17.11.2.7 Powers and duties of Health Officers and Sanitary Inspectors (Section 14)

A Health Officer shall exercise within the area under his jurisdiction the powers conferred on him and perform the duties imposed upon him as the State Government or the Board may specify.

17.11.2.8 Buildings and structures constructed within mining settlements to conform to prescribed conditions and power of Board to demolish buildings and structures in certain cases (Section 15)

Buildings and structures constructed in any area after the declaration thereof as a mining settlement under Section 4 shall conform to such conditions as to sanitation, water supply, safety of the dwellers therein and public health ad may be prescribed.

17.11.2.9 Power to undertake measures (Section 18)

Board may on the recommendations of the Health Officers or otherwise, undertake in the mining settlement such measures as it considers necessary to provide for the supply of filtered or other water; sanitation, drainage, conservancy, maintenance of public health and prevention or abatement of nuisances; the housing of residents in the mining settlements, whether permanent or temporary; preventing the outbreak and spread of and combating, epidemic and other diseases; the proper treatment of the sick by the establishment and maintenance of hospitals and dispensaries and a medical staff; the regular inspection of food-stuffs exposed for sale in the mining settlement and report to food inspectors appointed under the prevention of Food Adulteration Act, 1954; the registration of births, deaths and diseases in the mining settlement and the carrying out generally of the purposes of this Act.

17.11.2.10 The Mining Settlement Fund (Section 25)

Every Mining Settlement shall have a fund to be called “the Mining Settlement Fund”. Such fund shall be vested in the Board.

17.11.2.11 Application of the fund (Section 26)

A Mining Settlement Fund shall be applied for the payment of contribution or grants for the prevention and control of epidemic and other diseases and for the welfare activities in the mining settlement.

17.11.2.12 Board to comply with directions of the State Government (section 44)

A board shall comply with all such directions as may be given to it from time to time by the State Government having regard to the provisions of this Act.

17.12.0 THE WEST BENGAL RESTRICTION ON CONSTRUCTION IN UNSAFE AREAS ACT, 1979

17.12.1 OBJECTIVE AND SCOPE:

Act provides for restriction on construction in areas found unsafe due to operation of mines or otherwise in west Bengal. The Act declares that it is expedient in the public interest to provide for restriction on construction in areas found unsafe due to operation of mines or otherwise in West Bengal.

17.12.2 RELEVANT PROVISIONS OF THE ACT:

17.12.2.1 Definitions (Section 2)

i. "Construction" means erection or re-erection of a building or structure or addition or alteration to any existing building or structure but shall not include repairs to any existing building or structure.

17.12.2.2 Inquiry on receipt of information (Section 3)

The District Magistrate shall on receipt of any information that any area within the limits of his jurisdiction, is likely to subside due to operation of any mine, forthwith cause an inquiry to be made into the matter by any officer.

17.12.2.3 Declaration of unsafe area (Section 4)

If on the report of the inquiry, the District Magistrate is satisfied that any area within the limits of his jurisdiction is likely to subside due to operation of ny mine or otherwise, he shall cause to be made, with reference to the finally published record-of-rights and maps of the locality, a plan of the area likely to subside and by order published in the manner prescribed, declare such area to be unsafe.

17.12.2.4 Prohibition of construction without permission (Section 5)

When any area is declared unsafe under section 4, no construction within that area shall be commenced or continued within the previous permission in writing of the District Magistrate.

17.12.2.5 Power to demolish construction (Section 7)

Where any construction has been commenced or is being continued in contravention of the provisions of section 5, the District Magistrate having jurisdiction may after giving the owner of such construction and also to the occupier, an opportunity of being heard, make an order directing the demolition of the construction commenced or continued within such period as may be specified in the order and in default, the District Magistrate may himself or through a person authorized by him in this behalf cause demolition of such construction.

17.13.0 THE WEST BENGAL TRAFFIC REGULATION ACT, 1965

17.13.1 OBJECTIVE AND SCOPE:

Act provides for the regulation of traffic in streets and public places. The Act declares that it is expedient to provide for the regulation of traffic in streets and public places with a view to preventing danger, obstruction or inconvenience to the public.

17.13.2 RELEVANT PROVISIONS OF THE ACT

17.13.2.1 Extent (Section 1)

Act extends to the whole of West Bengal.

17.13.2.2 Act to override other laws (Section 3)

The provisions of this Act shall have effect notwithstanding anything to the contrary contained in any other law.

17.13.2.3 Powers to prohibit the plying of vehicles, to regulate traffic etc. (section 4)

State Government or any authority appointed by the State Government in this behalf, may prohibit the plying of any class of vehicles in streets or public places subject to such conditions as may be specified in the order; regulate traffic of all kinds in streets or public places and the use or driving of vehicles in streets or public places with a view to preventing danger, obstruction or inconvenience to the public; regulate the conditions under which

vehicles may remain standing in streets or public places and the use of streets as halting places for such vehicles.

17.13.2.4 Seizure (Section 6)

Where any police officer or any other public servant not below the rank of Inspector of Motor Vehicles of the State Government duly authorized in this behalf by the State Government has reason to believe that any offence under this Act has been committed in respect of any vehicle, he may seize such vehicle.

CHAPTER EIGHTEEN

DELHI

18.1.0 DELHI FIRE SERVICE ACT, 2007

18.1.1 OBJECTIVE AND SCOPE

Act provides for maintenance of a fire service and contains provisions for fire prevention and fire safety measures to be followed for certain buildings and premises in the National Capital Territory of Delhi.

18.2.2 RELEVANT PROVISIONS OF THE ACT:

18.1.2.1 Definitions (Section 2)

(a) "Appellate authority" – Lieutenant Governor or any officer appointed by the Lieutenant Governor.

(b) "Fire Zone" – Territory comprising of fire divisions as prescribed and declared by the Government.

(c) "Fire prevention and fire safety measures" – Measures which are necessary in accordance with the building bye-laws/National Building Code of India for containment, control and extinguishing of fire and ensuring safety of life and property.

(d) "Local authority" – Delhi Cantonment Board established under the Cantonments Act, 1924, Delhi Development Authority established under the Delhi Development Act, 1957, Municipal Corporation of Delhi established under the Delhi Municipal Corporation Act, 1957, New Delhi Municipal Council established under the New Delhi Municipal Council Act, 1994 or any other authority notified by Central Government.

(e) "Nominated authority" – Officer not below the rank of a station officer nominated by the Director as a nominated authority.

(f) "Occupier"- It includes –

  (i) Any person who pays the rent of the land or building

  (ii) An owner using his land or building.

  (iii) Rent –free tenant of any land or building

(iv) Licensee in occupation of any land or building.

(v) Any person liable to pay to owner damages for use and occupation of any land or building.

(g) "Owner"- Includes a person who is entitled to receive the rent of any land or building and includes the custodian of evacuee property (under Administration of Evacuee Property Act, 1950), Director of Estates of Government of India, Secretary of State Development Authority, General Manager of railway and head of a Government department in relation to properties under their control.

(h) "Premises" – Any land or building used for storing explosives and dangerously inflammable substance.

18.1.2.2 One Fire Service for whole of Delhi (Section 3)-

There will be one fire service for whole of Delhi.

18.1.2.3 Superintendence of Fire Service to vest in Government (Section 4)

Superintendence of Fire Service throughout Delhi will vest in Government.

18.1.2.4 Appointment of Director of Fire Service (Section 8)

Government will appoint a Fire Officer to be the Director.

18.1.2.5 Constitution of fire divisions, sub-divisions and fire stations (Section 9) – Government may-

(a) Constitute fire zones and fire divisions within National Capital Territory of Delhi.

(b) Divide such fire Zones into fire divisions and fire divisions into fire sub-divisions and specify the fire divisions, fire sub-divisions and fire stations into each fire zone, fire division and fire sub-division and

(c) Define limits and extent of such fire zones, fire divisions, fire sub-divisions and fire stations for administrative and operational efficiency.

18.1.2.6 General Powers of the Director (Section 12)-

Director will direct and regulate all matters of firefighting equipment, machinery and appliances, training, observation of persons and events, distribution of duties and maintenance of discipline of fire officers and members of the Fire Service under him.

18.1.2.7 Fire Officers deemed to be always on duty and liable to employment in any part of Delhi (Section 15)

Every fire officer shall be deemed to be always on duty.

18.1.2.8 Declaration of Fire Service to be an essential service to the community (Section 17) Government can declare the Fire Service to be an essential service to the community. Such a declaration will remain in force in the first instance for six months and can be extended from time to time. Upon such a declaration being made every fire officer will obey an order given by any superior officer.

18.1.2.9 Penalty for violation of duty (Section 18)

Any member of Fire Service who is guilty of violation of duty or found guilty of cowardice or abstains from duty without permission will be punishable with imprisonment which may extend to three months or with fine which may extend to an amount not exceeding three months pay of such member or with both.

18.1.2.10 Levy of fire tax – (Section 20)

Government can levy a fire tax on lands and buildings situated in any area in which the Act is in force.

18.1.2.11 Reciprocal fire- fighting arrangements with other fire service (Section 23) Director may enter into agreement with any fire service beyond the limit of any area in which the Act is in force for providing personnel or equipment or both for firefighting purposes.

18.1.2.12 Preventive Measures (Section 25)

Government can declare any class of occupancy and pandals as likely to cause a risk of fire. Government can require owner or occupiers or both of such premises or buildings to take fire prevention and fire safety measures.

18.1.2.13 Fire prevention and fire safety measures in the pandals to be self regulatory (Section 26)

Erectors of pandals will be deemed to be self regulators for taking fire prevention and fire safety measures. Erector of a pandal will display at a prominent place in the pandal a declaration that he has taken all the prescribed fire prevention and fire safety measures. The Director or any other officer authorized by the Government can authorized by the Government can enter and inspect pandal to verify the correctness of the declaration made by the erector.

18.1.2.14 Removal of encroachments or objects or goods likely to cause a risk of fire or any obstruction to fire fighting (Section 27)

Director or any officer authorized by the Government can direct the removal of encroachments or objects or goods likely to cause a risk of fire or obstruction to fire fighting. The matter can be reported to the Sub-Divisional Magistrate in whose territorial jurisdiction the premises or pandal is situated. The Sub-Divisional Magistrate will give such owner or occupier a reasonable opportunity of making representation and post it can make an order to seize, detain or remove such encroachments or objects or goods.

18.1.2.15 Powers of members of the Fire Service on occasion of fire and/or rescue (Section 28)

In case of fire rescue in any area, any member of the Fire Service in charge of fire fighting operations can remove any person who impedes operation for extinguishing fire or for saving life or property, close any passage, break or pull down any premises for extinguishing fire and carrying out rescue operations, require authority in charge of water supply to regulate water mains for extinguishing fire, arrest any person who wilfully obstructs and hinders a fire service personnel in fire fighting and rescue operations and take any other measures necessary for extinguishing fire or for protection of life or property or both.

18.1.2.16 Appointment of fire safety officer (Section 29)

Following owner and occupier will ensure appointment of a fire- safety officer for compliance of all fire prevention and fire safety measures –

(a). Cinema houses with seating capacity of more than 1000 persons

(b) Hotels with 100 rooms and above

(c) Underground shopping complexes, district centres, sub-central business districts including basement with build up area of more than 25000 sq. Mtr.

(d) Multi-storeyed non-residential building above 50 meters in height.

(e) Large oil and natural gas installations such as refineries, LPG bottling plants and other similar facilities.

(f) Open stadium with seating capacity more than 50,000 persons and indoor stadium with seating capacity more than 25,000 persons.

(g) Hospitals and nursing homes with more than 500 beds.

(h) Public and semi-public buildings like large surface and sub-surface railways stations, interstate bus terminuses, airports amusement parks and other similar buildings.

18.1.2.16 Inspection of buildings, premises (Section 33)

Nominated authority can after giving three hours notice to the occupier or owner of building can enter and inspect the said building if it appears to be necessary for ascertaining the adequacy or contravention of fire protection and fire safety measures.

18.1.2.17 Provision regarding certain building and premises (Section 35)

The Director or nominated authority can after inspection of the building or premises issue a notice to the owner or occupier stating inadequacy of fire prevention and fire safety measures and direct the owner or occupier to undertake measures for rectifying the said inadequacy.

18.1.2.18 Appeals (Section 36)

Any person aggrieved by any notice or order of the nominated authority of the Director can prefer an appeal against such notice to the Appellate Authority within thirty days from the date of order.

18.1.2.19 Liability of property owner to pay compensation (Section 41)

If any person's property catches fire due to his own action or act of his agent done deliberately or negligently, such person shall be liable to pay compensation to any other person suffering damage to his property. Such claims should be made to the Appellate Authority within thirty days from the time when damage was caused.

18.2.0 DELHI FIRE SERVICE RULES, 2010

18.2.1 OBJECTIVE AND SCOPE

The Rules extend to the National Capital Territory of Delhi and are made for effective implementation of the provisions of the Delhi Fire Service Act, 2007.

18.2.2.2 RELEVANT LEGAL PROVISIONS

18.2.2.1 Definitions (Section 2)

In these rules, unless the context otherwise requires:-

(i) 'Act' means the Delhi Fire Service Act, 2007 (Delhi Act 2 of 2009);

(ii) "fire prevention wing" means the Fire Prevention Wing of the Delhi Fire Service;

(iii) "fire safety certificate" means the Fire Safety Certificate issued by the Fire Service for compliance of minimum standards for fire prevention and fire safety of buildings or premises under these rules;

(iv) 'National Building Code of India 2005' means National Building Code of India 2005, Part 4, 'Fire and Life Safety" published by Bureau of Indian Standards, New Delhi;

18.2.2.2 Constitution of Fire Zones (Section 3)

a) Three or more Fire Zones will be created in the National Capital Territory of Delhi as per the contingencies of work namely, 'New Delhi Zone', 'South Zone', and 'West Zone' or any other Zone as may be created by the Government.

b) Each Fire Zone shall be under the charge of a Chief Fire Officer.

18.2.2.3 Constitution of Fire Divisions (Section 4)

a) There shall be six or more Fire Divisions in the National Capital Territory of Delhi as per the contingencies of work, namely,'North-West Division', 'South Division', 'East Division', 'South-West Division', 'West Division' and 'Central Division' or any other Division as may be created by the Government.

b) Each Fire Division shall be under the charge of a Divisional Fire Officer.

18.2.2.4 Constitution of Fire Sub-divisions (Section 5)

(1) There shall be eighteen or more fire sub divisions.

(2) Fire Sub-Division shall be under the charge of an Assistant Divisional Fire Officer.

18.2.2.5 Rate of Surcharge on Property Tax to be levied as Fire Tax under Sub-section (2) of section 20 of the Act (Section 17)

Rate of surcharge on property tax charged by local authority to be levied as Fire Tax will be notified by the Government.

18.2.2.6 Fire Prevention Wing (Section 26)

a) A 'Fire Prevention Wing' will be constituted in the Fire Service under the charge of a Chief Fire Officer assisted by a Deputy Chief Fire Officer, two Divisional Fire Officers, six Assistant Divisional Fire Officers, twelve Station Officers and one Assistant Law officer.

b) The Fire Prevention Wing shall examine the building plans referred to Fire Service from fire prevention and fire safety point of view and issue directives relating to fire prevention and fire safety measures for compliance by the builder, owner or occupier.

c) Fire Prevention Wing shall study trends in fire accidents in National Capital Territory of Delhi and assist in framing the policies for fire prevention and fire safety, deployment of firefighting equipment and appliances, planning for new fire stations and prepare training requirements for Fire Service.

d) Fire Prevention Wing will study provisions relating to fire prevention and fire safety as contained in other Acts, Statues, Rules and Regulations for the time being in force.

e) Fire Prevention Wing shall defend cases in various courts of law.

f) Fire Prevention Wing shall organize mass awareness programs on fire prevention and fire safety and prepare leaflets and other advertisement material in electronic form for distribution to the public free of any charges.

18.2.2.7 Classes of occupancies likely to cause a risk of fire (Section 27)

Following classes of occupancies shall be construed to likely cause a risk of fire-

a) Pandal having seating capacity more than **50** persons or covered area more than 50 square meters.

b) Residential buildings (other than hotels and guest houses) having height more than 15 meters or having ground plus four upper stories including mezzanine floor.

c) Hotels and guest houses having height more than 12 meters having ground plus three upper stories including mezzanine floor.

d) Educational buildings having height more than 9 meters or having ground plus two upper stories including mezzanine floor.

e) Institutional buildings having height more than 9 meters or having ground plus two upper stories including mezzanine floor.

f) All Assembly buildings.

g) Business buildings having height more than 15 meters or having ground plus four upper stories including mezzanine floor.

h) Mercantile buildings having height more than 9 meters or having ground plus two upper stories including mezzanine floor.

i) Industrial buildings having covered area on all floors more than 250 square meters.

j) Storage buildings having covered area on all floors more than 250 square meters.

k) All Hazardous buildings having covered area on all floors more than 100 square meters.

l) Underground Structures.

18.2.2.8 Removal of encroachments or objects or goods likely to cause a risk of fire or any obstruction to fire fighting (Section 31)

Sub-Divisional Magistrate having jurisdiction after giving reasonable opportunity may order to seize, detain or remove goods or objects likely to cause a risk of fire or any obstruction to fire fighting.

18.2.2.9 Appointment of Fire Safety Officer under section 29 of the Act (Section 32)

a) The Directoror nominated authority shall issue notice to the owner or occupier of buildings or premises to appoint a fire safety officer.

b) If the owner or occupier fails to comply with the notice issued by the Director or nominated authority, Director shall raise a demand on the owner or occupier.

c) In case the owner or occupier fails to comply with the direction of the Director, matter shall be reported to the Sub-Divisional Magistrate having jurisdiction to recover the same as the arrear of land revenue.

18.2.2.10 Minimum standards for fire prevention and fire safety for buildings (Section 33) (1) The minimum standards for fire prevention and fire safety for buildings with reference to the height of the building and class of occupancy shall be provided in the building bye-laws or National Building Code of India 2005 in relation to the following matters:-

(1) Access to building

(2) Number, Width, Type and Arrangement of exits.

(3) Protection of Exits by means of fire check door (s) and or pressurization.

(4) Compartmentation.

(5) Smoke Management System.

(6) Fire Extinguishers.

(7) First-Aid Hose Reels.

(8) Automatic fire detection and alarming system.

(9) MOEFA.

(10) Public Address System.

(11) Automatic Sprinkler System.

(12) Internal Hydrants and Yard Hydrants.

(13) Pumping Arrangements.

(14) Captive Water Storage for fire fighting.

(15) Exit Signage.

(16) Provision of Lifts.

(17) Standby power supply

(18) Refuge Area.

(19) Fire Control Room

(20) Special Fire Protection Systems for Protection of special Risks

18.2.2.11 Issue of fire prevention and fire safety measures (Section 34) –

On receipt of a reference from the local authority or any other statutory authority Fire Prevention Wing shall issue fire prevention and fire safety measures under these rules to be incorporated in the design of the building for the safety of the occupants.

18.2.2.12 Fire Safety Certificate to be issued (Section 35)

Director or any other officer(s) authorized by him shall issue a Fire Safety Certificate to the owner or occupier of the building or premises with conditions to be complied with for fire prevention.

18.2.2.13 Duration of Fire Safety Certificate (Section 36)

Fire Safety Certificate issued shall be valid for a period 5 years for residential buildings (other than hotels) and 3 years for non-residential buildings including hotels from the date of issue.

18.2.2.14 Liability to maintain fire safety measures (Section 38) –

The occupier of the building or premises shall maintain the fire prevention and fire safety measures provided in the building or premises at all times in best repairs for use in the event of an out- break of fire.

18.2.2.15 Time for Completion of measures (Section 39)

Nominated Authority shall indicate the time not exceeding 90 days within which fire prevention and fire safety measures should be provided.

18.2.2.16 Cancellation of Fire Safety Certificate (Section 40)

If the owner or occupier fails to comply with the direction given the Director can cancel the Fire Safety Certificate issued.

18.2.2.17 Compounding of offences (Section 43)

Deputy Chief Fire Officer may compound offences punishable with fine up to and including Rs. 1000/-(rupees one thousand only). The compounding limit for the Chief Fire Officer shall be Rs. 10000/- (rupees ten thousand only). The Director may compound any offence punishable with fine exceeding Rs 10,000/- (rupees ten thousand only).

18.2.2.18 Issuing of Fire Report (Section 44)

A fire report shall be made available on line within **72** hours of the date of occurrence.

18.2.19 Delhi Fire Service Benevolent Fund (Section 48)

A fund known by name 'Delhi Fire Service Benevolent Fund' shall be established for providing assistance to members of Fire Service and Spouse and Children of the members who died in harness.

18.3.0 THE DELHI ELECTRICITY REFORMS ACT, 2000

18.3.1 OBJECTIVE AND SCOPE:

The Act provides for the constitution of an Electricity Regulatory Commission, restructuring of the electricity industry (rationalization of generation, transmission, distribution and supply of electricity), increasing avenues for participation of private sector in the electricity industry and generally for taking measures conducive to the development and management of the electricity industry in an efficient, commercial, economic and competitive manner in the National Capital Territory of Delhi and for matters connected therewith or incidental thereto.

18.3.2 RELEVANT PROVISIONS OF THE ACT

18.3.2.1Extent (Section 1)

It extends to the whole of the National Capital Territory of Delhi excluding the areas of the New Delhi Municipal Council and the Delhi Cantonment Board.

18.3.2.2 Definitions (Section 2)

- **i.** "area of transmission" means the area within which the holder of a transmission license is for the time being, authorized by license to transmit energy;
- **ii.** "Commission" means the Delhi Electricity Regulatory Commission referred to in section 3;

iii. "license" means a license granted under Part II or Part II A of the Indian Electricity Act, 1910 or Part VI of this Act;

iv. "licensee" or "license holder" means a person licensed under part II or Part II A of the Indian Electricity Act, 1910 or under Part VI of this Act to transmit or supply energy;

v. "transmit" in relation to electricity means the transportation or transmission of electricity by means of a system operated or controlled by a licensee which consists, wholly or mainly, of extra high voltage and extra high tension lines and electrical plant and is used for transforming and for conveying and/or transferring electricity from a generating station to a sub-station, from one generating station to another or from one sub-station to another or otherwise from one place to another.

18.3.2.3 Establishment and Constitution of the Commission (Section 3)

There shall be an Electricity Regulatory Commission for the National Capital Territory of Delhi to be known as "the Delhi Electricity Regulatory Commission" to exercise the powers conferred on, and to perform the functions assigned to it under this Ordinance.

18.3.2.4 Powers of the Commission (Section 10)

The Commission shall, for the purposes of any inquiry or proceedings under this Ordinance have the powers as are vested in a Civil Court under the Code of Civil Procedures, 1908, while trying a suit in respect of the following matters, namely the summoning and enforcing of attendance of any witness and examining on oath; the discovery and production of any document or other material object producible as evidence; the reception of evidence on affidavit; the requisition of any public record from any court or office; the issue of commission for examination of witnesses; the appearance of parties and consequences of non-appearance; the grant of adjournments at the hearing; and any other matter which may be prescribed. The Commission shall have the power to require any person to produce before it and allowed to be examined and kept by an officer of the Commission specified in this behalf, such books, accounts, or other documents in the custody or under the control of the person so required as may be specified or described in the requisition, being documents relating to any matter concerning the generation, transmission, distribution and supply or use of electricity, the functioning of any undertaking involved in the above areas and other matters, the examination of which the Commission considers is necessary or relevant for the

purposes of this Ordinance or for the discharge of the functions of the Commission under this Ordinance; and to furnish to an officer so specified, such information as may be required for the purposes of this Ordinance or such other information as may be in his possession in relation to any activity carried on by any other person.

18.3.2.5 Functions of the Commission (Section 11)

The Commission shall discharge the following functions, namely to set standards for the electricity industry in the National Capital Territory of Delhi including standards related to quality, continuity and reliability of service; to regulate the working of the licensees and other persons authorized or permitted to engage in the electricity industry in the National Capital Territory of Delhi and to promote their working in an efficient, economical and equitable manner.

18.3.2.6 General Powers of the Government (Section 12)

In the discharge of its functions, the Commission shall be guided by such directions in matters of policy involving public interest as the Government may issue from time to time.

18.3.2.7 Licensing (Section 19)

No person, other than those authorized to do so by license or by virtue of exemption under this Ordinance or authorized to or exempted by any other authority under the Indian Electricity Act, 1910 and the Electricity (Supply) Act, 1948, shall engage in the National Capital Territory of Delhi in the business of transmitting electricity; or supplying electricity including bulk supply.

18.3.2.8 General duties and powers of the licensees (Section 22)

It shall be the duty of the holder of a supply license or a transmission license in respect of a particular area to develop and maintain an efficient, coordinated and economical system of electricity supply or transmission in the area of transmission or area of supply as the case may be. Each licensee and generating company in discharge of its duties shall comply with the provisions of the regulations framed from time to time governing the terms and conditions for the operation and maintenance of power system and electric supply lines.

18.3.2.9 Interim orders for securing compliance (section 30)

Where the Commission is satisfied that a licensee is contravening, or is likely to contravene any relevant condition or requirement, it shall by final order and , if it thinks by interim order issue such directions as it deems proper for securing compliance.

18.3.2.10 Commission Advisory Committee (section 35)

The Commission shall constitute a committee to be known as the Commission Advisory Committee to advise the Commission on major question of policy related to the electricity industry in the National Capital Territory of Delhi ; and to advise the Commission on any matters which the Commission may put before it, including matters relating to the quality, continuity and extent of service provided by licensees and compliance by licensees with the conditions and requirements of their licenses.

18.3.2.11 Consumer protection; standards of performance (section 36)

The Commission may, after consultation with holder of supply licenses ; other persons or bodies appearing to the Commission to be representatives of persons and categories of persons likely to be affected ; and the Commission Advisory Committee, frame regulations prescribing the circumstances in which such licensees are to inform customers of their rights; the standards of performance in relation to any duty in connection with the electricity supply to the consumer ; and the circumstances in which licensees are to be exempted from any requirements of the regulations and may make different provision for different licensees.

18.4.0 THE DELHI POLICE ACT, 1978

18.4.1 OBJECTIVE AND SCOPE

The Act was enacted to amend and consolidate the law relating to the regulation of the police in the Union territory of Delhi.

18.4.2 RELEVANT PROVISIONS OF THE ACT

18.4.2.1One police force for the whole of Delhi (Section 3)

There shall be one police force for the whole of Delhi and all officers and subordinate ranks of the police force shall be liable for posting to any branch of the force including the Delhi Armed Police.

18.4.2.2 Special Police Officers (Section 17)

The Commissioner of Police appoint any able bodied male person not less than eighteen years of age, to be a special police officer to assist the Delhi police on any occasion, when he has reason to apprehend the occurrence of any riot or grave disturbance of the peace in any area and he is of opinion that the ordinary police force is not sufficient for the protection of persons residing, and for the security of property, within such area.

18.4.2.4 Employment of additional police to keep peace (Section 38)

The Commissioner of Police may, on the application of any person, depute any additional number of police to keep the peace, to preserve order, to enforce any of the provisions of this Act or of any other law in respect of any particular class or classes of offences or to perform any other duties imposed on the police at any place in Delhi.

18.4.2.5 Employment of additional police in cases of special danger to public peace (Section39)

The Commissioner of Police may employ police in cases of special danger to public peace

18.4.2.6 Compensation for injury caused by unlawful assembly how recoverable (Section41)

a) When any loss or damage is caused to any property or when death results or grievous hurt is caused to any person or persons, by anything done in the prosecution of the common object of an unlawful assembly, the Administrator may, by notification in the Official Gazette, specify the area in which, such unlawful assembly was held.

b) On the issue of a notification under sub-section (1), the District Collector may, after such inquiry as he deems necessary, determine the amount of the compensation which, in his opinion, should be paid to any person or persons in respect of the loss or damage or death or grievous hurt aforesaid.

c) The amount of the compensation shall be deemed to be a fine imposed under this section, and shall be payable by the inhabitants of the disturbed area.

d) It shall be lawful for the District Collector to exempt, by order in writing and for sufficient reasons, any person from liability to pay any portion of the compensation amount.

Note- "Administrator" means the Administrator of Delhi appointed under article 239 of the

Constitution.

18.4.2.7 Removal of persons about to commit offences (Section 47)

Whenever it appears to the Commissioner of Police-

(a) That the movements or acts of any person are causing or are calculated to cause alarm, danger or harm to person or property; or

(b) That there are reasonable grounds for believing that such person is engaged or is about to be engaged in the commission of an offence involving force or violence or an offence punishable under Chapter XII, Chapter XVI, Chapter XVII or Chapter XXII of the Indian Penal Code (45 of 1860) or under section 290 or sections 489A to 489E (both inclusive) of that Code or in the abetment of any such offence; or

(c) That such person-

(i) is so desperate and dangerous as to render his being at large in Delhi or in any part thereof hazardous to the community; or

(ii) has been found habitually intimidating other persons by acts of violence or by show of force; or

(iii) habitually commits affray or breach of peace or riot, or habitually makes forcible collection of subscription or threatens people for illegal pecuniary gain for himself or for others; or

(iv) has been habitually passing indecent remarks on women and girls, or teasing them by overtures and in the opinion of the Commissioner of Police witnesses are not willing to come forward to give evidence in public against such person by reason of apprehension on their part as regards the Safety of their person or property, the Commissioner of Police direct such person to remove himself.

18.5.0 THE DELHI COMMON EFFLUENT TREATMENT PLANTS ACT, 2000

18.5.1 OBJECTIVE AND SCOPE:

Act provides for the recovery of the dues as arrears of land revenue in respect of the capital and recurring costs of common effluents treatment plants set up in the Industrial Estates in the National Capital Territory of Delhi.

18.5.2 RELEVANT PROVISIONS OF THE ACT

18.5.2.1 Definitions (section 2)

i. "CETP" means common effluent treatment plant;
ii. "effluent" includes any liquid, gaseous or solid substances which is discharged from any premises used for carrying on any industry operation or process, or treatment and disposal system including domestic sewage;
iii. "Occupier" in relation to any establishment, factory or premises, means the person which has control over the affairs of the establishment, factory or the premises, as the case may be, and includes, in relation to any substance, the person in possession of the substance.

18.5.2.2 Constitution of CETP Societies (Section 3)

An industrial estate and any area included in the jurisdiction of any CETP society may constitute a CETP society which shall be registered and duly approved by the appropriate authorities for the purpose of performing such functions including setting up and operating a CETP for the units in that such industrial estate or estates, as may be entrusted to such society.

18.5.2.3 Constitution of appropriate authority (Section 5)

The Government shall constitute an appropriate authority to exercise the powers conferred on and perform the functions assigned to that authority under this Act.

18.5.2.4 Functions of the appropriate authority (Section 6)

The appropriate authority may perform the following functions, namely to carry out the apportionment of the cost among the occupiers of the CETP in respect of initial capital cost, recurring cost, operation and maintenance cost; to recover any due from any occupier and to take such other steps as may be necessary for the fulfillment of the objectives of this Act.

18.5.2.5 Power of entry and Inspection (section 9)

Any person empowered by the appropriate authority shall have a right at any time to enter, with such assistance as he considers necessary, any place for the purpose of performing of the functions of the appropriate authority as may be prescribed in the Rules.

18.5.2.6 Local authorities to assist (Section 21)

All local authorities shall render such help and assistance and furnish such information to the appropriate authority as it may require for the discharge of its functions, and shall make available to the appropriate authority for inspection and examination such records, maps, plans and other documents as may be necessary for the discharge of its functions.

18.5.2.7 Cognizance of offences under this Act (Section 23)

No Court inferior to that of the Metropolitan Magistrate shall take cognizance of any offence under this Act.

18.5.2.8 Other laws not affected (Section 25)

The provisions of this Act are in addition to and not in derogation of the provisions of any other law for the time being in force.

18.6.0 THE DELHI DEGRADABLE PLASTIC BAG (MANUFACTURE, SALE AND USAGE) AND GARBAGE (CONTROL) ACT, 2000

18.6.1 OBJECTIVE AND SCOPE:

The Act provides for prevention of contamination of foodstuff carried in recycled plastic bags, reduction in the use of plastic bags, throwing or depositing non-biodegradable garbage in public drains, roads river, river bed and places open to public view in the National Capital Territory of Delhi and for matters connected therewith or incidental thereto.

18.6.2 RELEVANT PROVISIONS OF THE ACT

18.6.2.1 Extent (Section 1)

It extends to the whole of the National Capital Territory of Delhi

18.6.2.2 Definitions (Section 2)

i. "authorization" means permission granted by the Delhi Pollution Control Committee for the manufacturing of non-biodegradable recycled plastic bags;

ii. "bio-degradable garbage" means garbage that can be degraded by micro organisms.

iii. "degradable garbage" means a plastic bag designed to undergo a significant change in its chemical structure under specific environmental conditions, resulting in a loss of some properties that may be measured by standard methods

appropriate to the plastic and the application in a period of time that determines its classification, as prescribed.

iv. "local authority" includes the Municipal corporation of Delhi, the New Delhi Municipal Council, the Delhi Cantonment Board, the Delhi Development Authority or any successor body to any of them and any other statutory authority performing municipal functions;

v. "Non-biodegradable garbage" means garbage that cannot be degraded by micro-organisms and are more specifically included in the Schedule of this Act.

vi. "occupier" includes any person who for the time being is paying or is liable to pay to the owner the rent or any portion of the rent of the land or building in respect of which such rent is paid or is payable; an owner who is in occupation of or otherwise using his land or building; a rent free tenant of any land or building; an owner or tenant of any jhuggi/temporary structure or land or building in any unauthorized colony; any person who is liable to pay to the owner damages for the use and occupation of any land or building;

vii. "owner" includes a person who for the time being is receiving or is entitled to receive, the rent of any land or building,, whether on his own account or on account of himself and others or as an agent, trustee, guardian or receiver for any other or who should so receive the rent or be titled to receive it if the land or building or part thereof were let to a tenant.

18.6.2.2 Prohibition of Manufacture, Sale and Usage of Recycled Plastics Bags for Food (Section 3)

No person shall himself or by any person on his behalf manufacture for sale, sell and use any recycled plastic bags or containers for storing, carrying or packing of foodstuff within the National Capital Territory of Delhi." No license, for the manufacture, sale of recycled plastic bags granted or received under any law before the date of commencement of this Act, shall entitle the holder thereof or any other person on this behalf to commence or carry on such business.

18.6.2.3 Prohibition of manufacture, sale and usage (Section 3A)

No person shall manufacture for sale, sell and use any plastic bag other than degradable plastic bag in the National Capital Territory of Delhi.

18.6.2.4 Prohibition of throwing garbage, and 'samagri' (religious material) in river bed, river, public places, drains, sewer, etc. (Section 4)

No person, by himself or through another, shall knowingly or otherwise, throw or cause to be thrown in any drain, ventilation shaft, pipe and fittings, connected with the private or public drainage works and in river and river beds, any garbage which is likely to impair proper functioning of the drainage, sewage system and river; interfere with the free flow or affect the treatment and disposal of the drain, sewage contents and river; be dangerous or cause a nuisance or be prejudicial to public health; be ingested by stray animals leading to serious health hazards.' No person shall, knowingly or otherwise, place or permit to be placed, except in accordance with such procedure and after complying with such safeguards as may be prescribed, any garbage in any public place, river or river bed or in place open to public view, unless the garbage is placed in a garbage receptacle; or the garbage is deposited in a location designated by local authority having jurisdiction on an area for the disposal of the garbage.

18.6.2.5 Provision for placement of receptacles and places for deposit of garbage and samagri (Section 5)

The local authority shall provide separate receptacles/ dhallos /dustbins for non-biodegradable garbage and bio-degradable garbage for their temporary deposit, collection, and transportation up to their final disposal; provide designated enclosures for placing of samagri (religious material) in river Yamuna; ensure timely and regular removal of the contents of receptacles at all places provided by it; and make adequate provision of the receptacles / dhallos / dustbins whether authorized or not, to ensure that they do not become a source of nuisance and are not easily approachable by stray animals.

18.6.2.6 Duties of occupier of land and building (Section 6)

It shall be the duty of the owners and occupiers of all lands and building to collect or to cause to be collected from their respective land and buildings the non-biodegradable garbage and to deposit, or cause to be deposited, in public receptacles, deposits or places provided for temporary deposit or collection of the non-biodegradable garbage by the local authority in the area; to provide separate receptacles or dustbins, other than those kept and maintained for deposit of bio-degradable garbage of the type and in the manner prescribed by the local

authority for collection therein of all the non biodegradable waste from such land and building and to keep such receptacles/dustbins in good condition and repair.

18.6.2.7 Power of local authority for removing non-biodegradable garbage (Section 7)

The local authority may by notice in writing, require the owner or occupier or part-owner, or person claiming to be the owner or part owner of any land or building, which has become a place of unauthorized stacking or deposit of non biodegradable garbage and likely to occasion a nuisance, remove or cause to be removed the said garbage so stacked or collected or thrown into the river and if, in its opinion, such stacking or collection or throwing of non-biodegradable waste is likely to harm the river, river bed, drainage and sewage system or is likely to be dangerous to life and health of human beings, it shall forthwith take such steps as may be necessary at the cost of such person or persons.

18.6.2.8 Authorization (Section 8)

Any person manufacturing degradable plastic bags shall, by applying in the form and paying the fees as may be prescribed, seek authorization from the Delhi Pollution Control Committee which may grant authorization.

18.7.0 THE DELHI FIRE PREVENTION AND FIRE SAFETY ACT, 1986

18.7.1 OBJECTIVE AND SCOPE

This Act was enacted to make more effective provision for the fire prevention and fire safety measures in certain buildings and premises in the Union territory of Delhi.

18.7.2 RELEVANT PROVISIONS OF THE ACT

18.7.2.1 Definitions

a. "Administrator" means the Administrator of Delhi appointed by the President under article 239 of the Constitution.
b. "Building" means a house, outhouse, stable, latrine, urinal, shed hut, wall (other than a boundary wall) or any other structure, whether of masonry, bricks, wood, mud, metal or other material.
c. "Building bye-laws" means the bye-laws made under section 282 of the Cantonments Act, 1924 or the bye-laws made under section 481 of the Delhi Municipal Corporation

Act, 1957 or the bye-laws made under section 188, sub-section (*3*) of section 189 and sub-section(*1*) of section 190 of the Punjab Municipal Act, 1911(Punjab Act III of 1911), as in force in New Delhi or the regulation made under sub-section (*1*) of section 57 of the Delhi Development Act, 1957(61 of 1957), relating to buildings.

d. "Chief Fire Officer" means the Chief Fire Officer appointed by the Municipal Corporation of Delhi established under the Delhi Municipal Corporation Act, 1957(66 of 1957).

e. "Delhi" means the Union territory of Delhi.

f. "Fire prevention and fire safety measures" means such measures as are necessary in accordance with the building bye-laws for the prevention, control and fighting of fire and for ensuring the safety of life and property in case of fire.

g. "Local authority" means of Delhi Cantonment Board established under the Cantonments Act, 1924(2 of 1924), the Delhi Development Authority established under the Delhi Development Act, 1957(1 of 1957), the Delhi Municipal Corporation established under the Delhi Municipal Corporation Act, 1957(66 of 1957), the New Delhi Municipal Committee established under the Punjab Municipal Act, 1911(Punjab Act III of 1911), as in force in New Delhi or any other authority under any other law, which may be notified in this behalf by the Administrator with the prior approval of the Central Government.

h. "Nominated authority" means an officer not below the rank of a Station Officer nominated by the Chief Fire Officer, and includes an officer nominated by a local authority or a railway administration as a nominated authority for the purpose of this Act.

i. "Occupier" includes-

(i) any person who for the time being is paying or is liable to pay to the owner the rent or any portion of the rent of the land or building in respect of which such rent is paid or is payable;

(ii) an owner in occupation of, or otherwise using his land or building;

(iii) a rent-free tenant of any land or building;

(iv) a licensee in occupation of any land or building; and

(v) any person who is liable to pay to the owner damages for the use and occupation of any land or building;

j. "Owner" includes a person who for the time being is receiving or is entitled to receive, the rent of any land or building whether on his own account or on account of himself and others or as an agent, trustee, guardian or receiver or any other person or who should so receive the rent or be entitled to receive it if the land or building or part thereof were let to a tenant and also includes-

(i) the custodian of evacuee property in respect of evacuee property vested in him under the Administration of Evacuee Property Act, 1950(31 of 1950).

(*ii*) the Director of Estates of the Government of India, the Secretary of the Delhi Development Authority, constituted under the Delhi Development Act, 1957(61 of 1957), the general manager of a railway and the head of a Government department, in respect of properties under their respective control.

k. "Premises" means any land or any building or part of a building appurtenant thereto which is used for storing explosives, explosive substances and dangerously inflammable substances**.**

*Explanation***.-**In this clause, "explosive", "explosive substances" and "dangerously inflammable substances" shall have the meanings, respectively, assigned to them in the Explosives Act, 1884(4 of 1884), the Explosive Substances Act, 1908(5 of 1908), and the Inflammable Substances Act, 1952(20 of 1952)**.**

18.7.2.2 Inspection of buildings, premises, etc (Section 3)

The nominated authority after giving three hours' notice to the occupier, or to the owner of any building or premises, enter and inspect the said building or premises at any time between sunrise and sunset where inspection appears necessary for-

- Ascertaining the adequacy or contravention of fire prevention and fire safety measures and,

- It is necessary to do so in order to ensure safety of life and property**.**

-For the above purpose nominated authority shall be provided with all possible assistance by the owner or occupier.
-due regard shall be paid to the social and religious sentiments of the occupiers

18.7.2.3 Measures for fire prevention and fire safety (Section 4)

a) The nominated authority after the completion of the inspection, record its views on-

- Deviations or the contraventions of, the building bye-laws with regard to the fire prevention and fire safety measures,
- Inadequacy of such measures with reference to-
  - The height of the building or
  - The nature of activities carried on in such building or premises
- Issue a notice to the owner or occupier of such building or premises directing him to undertake such measures as may be specified in the notice**.**

b) The nominated authority shall give a report of any inspection to the Chief Fire Officer**.**

18.7.2.4 Power to seal buildings or premises (Section 5)

a) After receiving the report from nominated authority, it appears to the Chief Fire Officer that the condition of any building or premises is dangerous to life or property, he shall by order, require the persons in possession or occupation of such building or premises to remove themselves from such building or premises, forthwith**.**
b) If an order is not complied with, the Chief Fire Officer may direct police officer having jurisdiction in the area to remove persons from the building or premises.
c) After the removal of the persons, the Chief Fire Officer shall seal the building or premises**.**

18.7.2.5 Provision regarding certain buildings and premises (Section 6)

The Chief Fire Officer may enter and inspect any building-

- the construction of which was completed on or before the 6th day of June, 1983 (being the date on which the current building bye-laws had come into force) or

- any building which was under construction on such date if such inspection appears necessary for ascertaining the adequacy of fire prevention and fire safety measures in such building**.**

18.7.2.6 Penalties (Section 10)

Whoever contravenes any provision of this Act shall, be punishable-

- with imprisonment for a term which may extend to six months, or
- with fine which may extend to fifty thousand rupees, or
- with both and
- Where the offences is a continuing one, with a further fine which may extend to three thousand rupees for every day after the first during which such offences continues**.**

18.7.2.7 Jurisdiction (Section 13)

No court inferior to that of a Metropolitan Magistrate shall try an offences punishable under this Act**.**

18.7.2.8 Power to make rules (Section 16)

The Administrator may, by notification in the Official Gazette, make rules for carrying out the provisions of this Act**.**

Such rules may provide for-

- The height of the building.
- The minimum standards for fire prevention and fire safety measures.
- Any other matter which is required to be, or may be, provided by rules**.**

CHAPTER NINETEEN

MAHARASTRA

19.1.0 MAHARASHTRA FIRE PREVENTION & LIFE SAFETY MEASURES ACT 2006

19.1.1 OBJECTIVE AND SCOPE:

Act to make more effective provisions for fire prevention and life safety measures in various types of buildings in different areas in the State of Maharashtra.

19.1.2 RELEVANT PROVISIONS OF THE ACT:

19.1.2.1 Definitions (Section 2)

1. "Chief Fire Officer" means the Chief Fire Officer or any other fire officer in charge of the fire-brigade maintained by a local authority or a planning authority.
2. "Director" means the person appointed by the State Government to be the Director, Maharashtra Fire Services.
3. "fire prevention and life safety measures"- Measures as are necessary in accordance with the building bye-laws or as required under provisions of any law or the National Building Code of India, 2005 for prevention, control and fighting of fire and for ensuring safety of life and property in case of fire.

4. "National Building Code of India, 2005" means the book containing Fire Prevention and Life Safety Measures to be implemented in the buildings, places, premises, workshops, warehouses and industries, published by the Bureau of Indian Standards.

19.1.2.2Owners or Occupiers Liability to provide for fire prevention and life safety measures (Section 3)

Owner or occupier of the building shall provide fire prevention and life safety measures in such building, minimum fire fighting installations as specified and maintain the fire prevention and life safety measures in good repair and efficient condition. Owner or occupier will furnish to the Chief Fire Officer a certificate regarding compliance of the fire prevention and life safety measures in his building.

19.1.2.3 Preventive Measures (Section 4)

State Government can require owner or occupier of premises likely to cause risk of fire, to take precautions. Director or Chief Fire Officer of local authority or planning authority or any fire officer can direct the removal of objects or goods likely to cause the risk of fire to a place of safety and on failure by the owner or occupier to do so, seize, detain or remove such objects or goods.

19.1.2.4 Power of Inspection (Section 5)

Director or the Chief Fire Officer may after giving three hours' notice to the occupier or owner of any place or building enter and inspect such place or building if such inspection is necessary for ascertaining the adequacy or contravention of fire prevention and life safety measures.

19.1.2.5 Notice regarding fire prevention and life safety measures (Section 6)

Director or the Chief Fire Officer shall after completion of the inspection of the place record his views and issue a notice to the owner or occupier directing him to undertake measures specified in the notice.

19.1.2.6 Power to seal building (Section 8)

If the Director or the Chief Fire Officer is satisfied that due to inadequacy of fire prevention and life safety measures condition of any place or building is in imminent danger to person or property he shall order seal such place or building.

19.1.2.7 Power to grant license to act as Licensed Agency (Section 9)

The Chief Fire Officer may grant any person or association of persons a license to act as a Licensed Agency.

19.1.2.8Licensed Agency to carry out work of providing fire prevention and life safety measures (Section 10)

Only a Licensed Agency shall carry out the work of providing fire prevention and life safety measures.

19.1.2.9 Imposition of fees (Section 11)

State Government can levy a Fire Service fee on all owners of various types of buildings.

19.1.2.10 Appointment of Director (Section 18)

State Government shall appoint a person to be Director of Fire Services and other officers and staff to assist the Director.

19.1.2.11 Powers and duties of Director (Section 19)

Director shall,—

(i) function as Head of Department in the office of the Director ;

(ii) Keep liaison with the Central Government and State Government offices for the development of fire services;

(iii) Frame the policies for development of fire services in the State

(iv) Exercise supervision and control over all Authorities in matters of fire prevention and fire safety measures;

(v) Represent the State Government on National and International forums for updating the standard of fire services in the State of Maharashtra;

(vi) Prepare and submit plans and proposals to the State Government with regard to the periodical review of fire equipment, fire property and fire manpower for effective implementation of fire services by the Authorities;

(vii) Take steps in cases of major fires, house collapse and other emergencies or calamities ;

(viii) Investigate cause of fire and advise the Authorities for implementing fire precautionary measures;

(ix) Advise the State Government to set up additional Fire Training Center or Centers for imparting training to the officers

(x) Requisition fire-fighting property;

(xi) Exercise such other powers and perform such other duties and functions as may be conferred under the provisions of this Act.

19.1.2.12Constitution of Maharashtra Fire Services and provisions (Section 22)

State Government can constitute a fire service or services if it feels so necessary for making a more efficient Fire Service of officers of Municipal Corporations, Municipal Councils, Nagar Panchayats etc.

19.1.2.13Constitution of a Special Fund (Section 25)-

A special fund called the “Fire Protection Fund” shall be constituted. All the fees imposed

and collected under this Act will be credited to this fund. The amounts in the fund shall be applied for maintaining Fire Brigade, for providing sophisticated equipments and appliances and for preventing and extinguishing fire on any land or in any building.

19.1.2.14 Power of Director or Fire Officer on occasion of fire (Section 27)-

On the occasion of fire in any area, the Director or any other Fire Officer who is incharge may—

(a) Remove any person who interferes with operations for extinguishing the fire or for saving life or property

(b) Close any street or passage in or near which fire is burning ;

(c) Break into or pull down, any premises, for the passage for extinguishing fire

(d) Require the authority incharge of water supply to regulate the water mains so as to provide water at a specified pressure for extinguishing fire ;

(e) Exercise in the absence of aid from the police, the same powers for dispersing an assembly of persons likely to obstruct;

(f) Generally take such measures as may appear necessary for extinguishing the fire or for the protection of life or property.

19.2.0 THE BOMBAY POLICE ACT, 1951

19.2.1 OBJECTIVE AND SCOPE

This Act was enacted to consolidate and amend the law relating to the regulation of the Bombay Police Force and the exercise of powers and performance of functions by the State Government and by the members of the said Force for the maintenance of public order.

19.2.2 RELEVANT PROVISION OF THE ACT

19.2.2.1 Control of District Magistrate over Police Force in district (Section 17)

The Superintendent and the Police Force of a district shall be under the control of the District Magistrate.

In exercising control the District Magistrate shall be governed by rules and orders as the State Government may make in this behalf and subject to the lawful orders of the Revenue Commissioner.

19.2.2.2 Special Police officers (Section 21)

The Commissioner, the District Superintendent, or any Magistrate empowered by the State Government, may, appoint any able bodied male person between the ages of 18 and 50, to be a special Police officer to assist the Police Force on occasion, when he has reason to apprehend the occurrence of any riot or grave disturbance of the peace within the limits of his charge and he is of opinion that the ordinary Police Force is not sufficient for the protection of the inhabitants and for the security of property.

Every special Po1ice officer so appointed shall on appointment -
(a) Receive a certificate in a form approved by the State Government in this behalf.
(b) Have the same powers, privileges and immunities and be liable to the same duties and responsibilities and be subject to the same authorities as an ordinary Police officer.

19.2.2.3 Appointment of additional Police (Section 22)

Additional Police officers of such rank or grade for such time and on such pay as the authority specified or under the provisions of this Act in that behalf may determine, may be employed or deputed for the purpose stated in provisions.

19.2.2.4 Power to make rules or regulation of traffic and for presentation of order in public place, etc. (Section 33)

The Commissioner, the DistrictMagistrate and the Superintendent of Police with respect to the matters falling in areas under their respective charges, may make, alter or rescind rules or orders not inconsistent with this Act for-

a) Regulating traffic of all kinds in streets and public places, and the use of streets and public places by persons riding, driving, Cycling, walking or leading or accompanying cattle, so as to prevent danger, obstruction or inconvenience to the public.
b) Regulating the leading, driving, conducting or conveying of any elephant or wild or dangerous animal through any street.
c) Licensing, controlling or, in order to prevent the obstruction, inconvenience, annoyance, risk, danger or damage of the residents or passengers in the vicinity, prohibiting the carrying in streets and public places of gunpowder or any other explosive sub stances.
d) Prohibiting except along certain specified streets and during specified hours and subject to such regulations as he may prescribe in that behalf, the exposure or

movement in any street of persons or animals suffering from contagious or infectious diseases and the carcasses of animals or part thereof and the corpses of persons deceased.

e) In cases of existing or apprehended epidemic or infectious disease of men or animals, the cleanliness and disinfection of premises by the occupier thereof and resident therein and the segregation and management of the persons or animals diseased or supposed to be diseased, as

f) may have been directed or approve by the State Government, with a view to prevent the disease of to check the spreading thereof.

g) licensing, controlling or, in order to prevent obstruction, inconvenience, annoyance, risk, danger or damage of the residents or passengers in the vicinity, prohibiting the blasting of rock or making excavations in or near streets or public places;

h) Closing certain streets or places temporarily, in cases of danger from ruinous buildings or other cause, with such exceptions as shall appear reasonable.

i) Guarding against injury to person and property, in the construction, repair and demolition of building, platforms and other structures from which danger may arise to passengers, neighbours or the public.

j) Prohibiting the setting fire to or burning any straw or other matter, or lighting a bonfire or want only discharging a fire, arm or air gun, or letting off or throwing a fire- work or, sending up afire balloon or rocket in or upon or within fifty feet of a street or building or the putting up of any post or other thing on the side of or across a street for the purpose of affixing thereto lamps or other contrivances for illumination, except subject to such reasonable rules, as he may make in that behalf.

k) Regu1ating the means of entrance and exit at places of public amusement or entertainment or assembly, and providing for the maintenance of public safety and the prevention of disturbance thereat.

19.2.2.5 Power to prohibit certain for prevention of disorder (Section 37)

The Commissioner and the District Magistrate in areas under their respective charges, may whenever and for such time as he shall consider necessary for the preservation of public peace or public safety by a notification publicly promulgated or addressed to individuals, prohibit at any town, village or place or in the vicinity of any such town, village or place-

(a) the carrying of arms, cudgels, swords, spears, bludgeons, guns, knives, sticks or lathis, or any other article, which is capable of being used for causing physical violence.

(b) The carrying of any corrosive substance or of explosives.

(c) The carrying, collection and preparation of stones or other missiles or instruments or means of a casting or impelling missiles.

(d) The exhibition of persons or corpses of figures or effigies.

(e) The public utterance of cries, singing of songs, playing of musk.

(f) Delivery of harangues, the use of gestures or mimetic representations, and the preparation, exhibition or dissemination of pictures, symbols, p1acards or any other object or thing which may in the opinion of such authority offend against decency of morality or undermine the security of or tend to overthrow the State.

19.2.2.6 District Magistrate may take special measures to prevent outbreak of epidemic disease at fair, etc.(Section 43)

Whenever it appear to the Commissioner or District Magistrate that any place in the areas under their respective charges, at which, on account of a pilgrimage, fair or other such occurrence,

large bodies of persons have assemble is visited with an outbreak of any epidemic disease, he may take special measures and by public notice prescribe regulations to be observed by the residents of the said place and by persons present thereat or repairing or returning there from as he shall deem necessary to prevent the outbreak of such disease or they spread thereof.

19.2.2.7 Employment of additional Police on application of a person (Section 47)

The Commissioner or District Superintendent, on the application of any person, depute any additional number of Police to keep the peace, to preserve order or to enforce any of the provisions of this or any other Act in respect of any particular class or classes of offences or to perform any other Police duties at any place in the area under his charge.

19.2.2.8 Duties of police officers (Section 64)

It shall be the duty of every police officer to obey and execute all orders and warrants lawfully issued to him by any competent authority-

- to collect and communicate intelligence affecting the public peace;
- to prevent the commission of offences and public nuisances;
- to detect and bring offenders to justice and

- To apprehend all persons whom he is legally authorized to apprehend, and for whose apprehension sufficient ground exists.
- For any of the purpose mentioned in this section, any police- officer, without a warrant enter and inspect any drinking- shop, gaming- house or other place or resort of loose and disorderly characters.

19.2.2.9 Duties of Police officers towards the public (Section 66)

It shall be the duty of every Police officer-

(a) To afford assistance within his power to disabled or helpless persons in the streets, and to take charge of intoxicated persons and of lunatics at large who appear dangerous or incapable of taking care of themselves.

(b) To take prompt measures to procure necessary help (or any person under arrest or in custody, who is wounded or sick and whilst guarding, or conducting any such person, to have due regard to his condition.

(c) To arrange far the proper sustenance and shelter of every person who is under arrest or in custody.

(d) In conducting searches, to refrain from needless rudeness and the causing of unnecessary annoyance.

(e) In dealing with women and children to act with strict regard to decency and with reasonable gentleness.

(f) To use his best endeavors to prevent any loss or damage by fire.

(g) To use his best endeavors to avert any accident or danger to the public.

19.3.0 CITY OF BOMBAY (BUILDING WORKS RESTRICTION) ACT, 1949

19.3.1 OBJECTIVE AND SCOPE:

Act intends to restrict the construction, alteration and repair of buildings in certain areas in the City of Bombay. The Act declares that it is expedient to restrict the construction, alteration and repair of buildings in certain areas in the City of Bombay.

19.3.2 RELEVANT PROVISIONS OF THE ACT

19.3.2.1 Restriction on building works in certain area without permission (Section 3)

No person shall during the period of two years from the date of the commencement of this Act, do any work of erecting, re-erecting, constructing, reconstructing, adding to, altering or repairing any building, wall or other structure, or any part thereof situated in the area described in the Schedule or laying out any private street in the said area, except under the authority of a written permission granted by the Commissioner and except in accordance with such conditions, if any, as the Commissioner may think fit to specify in the permission.

19.3.2.2 Commissioner may remove unauthorized work (Section 6)

The Commissioner may remove or cause to be removed any work done in contravention of section 3. All reasonable expenses incurred by the Commissioner in effecting any removal shall be recoverable under the principal Act.

19.3.2.3 Expenses incurred by the Commissioner may be debited to the municipal fund (Section 7)

Notwithstanding anything to the contrary contained in the principal Act any expenses incurred by the Commissioner in the execution or intended execution of this Act may be paid out of the municipal fund.

19.3.2.4 Written permission to ensure for benefit of successors in title (Section 8)

The benefit of any written permission granted under section 3 shall be annexed to and shall go with the ownership of the building, wall, or other structure or private street, as the case may be, in respect of which it was granted, and may be enforced by every person in whom that ownership is for the time being vested, and every conditions specified in any such permission shall be binding upon every such person.

19.3.2.5 Bar of legal proceedings (Section 9)

No suit or other legal proceeding shall be instituted against the Corporation or the Commissioner or any municipal officer or servant in respect of any act in good faith done or intended to be done in pursuance of the provisions of this Act.

19.4.0 MAHARASHTRA NON-BIODEGRADABLE GARBAGE (CONTROL) ACT, 2006

19.4.1OBJECTIVE AND SCOPE:

The Act prevents throwing or depositing non –biodegradable - garbage in public drains, roads, wetland, wasteland, water bodies, places open to public view; to regulate the use of non-biodegradable material.

19.4.2 RELEVANT PROVISIONS OF THE ACT

19.4.2.1Definitions (Section 2)

i. “Biodegradable garbage" means the garbage or waste' material capable of being destroyed by the activity of living beings;

ii. "Competent authority" means any authority, officer or person appointed by the State Government, 'by notification in the *Official Gazette,* for enforcement of any of the provisions of this Act;

iii. "Garbage receptacle" means the common bin placed at public place or any other convenient place for collection of waste in a manner so as to prevent littering. attraction' to ,vectors, stray animals and excessive foul odour ;

iv. "non-bibdegradable'garbage" means the garbage or waste material made up on non-bio degradable material and 'not capable of being destroyed by the activity, of living: beings or by biological natural process, which .remains in the environment for long period of time and has potential to harm ecosystem;

v. "non-biodegradable material" means the material which cannot be decomposed or degraged by action of micro-organisms, sunlight or other natural actions ,and includes des goods made or manufactured from polyethylene, nylon or other plastic substances such as ploy-vinyl-chloride (P. V. C), poly-propylene and polystyrene. specified in the Schedule to this Act;

vi. "occupier" inc1udes, any person who for tl1e time ,being is paying or is liable to pay to the owner the rent or any portion of the rent of the land or building in respect of which such rent is paid or is payable;' an owner in occupation or otherwise. using his land or building; a rent free tenant of any land or building;

and any person who is liable to pay to the owner damages for the use and occupation of any land or building; ,

vii. "Owner" includes a person: 'who for the time being is 'receiving or is entitled to receive, the rent of any' land or building, whether on his own account or of other person or as an agent, trustee, guardian or receiver for any other person or who should so receive the rent or be entitled to receive it if the land or' building or part thereof were let to a tenant;

viii. "wetland "includes swamps 2nd marshes, wet grass lands and pit lands, estuaries, deltas .and tidal flat near shore marine areas, mangroves, wastelands and creeks and human made sites such as fish ponds. Rice- paddies, reservoirs and salt pans.

19.4.2.2 Prohibition to throw biodegradable and non-biodegradable garbage in public drains, sewage lines, natural or manmade lake, wetlands (Section 3)

No person shall throw in any drain, ventilation shaft, pipe and fittings, connected with the private or public drainage works, lake, wetlands, any non-biodegradable garbage or construction debris or any biodegradable garbage by placing in a non- biodegradable bag or container likely to injure the drainage and sewage system, interfere with the free flow or affect the treatment and disposal of drain and sewage contents; be dangerous or cause a nuisance or be prejudicial to the public health and damage the lake, river water or wetland.

19.4.2.3 Restriction or prohibition on use of certain non-biodegradable material (Section 4)

State Government may impose restriction or prohibition on the use of non-biodegradable material or any other material harmful to environment within the State.

19.4.2.4 Provision for placement of receptacles and places for deposit of non-biodegradable garbage and establishment of waste collection system (Section 5)

It shall be the duty of the local authority to place or provide in proper and convenient situation public receptacles, depots or places for temporary deposit or collection of non-biodegradable garbage; provide separate dustbins for temporary deposit of non-biodegradable garbage other than those kept and maintained for deposit of biodegradable

garbage; provide for the removal of contents of receptacles, depots and of the accumulation at all places provided and arrange for recycling of the non-biodegradable garbage so collected.

19.4.2.5 Duty of owners and occupiers to collect and deposit non-biodegradable garbage etc. (Section 6)

It shall be the duty of the owners and occupiers of every land and building to collect from their respective land and building the non- biodegradable garbage and to deposit, in garbage receptacles, depots or places provided for the temporary deposits or collection of the non-biodegradable garbage by the local authority in the area; provide separate garbage receptacles for collection of all the non-biodegradable waste from such building and land; segregate and store the waste generated by them into a minimum of two receptacles one for biodegradable waste and other for non-biodegradable waste.

19.4.2.6 Power of local authority or competent authority to remove biodegradable garbage or non- biodegradable material (Section 7)

Local authority has power to remove biodegradable garbage or non- biodegradable material if such material is likely to injure the drainage and sewage system or is likely to be dangerous to life and health.

19.4.2.7 Power of entry and inspection (Section 8)

Any person empowered by the State Government shall have a right to enter any place for performing any of the functions entrusted to him by the State Government or examining any record, register, document or any other material object or for conducting a search of any building in which he has reason to believe that an offence under this Act is being committed.

19.5.0 THE MAHARASHTRA FELLING OF TREES (REGULATION) ACT, 1964

19.5.1 OBJECTIVE AND SCOPE:

The Act intends to make better provision for regulating the felling of certain trees in the State of Maharashtra, for the purpose of the preservation thereof. The Act declares that it is expedient to make better provision for regulating the felling of certain trees in the State of Maharashtra, for the purpose of the preservation thereof, and for the protection of the soil against erosion and to provide for matters connected therewith.

19.5.2 RELEVANT PROVISIONS OF THE ACT:

19.5.2.1 Extent (Section 1)

It extends to the whole of the State of Maharashtra but excluding an urban area.

19.5.2.2 Definitions (Section 2)

i."Collector" includes a Revenue Officer appointed by the State Government to exercise the powers and perform the functions of the Collector under this Act;

ii."Forest-Officer" means a Forest Officer within the meaning of the Indian Forest Act, 1927;

iii. "urban area"" means the area within the limits of a municipality, Municipal Corporation, Municipal Committee, Town Committee, or notified area committee or Cantonment constituted under any law for the time being in force; and includes a local area which is specified by the State Government in the *Official Gazette* being an area which has a population of not less than five thousand and has not less than three-fourths of male workers engaged in non-agricultural pursuits.

19.5.2.3 Restriction on felling of trees (Section 3)

No person shall fell any tree or causes such tree to be felled hi any land, whether of his ownership or otherwise, except with the previous permission in writing of a Tree Officer duly empowered by the State Government in that behalf.

19.5.2.4 Power of Tree Officer to order planting of trees (Section 3A)

If in the opinion of the Tree Officer the number of trees in any land power of is not adequate according to the standards prescribed by rules made under' section *15,* the Tree Officer may, by order, after giving a reasonable opportunity to the owner or occupier of the land of being heard, require him to plant such trees or additional trees, as the case may be, at such places in the land as may be specified in the order; and the owner or occupier of. The land shall comply with the order by planting such trees or additional trees in the ensuing planting season. It shall be the duty of the Owner occupier of the land who is required by an order to plant a tree or trees to ensure that they grow properly and are well preserved. Where the owner or occupier fails to comply with an order the Tree Officer may, after giving a reasonable opportunity to such owner' or occupier of making representation and without prejudice to any other action which may be taken against the defaulter under this Act take necessary action himself and recover the expenditure incurred therefore from the owner or

occupier, as the case may be, after giving a notice of demand for the amount available by him. If the amount is not paid within the time specified by the Tree Officer in the notice, it shall be recovered along with interest at six per cent per annum and other incidental expenses, if any.

19.5.2.5 Contravention of Section 3 to be reported by certain officers (Section 5)

Every Revenue Officer, Forest Officer and Police Officer shall be bound- to give immediate information of any contravention of section 3 to the officer empowered under that section and of the intention or preparation to be reported commit such contravention which may come to his knowledge and to take all reasonable measures in his power to prevent such contravention which he may know or have reason to believe is about or likely to be committed.

19.5.2.6 Provisions of this Act to be in addition to any other law for the time being in force (Section 14)

The provisions of this Act shall be in addition to the provisions of any other law for the time being in force prohibiting or regulating the felling of trees.

CHAPTER TWENTY

NDMA GUIDELINES AND REPORTS[32]

20.1 NATIONAL DISASTER MANAGEMENT GUIDELINES- MANAGEMENT OF EARTHQUAKES

Preparation of guidelines for various types of disasters forms an important part of the mandate of the National Disaster Management Authority (NDMA). Almost 59 percent of the landmass of India is prone to earthquakes and preparation in this regard constitutes an important part of our effort for better management of disasters in the Country. For that reason, soon after being constituted, a series of consultations were initiated by the NDMA, with various stakeholder groups to formulate Earthquake Guidelines. These consultations included representatives of various central ministries and departments, scientific and technical institutions, academics, technocrats, architects and humanitarian organizations. The first such meeting was held on 21 December 05. It reviewed the status of earthquake management efforts thus far, identified gaps and set the framework for the approach. Thereafter, a Core Group was constituted to prepare the guidelines. Their work, which extended over six months, was reviewed by an Extended Group during a number of deliberations.

The guidelines were finalized after two national workshops at IIT Kanpur and IIT Mumbai and vetting by the ministries concerned. As is evident, these guidelines are an outcome of the effort of over 300 leading experts in the Country. These call for a participatory approach involving all stakeholder groups to strengthen the national vision of moving towards a more proactive pre-disaster preparedness and mitigation-centric approach. These contain all the details that are required by the planners and implementers and will help in the preparation of plans by the central ministries and the states.

These Guidelines consist of three broad sections: (a) the context and approach to the management of earthquakes in India; (b) an outline of the specific Guidelines; and (c) a broad overview of the DM plans to be prepared by the central ministries and departments, state governments, other stakeholders and nodal agencies. (a) The first section covers the following: • an overview of the earthquake risk and vulnerability in India; • a brief review of the status of earthquake management efforts; • an overview of the recent initiatives of the

[32] FOR FULL COPY OF THE GUIDELINES AND REPORTS , PLEASE VISIT OFFCIAL WEBSITE OF NDMA.

government for ensuring earthquake risk reduction; • an identification of the critical areas which require special attention to ensure that the overall strategy for the management of earthquakes in India is holistic, integrated and supportive to the development aspirations of building a modern nation; • an outline of a rational RM framework to institutionalise systems and processes to make earthquake safety in India a sustainable strategy; • an introduction to the six pillars of earthquake management, with prescribed time lines for the effective implementation of the various activities; and • an overview of the issues which need to be addressed to ensure the effective implementation of the plans formulated based on these Guidelines. (b) The second section outlines each of the six pillars for effective earthquake management in India. (c) The third section provides an overview of the DM plans to be prepared by the central ministries and departments, state governments, other stakeholders and nodal agencies.

20.2NATIONAL DISASTER MANAGEMENT GUIDELINES ON TSUNAMI

‘Tsunami’ has been defined as a Japanese term meaning "harbour wave", derived from the characters "tsu" meaning harbour and "nami" meaning wave, to describe a system of ocean gravity waves having a long wave length and period (time between crests), formed as a result of large-scale disturbance of the sea caused by an earthquake. ‘Tsunami Damage’ has been defined as the loss or damage directly or indirectly caused by a destructive tsunami, including loss of lives, damage to assets, property and infrastructure as well as disruption of livelihoods of affected communities. The Guidelines include a wide range of approaches for strengthening the tsunami preparedness and mitigation, including tsunami warning systems, capacity building, education, building codes and safety standards, land use planning, and other engineering solutions. These Guidelines are an important step towards comprehensive tsunami risk management in India, by developing resilience to face future tsunamis and for integrating risk mitigation measures as a part of routine safety culture. These Guidelines have been prepared to provide direction to all stakeholders and appropriate guidance to Ministries and Departments of the GoI and state authorities for the preparation of their detailed Disaster Management (DM) Plans as stipulated in the DM Act, 2005.These Guidelines call for a proactive, participatory, well structured, fail-safe, multi-disciplinary and multi-sectoral approach for improved preparedness, mitigation and emergency response at various levels.

The Guidelines are presented in 8 chapters as detailed below. Chapter 1 provides an introductory overview that reflects the tsunami risk and vulnerability in the country, identifies

the critical areas of concern, and provides a description of past initiatives for addressing coastal hazards, and outlines the post tsunami initiatives and the roadmap for a comprehensive approach to tsunami risk management in India. Chapter 2 on Tsunami Risk and Vulnerability Assessment provides a brief overview of various approaches to understand the tsunami hazard, risk and vulnerability assessment in the context of our coastal areas, based on global best practices in tsunami-prone countries.

Chapter 3 on Tsunami Preparedness provides the highlights of India's state of the art Tsunami Early Warning System for the issue of alert and early warning messages and describes the mechanisms proposed for the dissemination of such messages to the coastal communities. It also outlines the strategies for strengthening public awareness on tsunami risk and vulnerability as well as various aspects of tsunami risk management preparedness measures by various stakeholder groups. This Chapter also provides a roadmap for improving the capacity development of stakeholder groups including education, training, R&D and documentation. Chapter 4 on Structural Mitigation Measures provides guidance on design and construction of new structures as well as on strategies for protecting lifeline and priority structures along the sea front. Chapter 5 on Techno-Legal Regime provides guidance on the techno-legal and techno-financial regime for tsunami risk reduction. In Chapter 6 on Emergency Response, a robust mechanism has been proposed for strengthening the post-tsunami response capacities of stakeholder groups. Chapter 7 on Ensuring Implementation provides guidance for preparing disaster management plans at various levels. Chapter 8 provides a Summary of Action Points.

20.3 THE NATIONAL GUIDELINES FOR THE MANAGEMENT OF CYCLONES[33]

The National Guidelines for the Management of Cyclones have been formulated after a ‘nine step’ process taking on board completely, various Central Ministries, Departments, States and UTs. These guidelines call for a participatory approach involving all stakeholder groups to strengthen the national vision of moving towards a more proactive pre-disaster preparedness and mitigation-centric approach. These contain all the details that are required by planners and implementers and will help in the preparation of plans by the Central Ministries/Departments and the States/UTs. Chapter 1 provides an introductory overview that

[33]Available at, ndma.gov.in/ndma/guidelines/Management%20of%20Cyclones.pdf, last visited on 25th January 2014

reflects the risk and vulnerability of the country to cyclones, including the dimensions and magnitude of the problem. Chapter 2 discusses the Early Warning Systems (EWS) for cyclones. In this chapter, the present status of EWSs has been discussed and the gaps have been identified. Requirement to bring them up to international standards and making them state-of-the-art systems has been recommended. Chapter 3 deals with the present status of Warning Communication and Dissemination, its gaps and future improvements required towards making it fail-proof and modern. Chapter 4 covers structural measures for preparedness and mitigation, covering cyclone shelters, buildings, road links, culverts and bridges, canals, drains, saline embankments surface water tanks, cattle mounds and communication/power transmission networks.

Chapter five deals with important aspects of the management of coastal zone.Issues relating to coastal zone management, sustainability of coastal resources, bio-shields, coastal flood plain management, coastal erosion, natural resources management etc. Chapter 6 deals with various aspects of awareness generation related to CDM as an important preparedness measure. Chapter 7 covers Disaster Risk Management (DRM) issues, risk assessment and vulnerability analysis, hazard zoning and mapping, data generation, including the use of GIS tools, and capacity development. Chapter 8 deals with CDM-related response and relief strategies. A detailed account of several issues related to effective response such as response platforms, linking risk knowledge with response planning, evolving disaster response capabilities, etc., is brought out in this chapter. In Chapter 9, guidelines and implementation strategies have been discussed.

20.4 NATIONAL DISASTER MANAGEMENT GUIDELINES – MANAGEMENT OF FLOODS

These Guidelines have been divided into 10 chapters. The first chapter is general in nature. The nature and extent of the flood problem in the country, various initiatives taken by the GOI in managing them, the actions required for a reasonable and reliable assessment of the problem and collection of the data for the studies leading to systematic and scientific planning and implementation of various interventions to manage floods are briefly described therein. The second chapter titled ‘Institutional Framework and Financial Arrangements’ outlines the existing and proposed institutions to deal with the problem of floods and manage them effectively. It also deals with the financial system in place and arrangements that are proposed for meeting the requirement of funds for implementation of the various proposed

interventions and FM measures, both structural and non-structural. The third chapter on flood prevention, preparedness and mitigation presents an outline of the various types of structural and non-structural measures for managing the floods. Action plans for their implementation have also been prepared. The fourth chapter focuses on flood forecasting and warning. Flood forecasting and warning (FF and W) is an important measure for minimising loss of lives and properties and assists the authorities concerned, in prompt and effective response during and after floods. Dams, reservoirs and other water storages, both natural and man-made, play an important role in flood moderation and comprehensive mechanism for operation and regulation of reservoirs, and has been dealt with in the fifth chapter. The sixth chapter deals with regulation and enforcement.

Unplanned and unregulated developmental activities in the flood plains of the rivers and encroachments into the waterways have led to increase in flood losses as well as flood risk. The seventh chapter on capacity development covers the aspects of education, training, research and development and documentation with respect to FM. The proposals for strengthening the existing systems are also given therein. An action plan for capacity development has also been formulated. Eighth chapter is titled 'Flood Response'. The ninth chapter deals with implementation of guidelines.

20.5 NATIONAL DISASTER MANAGEMENT GUIDELINES- MANAGEMENT OF URBAN FLOODING

Urban flooding has been experienced over decades in India but sufficient attention was not given to specific efforts to deal with it. In the past, any strategy on flood disaster management largely focused on riverine floods affecting large extents of rural areas. Urban flooding is significantly different from rural flooding as urbanisation leads to developed catchments and in the event of heavy/ high intensity rainfall there is higher runoff which increases the flood peaks from 1.8 to 8 times and flood volumes up to 6 times. Consequently, flooding occurs very quickly due to faster flow times, sometimes in a matter of minutes. Taking this into account, NDMA has de-linked Urban Flooding from the subject of (riverine) Floods for the first time and commenced its efforts to come up with separate guidelines.

The National Guidelines for the Management of Urban Flooding have been formulated after a 'nine step' process taking on board, various Central Ministries, Departments, States and UTs

and several Urban Local Bodies and Development Authorities. The process also included wide consultations with experts from scientific, technical and academic institutions and humanitarian organisations. The draft guidelines document was circulated to all the Ministries/ Departments at the Centre and the States/ UTs and ULBs for their feedback. All workable suggestions have been incorporated. These guidelines are an important step towards the development of plans for the management of urban flooding. These have been prepared to provide guidance to ministries/ departments, States/UTs and urban local bodies for the preparation of their Disaster Management (DM) plans. These guidelines call for a proactive, participatory, well-structured, failsafe, multi-disciplinary and multi-sector approach at various levels.

The guidelines are presented in 10 chapters as detailed below: Chapter 1 provides an introductory review about how urban flooding is different from riverine flooding, factors contributing to urban flooding, different weather systems in India, variability of rainfall, different city scenarios and genesis of the Guidelines. Chapter 2 provides present status of the institutional framework at the national, state and the local levels, role of central ministries and departments, states and urban local bodies and other local authorities/organisations. Chapter 3 discusses present status of flood forecasting, warning and communication system. The gaps are identified and recommendations have been made for enhancing capabilities, using state-of-the-art equipment. Chapter 4 reviews the existing international and national status, practices for the design and maintenance of urban drainage systems. Gaps have been identified and recommendations made to develop efficient drainage systems with improved operations and maintenance actions. Chapter 5 covers urban flood risk management issues, vulnerability analysis, risk assessment and hazard mapping, damage assessment and data generation options, etc. Chapter 6 looks at town planning concepts, central and state legislations and a gist of relevant provisions under layout approvals and building permissions. Chapter 7 deals with response actions including putting in place an incident response system. Chapter 8 deals with capacity development at institutional and community levels, awareness generation and the role of different stakeholders and the need for proper documentation of events and actions. Chapter 9 deals with implementation stategies, mainstreaming of DM into development planning, role of nodal ministry, mobilization of financial resources and implementation methodology, etc. Chapter 10 provides the chapter-wise summary of action points.

20.6NATIONAL DISASTER MANAGEMENT GUIDELINES: MANAGEMENT OF DROUGHT[34]

The National Disaster Management Authority constituted an Extended and Core Group of Experts including representatives of Department of Agriculture & Cooperation, Indian Council of Agricultural Research and National Remote Sensing Centre, along with other stakeholders with a view to bring together all the stakeholders on a common platform for the preparation of the guidelines on management of drought. These guidelines have been prepared to provide direction to the central ministries/ departments, and state governments for preparing detailed action plans to handle drought as a part of an overall hazard Disaster Management plan. These guidelines place emphasis on risk management, rather than following the traditional approach of crisis management, where the emphasis is on reactive emergency response measures. Developing vulnerability profiles for regions, communities, population groups, and others will provide critical information on the vulnerability of regions and communities together with the causes. This information, when integrated into the planning process, can enhance the outcome of the process by identifying and prioritizing specific areas, where progress can be made in risk management.

The main objective behind formulation of these guidelines is to help authorities involved in Drought Management at Central Government level and at State Government level to manage droughts better in the future. These guidelines will ensure that[35]: -

i. All contemporary knowledge, experience and information are taken on board, clear destinations identified and road maps drawn with milestones clearly marked off through a wide consultative process involving all stakeholders.

ii. The evolution and practice of standard procedures for declaration of drought including the time of declaration is promoted and the gravity of the risk and the vulnerability of various States are duly understood.

iii. Development of standard procedures for drought vulnerability assessment and generation of vulnerability maps in each state is undertaken.

iv. The critical areas for minimising loss of lives, livelihood and property are addressed purposefully and systematically.

v. Measures are put in place for drought proofing of chronically drought-prone areas.

---

[34] Available at http://ndma.gov.in/ndma/guidelines/NDMA_Droughtguidelines.pdf, last visited 13th January, 2014.

[35] NDMA GUIDELINES ON DROUGHT MANAGEMENT.

vi. The India Drought Management Centre (IDMC) is set up.

vii. Organization and development of a centralized data base at state level and at nation level related to drought intensity assessment, drought declaration, vulnerability assessment and drought management are undertaken on priority. Grievance Management Systems are put in place for ensuring that benefits reach the intended beneficiaries.

viii. Application of ICT is promoted not only to create the databases, but also for effective monitoring the measures being taken. Effective use of e-mail, Video Conferencing, mobile phones for reducing time lag in traditional systems is encouraged.

ix. Remote sensing technology and data warehousing is promoted to study historical and future trends of the drought occurrence and its effects.

x. There is institutional participation and use of collective expertise in the drought intensity assessment/drought declaration/drought vulnerability assessment. Expert advisory systems are set up for providing advice to the affected population to mitigate the effects

xi. A common policy is evolved to dovetail short-term relief measures into long-term Interventions being handled in different Ministries/ Departments for comprehensive and all-inclusive Drought Management.

xii. Global and National best practices in Drought Management are identified and adopted.

20.7 GUIDELINES FOR DIVERSION OF FOREST LANDS FOR NON-FOREST PURPOSE UNDER THE FOREST (CONSERVATION), ACT 1980

The Forest (Conservation) Act, 1980 as amended from time to time checks the indiscriminate diversion of forest land for non-forest purposes. The State Government/Union Territories are required to submit formal proposals to the Central Government (Ministry of Environment and Forests) for diversion of forest land for non-forest purposes in the prescribed Performa along with details such as flora, fauna, map of the area, compensatory a forestation proposed etc. As the Government of India does not favour the diversion of forest land for non-forest purposes , clearances under the forest act are very difficult to obtain. The rare exceptions carry stipulations for compensatory a forestation and the like as laid down in the Act and the National Forest Policy, 1988.Therefore, as far as possible, non-forest land should be selected for projects.

As per the amended Forest (Conservation) Rules in force now, the Regional Chief Conservator of Forests have the powers to decide proposals involving forest land upto 5 hectares. Proposals involving forest land between 5 - 20 hectares shall be processed by the Regional Chief Conservatoire consultation with a State Advisory Group consisting of representatives of the concerned State Government. Proposals involving more than 20 hectares of forest land are required to be placed before the Advisory Committee constituted by the MoEF.

Some important guidelines laid down in Forest (Conservation) Act and Rules for diversion of forest land for non-forest purposes:

These guidelines ensure that ecological considerations are in no way undermined while examining investment proposals. The State Government or the Union Territory Administration concerned is required to envisage the initial stage itself, the different likely impacts of the proposed project, starting with the proposed site. The guidelines specify certain criteria for the siting of an industry, which state that no projects should be in the vicinity of Natonal Parks, Wildlife Sanctuaries and Core areas of the Biosphere Reserves.

- Scenic landscapes, areas of geomorphologic significance, unique and representative biomes and eco-systems, heritage sites/structures and areas of cultural heritage and importance.
- Fragile eco-systems such as mountains, areas rich in coral formations as well as marine, coastal, desert, wetland, riverine and island eco-systems.
- Areas rich in biological diversity, gene pool and other natural resources.

Other important points are:

- Investors in industrial projects involving forest land are required to undertake detailed Environmental Impact Assessment Studies of their projects with respect to physical resources, hydrology, and water quality, socio-economic aspects, human use values, etc.
- Introduction of exotic species of plants and animals without adequate investigations are to be avoided.
- Monoculture and plantation of dominating and exotic species shall be discouraged without sufficient experimentation.

- Wild varieties of animals and plant species are not to be disturbed.
- Besides forest lands, diversion of prime agricultural lands for non-forest purposes are also restricted.
- Investigations and surveys carried out in connection with hydro-electric projects, transmission lines, seismic surveys, exploration for oil drilling or mining will not attract the provisions of the Forest Act provided these surveys are restricted to only clearing of bushes an**d lopping of tree branches and do not** involve clearing of forests or cutting of trees.
- Such surveys, investigations and explorations are prohibited in Sanctuaries, National Parks, Biosphere Reserves and in the preservation and sample plots under the Wildlife (Protection) Act, 1972.
- The permission to survey, explore or prospect does not imply any commitment on the part of the Central Govt. for any subsequent use of the forest land.

20.8 NATIONAL DISASTER MANAGEMENT GUIDELINES—MANAGEMENT OF LANDSLIDES AND SNOW AVALANCHES[36]

Landslide has been defined as downward and outward movement of slope materials such as rock debris and earth, under the influence of gravity. Snow Avalanche is a slide of snow mass down a mountainside. It is a rapid, down slope movement of large detached mass of snow, ice and associated debris such as rock fragments, soil and vegetation. The main objectives of these Guidelines are to institutionalise the landslide hazard mitigation efforts, to make our society aware of the various aspects of landslide hazard in the country and to prepare the society to take suitable action to reduce both risks and costs associated with this hazard. The Guidelines include regulatory and non-regulatory frameworks with defined time schedules for all activities. It is envisioned that all national and state disaster management plans and policies for landslides will be formulated and implemented keeping in view the overall framework of the Guidelines. The National Disaster Management Guidelines for Management of Landslides and Snow Avalanches include a wide range of scientific, planning, and administrative tools to address various aspects of these hazards to effectively reduce losses from them. These include nine major elements to enhance the effectiveness of managing the above hazards in the country.

[36]Available at, http://ndma.gov.in/ndma/guidelines/LandslidesSnowAvalanches.pdf, last visite on 25th January, 2014

a) Landslide Hazard, Vulnerability and Risk Assessment: This includes delineating areas susceptible to landslide hazards and status of landslide hazards in different areas and to assess the resources at risk due to these hazards as per the requirement of communities and for planning and decision making purposes. This also involves site specific studies of landslides and preparation of landslide inventory. The study of snow avalanches can also be included in this.

b) Multi-Hazard Conceptualisation: Integrating landslide concerns into multi-hazard disaster management plans at different levels for effective risk assessment, mitigation and response.

c) Landslide Remediation Practice: Encouraging implementation of successful landslide remediation and mitigation technologies, and execution of pace setter examples in mitigation and remediation strategies to build confidence amongst the affected communities. This also includes monitoring of landslides and development of early warning systems.

d) Land Development; Monitoring and Early Warning: The study of landslide hazards is an area that requires active research. Unlike many other violent acts of nature, landslide hazards can be mapped out, predicted and contained, provided that a synergy of detailed plans, an aware community and scientific research are established. Research is of critical importance in managing landslides. Developing a predictive understanding of landslide processes and triggering mechanism; regional real-time landslide warning systems based on threshold values of rainfall; real-time monitoring and establishing early warning systems in case of landslides that pose substantial risk to developmental gains; risk assessment and developing methodologies for assessing the potential co-seismic slides are some of the important fields of research that need immediate attention.

e) Knowledge Network and Management : Establishing an effective system for gathering information on landslides, loss assessment resulting from landslides, and the effective dissemination of technical information and maps is an essential component of the disaster management process. A web portal—the India Disaster Knowledge Network (IDKN) will be launched at the National level.

f) Capacity Building and Training: Developing institutional capacity and training for geoscientists, engineers, and planners is necessary for effective management of the landslide hazard. The directorates of mining and geology of the state governments require particular attention in this regard as these can be focal points of most scientific

studies for landslides in the future. Risk assessment methodology, detailed site specific studies, etc., have to be standardised and existing codes for landslide related practices have to be suitably modified.

g) Public Awareness and Education: Effective communication of landslide hazard issues to the affected communities through education, public awareness programmes, posters, audio-visual aids, media campaigns, etc., is required.

h) Emergency Preparedness and Response: Development of coordinated landslide rapid response capability involving scientists, engineers, local authorities, the National Disaster Response Force and paramilitary forces. Rescue, relief and rehabilitation are covered in this component.

i) Regulation and Enforcement: Establishment of a techno-legal mechanism of landslide hazard assessment and mitigation with provisions for enforcing compliance thereof are important.

j) NATIONAL DISASTER MITIGATION PLAN (DROUGHT AND COLD WAVE/FROST)[37]

k) Department of Agriculture & Cooperation, Ministry of Agriculture closely monitors cold wave situation in consultation with India Meteorological Department (IMD) and State Governments. In case of cold wave/frost situation, States needs to initiate location specific measures as outlined in District Crop Contingency Plans and in consultation with respective State Agricultural Universities to minimise its impact.

l) Farmers are to provide light irrigation as per need, immediately prune damaged tips of branches or shoot, burn leave/waste material in the orchard to create smoke and manage rejuvenation of damaged crops through pruning of dead material, application of extra doses of fertilizer through foliar sprays.

20.9THE GUIDELINES ON MANAGEMENT OF NUCLEAR AND RADIOLOGICAL EMERGENCIES[38]

A National Workshop on Nuclear Disaster Management was organised on 17 May 2006 by the National Disaster Management Authority where all the possible scenarios of nuclear/radiological emergencies were discussed in detail and the basic structure of the

[37]AVAILABLE AT http://agricoop.nic.in/imagedefault/droughtmanagement/draftdisplan7813.pdf LAST VISITED ON 21ST FEBRUARY 2014

[38]Available at, ndma.gov.in/ndma/guidelines/Management+of+Nuclear...last visited on 23rd January 2014

National Guidelines to handle both nuclear and radiological emergencies were agreed upon. Pursuant to that, the National Disaster Management Authority constituted a Core Group of Experts consisting of 20 specialists that included many experts from the Department of Atomic Energy. During the last year and a half, the Core Group deliberated the various technical and administrative issues to arrive at a national consensus during the course of eight meetings, in addition to many meetings that were held in smaller subgroups, to prepare the draft document of the Guidelines. The document was subsequently discussed at two National Workshops of the Extended Group of Experts consisting of approximately 40 members from various ministries of the Government of India, state governments, specialists from the Department of Atomic Energy, the Defense Research and Development Organisation, the National Technical Research Organisation, the Indian Army and Air Force, etc. The suggestions/ comments of all the participants have been duly taken into account in preparing the Guidelines. This document i.e., the guidelines has the concurrence of the Department of Atomic Energy as well as the Atomic Energy Regulatory Board.

In these Guidelines, maximum emphasis has been laid on the prevention of nuclear and radiological emergencies, along with a detailed consideration of all other elements of the disaster management continuum. There may be two types of emergencies which can possibly arise as a result of (i) possible malfunctioning in the nuclear fuel cycle and (ii) detonation of a Radiological Dispersal Device (or dirty bomb) by gaining unauthorized access to radioactive materials that are routinely used in hospitals, research facilities, and industrial and construction sites. The Guidelines define a nuclear or Radiological Disaster as situation when the impact of a nuclear or radiological emergency, caused by a nuclear attack or large-scale release of radioactivity from nuclear/radiological facilities is very high, it assumes the dimension of a nuclear disaster leading to mass casualties and destruction of large areas and property. Nuclear or Radiological Emergency is defined as an emergency in which there is, or is perceived to be, a hazard due to: (a) the radiation energy resulting from a nuclear chain reaction or from the decay of the products of a chain reaction; or (b) radiation exposure. Such emergencies are usually well within the coping capability of the plant/facility authority along with the neighbouring administrative agencies, if required.

These Guidelines recommend a series of actions on the part of the various stakeholders at different levels of administration that would (i) mitigate the accident at source; (ii) prevent deterministic health effects in individuals and limit the probability of stochastic effects in the population; (iii) provide first aid and treatment of injuries; (iv) reduce the psychological impact on the population; and (v) protect the environment and property, all under the constraint of available resources.

20.10NATIONAL GUIDELINES ON CHEMICAL DISASTER MANAGEMENT.[39]

The guidelines provide that the main stakeholders in the management of chemical disasters are Ministry of Environment and Forests (MoEF; the nodal ministry); Ministry of Home Affairs (MHA); Ministry of Health and Family Welfare (MoH & FW); Ministry of Labour and Employment (MoLE); Ministry of Agriculture (MoA); Ministry of Shipping, Road Transport and Highways (MoSRT & H); Ministry of Defense (MoD); Ministry of Chemicals and Fertilizers (MoC & F); Ministry of Petroleum and Natural Gas (MoP & NG), Department of Atomic Energy (DAE); state governments and Union Territories (UTs) and the chemical industries. Chapter 1 provides an introductory brief of risks, vulnerabilities and consequences of chemical accidents; provides an account of causal factors of chemical disasters so as to restrict and contain them; and enlists major chemical accidents—their initiators, and impact on human lives and the environment.

The aims and objectives of the Guidelines focus on all aspects of the DM cycle to assist the ministries and departments of the Government of India, state governments and other agencies to prepare DM plans. Chapter 2 reviews the existing regulatory framework and practises. It furnishes an overview of the institutional framework with details of the monitoring mechanisms and compliance by central and state governments. It also provides an overview of the functioning of research institutes, autonomous bodies, professional institutes, Non-Governmental Organizations (NGOs) and MAH units, their compliance to statutory safeguards, and the efforts of the MoEF in setting up crisis management groups in industrial areas to ensure chemical safety. Various initiatives highlighting substantial work done in the area of emergency response and management systems in installations, storages and transport sectors are also illustrated. Chapter 3 gives an overview of the RELEVANT gaps identified in

[39] Available at, ndma.gov.in/ndma/guidelines/Chemical-Disaster.pdf, last visited on 21st January 2014

various aspects of the management of chemical accidents, transport accidents and medical emergencies. The management of chemical disasters will aim at prevention and mitigation with the introduction of safer process technologies, improved performance of safety devices and reduction of human error. Immediate effects of a disaster can be mitigated through installing engineering systems like scrubbers, flares and venting systems. Chapter 4 includes comprehensive guidelines for a regulatory framework, code of practises, procedures and standards, testing and information, technical and technological information, preparedness including education, training, creation of appropriate infrastructure, capacity development, awareness generation, institutional framework, networking and communication, R&D, and response, relief and rehabilitation for CDM. The roles and responsibilities of various stakeholders at centre. Chapter 5 comprises comprehensive guidelines for installations and storages (including isolated storages of HAZCHEM) that contain good engineering practises for safety, accident reporting, investigation and analysis checklists and safety promotional activities as important tools for effective CDM. Chapter 6 deals with guidelines related to chemical accidents during transportation of HAZCHEM. The areas covered include preparation of a highway DM plan, modification of rules pertaining to transport emergencies, specific roles and responsibilities of MAH units, transporters, drivers, authorities and aspects related to emergency communication systems and training of various stakeholders, the need for the development of an efficient pipeline management system. Chapter 7 sets out the approach to implementation of the Guidelines and also highlights the key points for ensuring the implementation of the plans prepared by the central ministries, departments and states.

20.11NATIONAL DISASTER MANAGEMENT GUIDELINES: MANAGEMENT OF CHEMICAL (TERRORISM) *Disasters*[40]

These guidelines are intended to focus on all aspects of the disaster management cycle, including prevention measures such as surveillance and intelligence, mitigation of direct and indirect risks, preparedness in terms of capacity development of human resources and infrastructure development, as well as relief, rehabilitation and reconstruction/recovery. These Guidelines will form the basis for the ministries and departments at central, state and district levels to formulate their plans. The approach followed in the Guidelines lays emphasis on:

[40]Available at, ndma.gov.in/ndma/guidelines/ChemicalTerrorismDisaster.pdf, last visited on 23rd January 2014

i) Security and surveillance measures for installations manufacturing/using/storing chemicals.
ii) Strengthening intelligence regarding the movement of chemicals.
iii) Preparedness for counter-terrorism measures:
a. Issues regarding the safety of chemicals and risk reduction strategies etc.
b. Strengthening of response through rescue and emergency medical resources.

The Guidelines consist of seven chapters. Chapter 1 gives the background, historical aspects and definitions of important terms related to Chemical (Terrorism) Disasters. Chapter 2 deals with the present status of the institutional framework, various legislations and regulatory framework, international conventions, global initiatives and recent developments at the national level. At the national level important central government Acts and Rules have been delineated. The initiatives of the states have also been described. The Indian Armed Forces have set up a Nuclear, Biological and Chemical Warfare Directorate. The research efforts of the Defense Research and Development Organisation for developing detection and protection systems and protective equipment and ongoing research efforts have been highlighted. Fire and emergency services for the management of Chemical (Terrorism) Disasters are not yet fully developed with the exception of a few HAZMAT vehicles in some states. Chapter 3 lists out RELEVANT gaps in the management of Chemical (Terrorism) Disasters. The requirement of specific regulations covering all aspects of protection, detection and decontamination facilities, relief and compensation to victims of man-made disasters, and chemical security have been highlighted. There are gaps in the risk management framework including risk and vulnerability assessment, surveillance mechanism, intelligence gathering and environmental monitoring, detection, characterisation, early warning systems, and safety and security of chemical agents. Disasters and the lack of special group treatment facilities have been described.

Chapter 4 elaborates on the measures required to plug the gaps identified in the legislative and regulatory framework. The dovetailing of various relevant Acts, Rules and Regulations with the Disaster Management Act, 2005, has been proposed. The measures proposed under prevention include risk and vulnerability assessment, evolving standard operating procedures, surveillance, and environmental monitoring for risk zonation at the micro level. Chapter 5 deals with guidelines for response, rehabilitation and recovery. The emergency services at the incident site will also include management of mass panic reaction, protection of responders and conducting decontamination procedures. The guidelines also give the response functions

of various emergency functionaries for the management of chemical terrorism. Detailed emergency medical response by quick reaction medical teams, triage at incident and support zone, evacuation of casualties as per their severity, and treatment at hospitals has been given in detail. Management of long-term health effects have been elaborated. Chapter 6 sets out the approach for the implementation of the Guidelines and also highlights the key points for ensuring the implementation of plans prepared by central ministries, departments, states and districts. The revamped plans will be implemented and monitored through an institutional mechanism set up as per the Disaster Management Act, 2005. The nodal ministry (Ministry of Home Affairs) with the help of technical institutions like Defense Research and Development Organisation, Defense Research and Development Establishment and others will evolve programmes and activities in the detailed Action Plan for holistic and coordinated management of Chemical (Terrorism) Disasters.

20.12NATIONAL DISASTER MANAGEMENT GUIDELINES—MANAGEMENT OF BIOLOGICAL DISASTER[41]

The guidelines define biological disasters as scenarios involving disease, disability or death on a large scale among humans, animals and plants due to toxins or disease caused by live organisms or their products. Such disasters may be natural in the form of epidemics or pandemics of existing, emerging or re-emerging diseases and pestilences or man-made by the intentional use of disease causing agents in Biological Warfare (BW) operations or incidents of Bioterrorism (BT). Bio-risk has been defined as the probability or chance that a particular adverse event (in the context of this document: accidental infection or unauthorized access, loss, theft, misuse, diversion or intentional release), possibly leading to harm, will occur. Bio-risk Management is defined as the analysis of ways and development of strategies to minimise the likelihood of the occurrence of bio-risks. Biological disasters might be caused by epidemics, accidental release of virulent microorganism(s) or Bioterrorism (BT) with the use of biological agents such as anthrax, smallpox, etc. The response to these challenges will be coordinated by the nodal ministry—Ministry of Health and Family Welfare (MoH&FW) with inputs from the Ministry of Agriculture (MoA) for agents affecting animals and crops. The support and input of other ministries like Ministry of Home Affairs (MHA), Ministry of Defense (MoD), Ministry of Railways (MoR) and Ministry of Labour and Employment

[41] Available at, ndma.gov.in/ndma/guidelines/Biological_Disasters.pd, last visited on 23rd January 2014.

(MoL&E), who have their own medical care infrastructure with capability of casualty evacuation and treatment, have an important role to play.

These Guidelines are designed to acquaint the reader with the basics of Biological Disaster Management (BDM). They deal with the subject in a balanced and thorough manner and give the information required by organisations to formulate Standard Operating Procedures (SOPs) at various levels. It is also envisaged that these Guidelines will be used for the preparation of national, state and district biological disaster management plans as a part of 'all hazard' Disaster Management (DM) plans. Chapter 1 introduces the subject and provides the background to these Guidelines. The characteristics of naturally triggered outbreaks are described and the potential for the use of pathogenic organisms in strategic and tactical modes as well as the potential of bioterrorism are presented. The mass destruction capability of biological agents in the context of disaster potential is outlined. The chapter deals with modern concepts on zoo noses in a broad fashion and also indicates the impact of the advances in molecular biology on this field. The chapter touches on bio-safety and bio-security and the evolution of epidemics In practice, though the course of action to deal with natural and artificial outbreaks is similar as far as the infected individuals are concerned, subsequent action depends on the genesis.

Chapter 2 deals with the resources available to prepare for and face the threat of biological disasters. The current laws and Acts that deal with methods for the control of epidemics have been enumerated. The Biological and Toxin Weapons Convention has been discussed. The international agencies concerned with biological disasters and the related activities of these agencies have been given. A note by the World Trade Organization (WTO) on the regulation of world trade has been included. The concerns voiced at the Earth Summit held in Brazil on the disruption of natural ecosystems that could result in biological disasters, the role of Interpol in enforcing the concerned regulations and the role of Non-Governmental Organisations (NGOs) have been mentioned. An account of the importance of the integrated disease surveillance project in biological disaster management is given. The chapter mentions the role of the Armed Forces and Railways who have a countrywide infrastructure that can be used in such disaster situations.

Chapter 3 is a reality check of the present capability to tackle biological disasters. The areas that have to be addressed during the preparatory phase are discussed. It also gives a short description of the response to challenges that the country has faced in recent times, e.g., the

Plague in 1994 (Beed and Surat) and 2002 (Himachal Pradesh) and the H5N1 outbreaks in poultry. Chapter 4 provides guidelines for individual stakeholders to prepare their respective DM plans. The chapter indicates the legislation that can be used, mechanics of disaster management and major modalities for preventing an epidemic situation and recovering from it. Chapter 5 deals with guidelines for the safety and security of microbial agents. Chapter 6 deals with the effects of disasters on animal husbandry. It discusses the present state of animal husbandry in India, its vulnerability to disasters, the economic consequences of disasters and proposes a plan for dealing with such situations. The statutory and legal framework available in the country and internationally is also mentioned. Chapter 7 deals with the issue of crop diseases that have economic ramifications. The national and international regulatory mechanisms have also been described. Chapter 8 rounds off the Guidelines to provide a broad perspective on biological disasters. The components for a system necessary to prepare for and respond to the threats have been set out.

20.13NATIONAL DISASTER MANAGEMENT GUIDELINES PSYCHO-SOCIAL SUPPORT AND MENTAL HEALTH SERVICES [42]

Psycho-social support in the context of disasters refers to comprehensive interventions aimed at addressing a wide range of psychosocial problems arising in the aftermath of a disaster. Psycho-Social Support and Mental Health Services (PSSMHS) should be considered as a continuum of the interventions in disaster situations. Psycho-social support will comprise of general interventions related to the larger issues of relief work needs, social relationships and harmony to promote or protect psychosocial well-being of the survivors. Mental health services will comprise of interventions aimed at prevention or treatment of psychological symptoms or disorders. These interventions help individuals, families and groups to restore social cohesion and infrastructure along with maintaining their independence and dignity.

There is considerable experience and evidence supporting the benefits of PSSMHS. The experiences from PSSMHS interventions in Orissa super cyclone, Gujarat earthquake, Tsunami and Kashmir earthquake, reveal that PSSMHS need to be planned ahead of disasters so as to be executed in a co-ordinated and integrated manner at the time of disasters. The psycho-social support to the disaster-affected communities needs to be provided on a

[42] Available at, http://www.ndma.gov.in/en/capacity-building/psychosocial/important-guidelines.html, last visited on 20th July 2014.

longterm basis. Appropriate and timely interventions will determine the victims' adjustment to various changes in lifestyle, caused by the disaster. The interventions have to be community-based and culturally sensitive, taking into account the needs of vulnerable groups like women, children, the elderly, the disabled etc. Such support can relieve the psychological distress of the affected people to a significant extent.

The main aim of the PSSMHS Guidelines is to envisage that disaster-affected communities are able to rebuild their shattered life through combined community activity, provided that the diminished capacity and support systems are rebuilt at the earliest and their coping capacity is increased through the simple mechanism of minimal emotional support, combined with a spectrum of care.

The objective of the PSSMHS Guidelines is to prepare national guidelines as a part of ‘all hazard’ health plan which shall concentrate on response, relief and rehabilitation aspects of different kinds of disasters. It shall also focus on implementation of PSSMHS activities through capacity building, training, service delivery, research, documentation, monitoring and evaluation at the national, state, district and community levels. The provision of PSSMHS shall be based on the general health programmes and will be integrated with National Mental Health Programme (NMHP) as well as with District Mental Health Programme (DMHP) and it will be delivered through general health care programme and district health plan.

The Guidelines are designed to acquaint the reader with the basics of managing Psycho-Social Support and Mental Health Services. These Guidelines deal with the subject in a balanced and thorough manner and give the information required by organizations to formulate PSSMHS at various levels. It is also envisaged that these Guidelines will be used for the preparation of national, state and district Psycho-Social Support and Mental Health Services as a part of 'all hazard' Disaster Management (DM) Health Plan. Standard Operating Procedures (SOPs) shall be prepared for all the stakeholders. Chapter 1 – Introduces the subject and provides the background to these Guidelines. The psycho-social trauma and its long-term consequences are presented. The emotional reactions and behavioral responses due to disasters are outlined in Annexure-A. It also deliberates on the need, aims and objectives of the Guidelines. Chapter 2 – Describes the present status of mental health resources available in India and the Indian experience of working in various disasters. The chapter also

deals with the various government policies, programmes and initiatives on Disaster Management (DM) Health Plans. The chapter briefly describes the evolution of PSSMHS in India and capacity development in terms of both human resources and infrastructure in the country during disaster and non-disaster situations. The chapter also provides a clear picture about the role of different ministries, department of health and other stakeholders in the management of PSSMHS during disasters.

Chapter 3 – Reveals the salient gaps in delivering PSSMHS. The noticeable gaps in policies, strategies, planning, human resources and other preparedness-related aspects are presented. The gaps and limitations are clearly noticeable at various levels for adequate capacities, lack of skilled human resource, service delivery, co-ordination, research and development, proper documentation, adequate finance and proper implementation. Chapter 4 – Deliberates on legislation for institutional and operational framework. It also describes proper planning and resource mapping at all levels. Capacity development and up gradation of infrastructure required for implementing PSSMHS are described along with hospital preparedness. The need for creating a network of institutions is been stressed, which shall prepare adequate knowledge material and modules for training of various human resources at different levels. The need for activation of psycho-social support, enhancing manpower for psychiatry and psychology, psychiatric social work, psychiatric nursing, community level workers and other volunteers is stressed. Proper documentation, international co-operation and the role of NGOs are deliberated. Appropriate attention to vulnerable groups and the necessity of creating proper referral systems for disaster-affected people once stressed. Chapter 5 – Deals with the mechanism of response for the PSSMHS in the Response phase at national, state and district levels, by various ministries and departments and all the other stakeholders including International Non- Government Organizations (INGOs), Non- Government Organizations (NGOs) and communities. This chapter also describes the mechanism of including PSSMHS in the general relief work and health plans. It further deals with the integration of community practices in PSSMHS in case of a disaster. The important aspect of long-term PSSMHS services is to be included in the recovery, rehabilitation and reconstruction phases of disaster. The importance of providing special care to the vulnerable groups as well as to the care-givers to enhance the quality of service delivery is stressed.

Chapter 6 – Rounds off the Guidelines to provide a broad perspective on PSSMHS in disasters. Various components of a system necessary to prepare for, and respond to, disasters

once set out. The time-lines proposed for the implementation of various activities in the Guidelines are both important and desirable. Precise schedules for structural measures will, however, be evolved in the PSSMHS in DM plans that will follow at the central ministries/state level, duly taking into account the availability of financial, technical and managerial resources. In case of compelling circumstances warranting a change, consultation with the National Disaster Management Authority (NDMA) will be undertaken well in advance, for adjustment on a Case-to-case basis. These Guidelines provide a framework for action at all levels. The Ministry of Health and Family Welfare (MoH&FW) shall prepare an Action Plan to enable all sections of the Government and administrative machinery at various levels to prepare and respond effectively.

20.14 NATIONAL DISASTER MANAGEMENT GUIDELINES PREPARATION OF STATE DISASTER MANAGEMENT PLANS

The aim of the state DM plan is to ensure that the following components of DM are addressed to facilitate planning, preparedness, operational, coordination and community participation. Flowing from the national vision and the aforementioned approach, the objectives guiding the policy formulation are: • Promoting a culture of prevention and preparedness by ensuring that DM receives the highest priority at all levels. • Ensuring that community is the most important stakeholder in the DM process. • Encouraging mitigation measures based on state-of-the-art technology and environmental sustainability. • Mainstreaming DM concerns into the developmental planning process. • Putting in place a streamlined and institutional techno-legal framework for the creation of an enabling regulatory environment and a compliance regime.

• Developing contemporary forecasting and early warning systems backed by responsive and fail-safe communications and Information Technology (IT) support. Promoting a productive partnership with the media to create awareness and contributing towards capacity development. • Ensuring efficient response and relief with a caring approach towards the needs of the vulnerable sections of the society. • Undertaking reconstruction as an opportunity to build disaster resilient structures and habitat. • Undertaking recovery to bring back the community to a better and safer level than the pre-disaster stage.

20.15 NATIONAL DISASTER MANAGEMENT GUIDELINES—INCIDENT RESPONSE SYSTEM[43]

The Guidelines on the Incident Response System (IRS) are issued by the National Disaster Management Authority (NDMA) under Section 6 of the DM Act, 2005 for effective, efficient and comprehensive management of disasters in India. The vision is to minimize loss of life and property by strengthening and standardizing the disaster response mechanism in the country. Realization of certain shortcomings in response and a desire to address the critical gaps led Government of India (GoI) to look at the world's best practices and adopt the Incident Command System (ICS).

The ICS incorporates all the duties that may be performed in case of any disaster or event.
It envisages a complete team with various sections to attend to all possible requirements.
If the ICS is put in place and stakeholders trained in their respective duties and roles, it will help reduce chaos and confusion during actual incident management and everyone involved will know what all needs to be done, who will do it, where are the resources and who is in command, etc.

The ICS is a flexible system and all its Sections need not be activated in every situation at the same time. Only required sections may be made operational as and when required. This system envisages that the roles and duties shall be laid down in advance, the personnel earmarked and trained in their respective roles and duties.
This system consists of a number of useful features like; 1) Management by Objectives,
2) Unity and Chain of Command, 3) Transfer of Command, 4) Organizational Flexibility,
5) Manageable Span of Control, 6) Area Command, 7) Unified Command, 8) Common Terminology, 9) Personnel Accountability, 10) Integrated Communications, 11) Planning and Comprehensive Resource Mobilization, Deployment and Demobilization, 12) Incident Action Plan, 13) Information Management, 14) Proper documentation of the entire response activities through forms and formats, 15) Responder's Safety, 16) Media Management and 17) Agency Coordination. The Guidelines are intended to familiarize its readers with the underlying principles of the Incident Response System (IRS). These Guidelines consist of nine chapters, the details of which are as follows: Chapter 1 on Institutional and Legal

[43] Available at http://ndma.gov.in/images/guidelines/incidentresponsesystemjuly.pdf, accessed on 15 July, 2014.

Arrangements provides an introductory brief of the institutional and legal arrangements for the management of disasters as it exists in India and as provided by the DM Act, 2005.

Chapter 2 on Overview of Incident Response System includes introduction to Incident Response System (IRS). Various components of IRS such as 1) Command Staff; a) Incident Commander, b) Information and Media Officer, c) Liaison Officer, d) Safety Officer and 2) General Staff; a) Operations Section; Branch, Division, Single Resource, Strike Team and Task Force, b) Planning Section; Resource, Situation, Documentation and Demobilisation Units and c) Logistics Section; Service, Support and Finance Branches and their Units have been discussed in detail with reference to the Indian context. The significance of various forms prescribed in the IRS have also been discussed in this chapter.

Chapter 3 on Disaster Response Management gives details of the disaster response mechanism and arrangements at the National, State, District, Union Territories and Metropolitan City levels. The constitution of Incident Response Teams (IRTs) at the State, District, Sub- Division, Tehsil/Block levels has been outlined. The arrangements for response management in Metropolitan Cities and Union Territories has also been suggested. The roles and responsibilities of Chief Secretaries and District Magistrates as Responsible Officers (ROs) at state and district levels respectively have been described in detail. In the IRS structure, specific roles have been assigned to various stakeholders like neighborhood Communities, PRIs, Local Authorities, volunteers of Civil Defence and other voluntary organizations in the Strike Team and Task Force. The roles of NACs, Municipalities, Corporations / ULBs have been clarified and appropriately integrated in the IRS structure. The roles of Emergency Operations Centres (EOCs) at National, State and District levels have been clarified and minimum norms have been suggested.

The formation, triggering mechanism and deployment of IRTs at various levels (State, District, Sub-Division, Tehsil / Block) have been clearly spelt out. Directions for CBRN Emergencies: Implementation of IRS for CBRN emergency response has also been dealt with and appropriate response actions have been recommended. This is an important feature as in this area there is generally a lack of correct and proper information among the people including the normal responders. Coordination: The coordination among the National, State and District levels has also clearly been enumerated.

Chapter 4 on Incident Commander & Command Staff deals with roles and responsibilities of Incident Commander (IC) and his staff during the incident response. The IC is the head of the Incident Response Team (IRT). The position of IC is very important as he has to perform the vital role of leading the IRT. To assist the IC in discharge of the responsibilities, he has a set of officers who are part of the command staff. The officers assisting him are; a) Information and Media Officer, b) Liaison Officer and c) Safety Officer. Details of the duties to be performed by the different command staff have also been dealt with in this chapter. Chapter 5 on General Staff deals in brief with the structure of General Staff in the IRS. The general staff in IRS consists of Operations Section, Planning Section and Logistics Section. Chapter 6 on Operations Section deals with roles and responsibilities of Operations Section Chief, Branch Directors, Division / Group supervisors, Strike Team and Task Force leaders. The Operations Section has been divided into two Branches; 1) Response and 2) Transportation. An illustrative list of different teams that may need to be formed under the Operations Section in the Response Branch has been placed in the annexure for convenience and guidance. The responsibility of the various teams like Food Team, Health Team, Teams for restoration of essential services like road, hospital services, water and sanitation, communication and other allied services like dead body management etc. have also been enumerated. The Transportation Branch works under the Operations Section. Depending upon the requirement it may activate up to four functional groups which are a) Road, b) Rail, c) Water and d) Air. To guide the responders, roles and responsibilities of the Branch and its functional Groups have been enumerated.

Chapter 7 on Planning Section deals with procedures involved in effective Planning for incident response. The roles and responsibilities of Planning Section chief, and his units; a) Resource Unit, b) situation unit, c) documentation unit and d) demobilization unit have been clearly spelt out in this chapter. Provision for arrangement of technical specialists to support the response has also been made. Chapter 8 on Logistics Section deals with resource provisioning. The Logistics Section has been divided into three branches such as 1) Service, 2) Support and 3) Finance. These branches have their separate functional units which have been enumerated in detail. The forms and formats for this section are also enclosed in the annexure. The finance branch has been brought under this section in order to help quick procurement following proper procedures and financial rules. Chapter 9 on Summary of Action Points comprises of directions for the implementation of these Guidelines such as time line, availability and mobilization of financial resources to implement IRS, capacity

building of IRTs, and preparation of response plan etc. These Guidelines have been issued to ensure professionalism among the responders to minimize loss of life and property in any disaster and to strengthen and standardize response in the country.

20.16 GUIDELINES ON 'NATIONAL DISASTER MANAGEMENT INFORMATION AND COMMUNICATION SYSTEM'[44]

This document by National Disaster Management Authority, sheds light on the guidelines that have been prepared with a view to provide the necessary guiding principles to the central ministries/departments and the state governments for establishing a communication network to meet the requirements of dedicated disaster communication. It provides services of audio, video, and data augmented with GIS-based value added information to various stakeholders. Further it would facilitate proactive and holistic management of disasters.

The document is divided into 12 chapters, which are as follows:

Chapter 1 introduces the subject of disaster management by highlighting the prevailing global scenario as well as the scenario in India. It highlights the need for proactive and holistic approach to deal with disaster. Formation of the National Disaster Management Authority (NDMA) and brief description of the four most crucial facets of natural hazards in disaster viz floods, cyclones, earthquakes and landslides with their respective profile with country and the special features of ICT required for management of these hazards are focus of the chapter.

Chapter 2 is on "Requirement of ICT network during various phases of Disaster Continuum". It analyses the requirement of ICT network during various phases of disaster continuum, which are different for each phase of disaster management viz mitigation, preparedness, response, and recovery. By elaborating on these issues the document sheds light on the need for an optimal mix of communication technologies to respond to diverse requirements.

Chapter 3 is on "Existing Communication Support and Situation Analysis". It primarily covers the brief details of existing telecommunication infrastructure of various service providers, hazard forecasting and warning networks along with certain limitations in the existing network vis a vis the DM requirement.

[44] Available at, http://www.ifrc.org/docs/idrl/919EN.pdf, last visited on 24th July 2014.

Chapter 4 is on "Need for GIS-based NDMIS (National Disaster Management Information System). It spells out the rationale for the establishment of NDMIS.

Chapter 5 is on "Establishment of National Disaster Communication Network (NDCN)". It elaborates on the characteristic features of the network that would be created by utilising the existing national, state and district level communication infrastructure the maximum possible extent.

Chapter 6 is on "Emergency Operations Centres (EOCs): Connectivity, Database &Applications Development". It describes the EOCs at National, State and District level and the Mobile Emergency Operations Center (MEOC) for NDRF.

Chapter 7 is on "Facilities Provided at EOCs". It deals with various provisions made at various levels of Emergency Operations Centers (EOCs) to facilitate efficient communication during disaster.

Chapter 8 is on "Technological Challenges for Implementation of NDCN". It brings out the technological challenges involved in establishment of an effective, responsive and integrated National Disaster Communication Network in India.

Chapter 9 is on "Technology, Emerging Trends and R&D Requirements". It deals with the basic telecommunication principles and describes briefly the various telecommunication Network technologies.

Chapter 10 is on "Last Mile Connectivity". It describes in detail the communication support envisaged to be provided for establishing graded communication at the disaster site.

Chapter 11 is on "Implementation of NDCN". The aspects of carrying out the activities of NDCN, the management of its staff and the role of other institutions involved are elaborated in this chapter.

Chapter 12 is on "Summary of Action Points". The action points, which need to be initiated at various levels, have been summarized in this chapter.

20.17 NATIONAL DISASTER MANAGEMENT GUIDELINES SCALING, TYPE OF EQUIPMENT AND TRAINING OF FIRE SERVICES

These Guidelines on scaling, type of equipment and training of fire services are issued by the National Disaster Management Authority (NDMA) under Section 6 of the DM Act 2005 for standardization and revamping of the fire services in the country and effective, efficient and comprehensive management of fire incidents,. The vision is to minimize loss of life and property by strengthening and standardizing fire response, mechanisms, proper scaling of equipment, appropriate training of firemen at different required levels in the country and prevention of fire incidents by spreading a culture of awareness, alertness and preparedness amongst the people.

Having examined the shortcomings in the fire fighting capabilities of our country as a whole, and with an aim of addressing the critical gaps, the NDMA had been engaged in constant dialogue with various authorities, including the 13th Finance Commission (FC). It was also brought to the notice of the Hon'ble Prime Minister in the NDMA meeting chaired by him.

At the Prime Minister's level it has been decided that the Planning Commission could play a role in persuading the states to make prioritized plans and provide proper allocation of funds for fire services in their annual five year plans. Discussion with the 13th FC led to appreciation of the problem by them and subsequent allotment of appropriate funds to all the states which had submitted proposals before it and further direction to the other remaining states and Urban Local Bodies to specifically spend on fire services out of the funds allotted by the 13th FC to the Urban Local Bodies (ULBs). It is expected that the short comings because of lack of proper plans and availability of adequate funds will be overcome in the next five years by the two pronged approach of; • Prioritized and planned steps in the State five year plans ; and • Expeditious actions by the ULB's and the state governments as directed by the 13th FC and spending money on the fire services from the grants allotted to them. These guidelines have been prepared with help of a core group consisting of the members of the Standing Fire Advisory Council, GoI and other experts in the field. In order to operationalize the process in a systematic manner, the NDMA is issuing these guidelines with regard to scaling, type of equipment, man power and their training along with a strategy for funding the requirements. All state governments and local bodies concerned shall follow it in a planned and focused manner.

20.18 **NATIONAL DISASTER MANAGEMENT GUIDELINES SEISMIC RETROFITTING OF DEFICIENT BUILDINGS AND STRUCTURES**

The Guidelines for Seismic Retrofitting of buildings and structures in India address the reduction (if not elimination) of loss of life owing to collapse of houses/residential structures, buildings and structures in impending future earthquakes. All buildings and structures that pose high risk to LOSS OF LIFE are identified. Table 4 provides the high priority category of buildings and structures other than houses/residences that pose such a threat; Vulnerable buildings and structures retrofitted to meet performance requirements (laid down in this document) during and after expected severe earthquakes. These Guidelines address: i. Seizing the problem of seismic risk of buildings and structures in India, ii. Preparing a priority of structures, iii. Determining extent of intervention required, and iv. Identifying suitable method of retrofitting to be adopted. The principal stakeholders, who will benefit most from the Guidelines, are Governments of the States and of the Union Territories, and Ministries of the Government of India.

B. NDMA REPORTS

20.19 PILOT PROJECT ON CAPACITY BUILDING FOR ADVANCED TRAUMA LIFE SUPPORT IN INDIA

NDMA in collaboration with Jai Prakash Narain Apex Trauma Centre (JPNATC) has undertaken a Pilot Project on Advanced Trauma Life Support Project at JPNATC. The project was designed to develop human resources to provide effective trauma care initially in the vulnerable and disaster prone states such as Assam, Bihar and Andhra Pradesh and to develop dedicated and well trained doctors, nurses and paramedics for trauma life support in order to meet the challenges of disaster situations. The Institute has submitted the draft report of the project indicating a total of 129 participants attended and completed training on Advanced Trauma Life Support. Besides 131 participants attended and completed the Rural Trauma Team Development Course. 53 Nurses have also successfully completed Advanced Trauma Care for Nurses course.

20.20 PROJECT ON CAPACITY BUILDING IN DISASTER MANAGEMENT FOR GOVERNMENT OFFICIALS AND REPRESENTATIVES OF PANCHAYATI RAJ INSTITUTIONS AND URBAN LOCAL BODIES AT DISTRICT LEVEL

Communities are the first responders in the event of any disaster and the representatives of local administrative bodies have a critical role in adoption of the new culture of disaster management in India. The National Disaster Management Authority is collaborating with the Indira Gandhi National Open University (IGNOU) to undertake a pilot project on "Capacity Building in Disaster Management for Government Officials and Representatives of Panchayati Raj Institutions and Urban Local Bodies at the District Levels". Under this project, a total of 4050 government officials and 12150 elected representatives of Panchayati Raj Institutions and Urban Local Bodies would be trained in Disaster Management through Face to Face Training Programmes at the district level in 54 hazard prone districts of 11 States. The Face to Face Training Programmes will focus on the critical aspects of prevention, preparedness, mitigation, relief and immediate response, rehabilitation, reconstruction and recovery with respect to disasters. The Indira Gandhi National Open University has a long experience of teaching courses in disaster management and has developed rich knowledge on the subject. This project combines their knowledge with the various guidelines evolved by NDMA for Disaster Management.

20.21 REVAMPING OF CIVIL DEFENCE IN THE COUNTRY

The changing global geo-political scenario, reducing the chances and occurrence of traditional wars, and steadily increasing threats from natural and man-made disasters, with large-scale devastation to life and property, warrants a greater role on the part of the Civil Defence (CD) from merely hostile act-centric responsibility to a holistic role in all the facets of Disaster Management in the country. The Civil Defence being a community-based voluntary organization can, in addition to rescue, relief and rehabilitation, also play a stellar role in the field of community capacity building and public awareness to face any disaster situation, as is being done by Civil Defence set-ups in many other countries. CD Set-up at all District Headquarters In terms of the Civil Defence Act, 1968, this organization is presently meant to provide protection to individuals, properties and establishments against any hostile act only in a limited number of categorized CD towns. However, in pursuance of the Ministry of Home Affairs (MHA), Government of India (GOI) order dated 5 September, 2003, some of the states are effectively utilizing the services of CD volunteers for post-disaster response and relief as also for pre-disaster activities related to mitigation and preparedness. In the light of the fact that no district in the country may be considered to be completely free from disaster vulnerability, it is recommended that Civil Defence infrastructure may be made

available in all the districts in the country in a phased manner in the next three financial years. While doing this, the entire concept and orientation of Civil Defence coverage has to be changed from 'Town Specific' to 'District Specific' with the area of responsibility covering the entire district. In extending the scope of Civil Defence coverage to all the districts, the recent report of Building Materials Technology Promotion Council (BMTPC), classifying 241 districts (Annexure-D) in the country as multi-hazard districts, is suggested to be taken as the base and these 241 districts are proposed to be included in the initial stages. Different suggestions extending the scope of civil defence have been incorporated under this report.

20.22 **GUIDELINES FOR THE NATIONAL INSTITUTE OF DISASTER MANAGEMENT (NIDM)**

The Disaster Management Act 2005 provides for an institute to be called the National Institute of Disaster Management which is to play a key role in training and capacity building in the field of Disaster Management. Sections 6 and 42 of the Act envisage that the NIDM shall function within the broad policies and guidelines laid down by the National Disaster Management Authority (NDMA). Keeping this objective in view, these guidelines have been drawn up to enable the NIDM to function as the primary training and capacity building institution in the country. It will develop institutional capacity by creating a cadre of trainers for various aspects of Disaster Management and undertake related activities in furtherance of the goals of the Nodal Agency at the National Level in the field of Disaster Management i.e. NDMA.

20.23 NATIONAL DISASTER MANAGEMENT GUIDELINES- STRENGTHENING OF SAFETY AND SECURITY FOR TRANSPORTATION OF POL TANKERS

National Disaster Management Authority convened a meeting to coordinate with the oil companies and different ministries/regulatory authorities dealing with transportation of POL tankers under the chairmanship of Lt Gen (Dr) J. R. Bhardwaj, Member, and NDMA on 29th April, 2010. Twenty Six senior representatives from invited organizations participated in the meeting. An active discussion has taken place between oil companies and various regulating authorities on the various issues defined above. Since there were large number of issues brought in during discussion. It was decided that all the representatives will send their written

comments at the earliest. The under singed constituted a core group for "Strengthening Safety and Security Regulations for the POL tankers" (Annexure II) who will coordinate and compile recommendations based on the comments received from various representatives. The comments from all the representatives were received by 20th May, 2010. The comments so received from various representatives were incorporated in the document entitled "Strengthening Safety and Security Regulations for the POL tankers".

20.24 NATIONAL DISASTER MANAGEMENT GUIDELINES PLAN TO COUNTER THE THREATS TO MUNICIPAL WATER SUPPLY AND WATER RESERVIORS

NDMA convened a meeting all of concerned departments and experts dealing with the subject of Safe Drinking Water supply under the Chairmanship of Lt Gen (Dr) JR Bhardwaj, PVSM, AVSM, VSM, PHS, Member, NDMA on 17thMay, 2010. A Core Group of the experts was constituted to formulate and firm up the plan.

The document was prepared by the Core Group under the Chairmanship of Lt Gen (Dr) JR Bhardwaj, Member, NDMA and was circulated to all the experts for their final comments if any. The comments from all the representatives were received by 05.06.2010. The comments so received from various representatives were incorporated in the document entitled "Plan to counter the threats to Municipal Water Supply and Water Reservoirs"

20.25TRAINING REGIME FOR DISASTER RESPONSE

To attain an effective and efficient Disaster Response System, the pressing need was identification of specific disaster response training courses and devising a unified, structured and uniform course module as well syllabus for these specific disaster response training courses. With this objective, the National Disaster Management Authority (NDMA) commissioned a systematic study to identify the training needs of personnel of National Disaster Response Force (NDRF), State Disaster Response Forces (SDRF) and other stakeholders. This report "Training Regime for Disaster Response" is a brilliant exertion towards attaining this objective that has materialized out of a detailed training needs analysis (TNA) and followed by extensive research on good practices in disaster response training within the country and elsewhere in the world. The proposition behind a unified, structured, uniform course module and syllabus is that first the entire NDRF Bns will successfully attain these select courses and subsequently the SDRF Bns and other stakeholders will be trained on

the same lines. The need of uniformly structured course module and syllabus emerged out of the fact that if all the NDRF Bns and other ‘first responders’ undergo the same training exercise, the coordination between different stakeholders would be expedient and well planned at the time of any major disaster where different NDRF Bns, SDRF Bns and other stakeholders will be working together in close coordination with each other. The course module and syllabus is structured and devised levelwise i.e. orientation, basic and advance courses. It is also in accordance with the type of disasters, with appropriate emphasis on local vulnerability conditions.The report on “Training Regime for Disaster Response” is the outcome of painstaking efforts on the part of the NDRF and CPFs personnel, as also several specialists and subject experts in related fields. This is definitely a major step towards the future where a holistic, uniformed and well structured disaster response training system will hold the key to an efficient and successful disaster response mechanism.

List of Contributors

1. Shri R K Jain, IAS, Secretary, NDMA
2. Dr Anita Bhatnagar Jain, IAS, Joint Secretary (Policy & Plan), NDMA
3. Anil K. Sinha, IAS (Retd), Vice Chairman, Bihar State Disaster Management Authority (BSDMA) Patna.
4. Prof V. K. Sharma, Vice Chairman, Sikkim State Disaster Management Authority
5. Shri Ratan Kumar Sinha, Chairman, Atomic Energy Commission & Secretary, Department of Atomic Energy
6. Shri T. Nandakumar, Ex- Member, NDMA
7. Professor Dr. P. Ishwara Bhat, Vice Chancellor, The West Bengal National University of Juridical Sciences.
8. Prof. (Dr.) Faizan Mustafa, Vice Chancellor, National Academy of Legal Studies and Research University of Law, Hyderabad.
9. Shri Rajesh Kumar Singh, Director (Policy & Plans), NDMA
10. Dr. Pavan Kumar Singh, Senior Research Office (Policy & Plans), NDMA
11. Dr. Mononita Kundu Das, Associate Professor, Executive Director, Centre for Environmental Law and Policy, Faculty of Law, National Law University,Jodhpur
12. Shri P. Srinivas, Director Safety-III, Room no. 362 Rail Bhavan, New Delhi
13. Shri Saurabh Jain, IAS, Deputy Director & Director, CDM, Lal Bahadur Shastri National Academy of Administration, Mussoorie, Uttarakhand
14. Dr. R K Dave, Senior Consultant (Policy and Plans), NDMA
15. Shri B.B. Patel, Deputy Secretary (LR), Government of India, Ministry of Rural Development, Department of Land Resources
16. Shri Anuj Tiwari, Advisor, Bihar State Disaster Management Authority (BSDMA)
17. Shri M. V. Vijayan, Under Secretary, Ministry of Urban Development, Government of India, Nirman Bhavan, New Delhi.
18. Shri R Shajeendran Pillai, Deputy Secretary, For Principal Secretary, Govt. of Kerala, Disaster Management (Revenue-K) Department, Kerala.

Compilation done by

19. Aisha Ahmed Sharfi, Phd Scholar and Research Assistant, West Bengal National University of Juridical Sciences
20. Shubhangi Bajaj, Phd Scholar and Research Assistant, West Bengal National University of Juridical Sciences

Contact Us

For more information on **Compendium of Laws on Disaster Management**

Please Contact

Joint Secretary
Policy & Plan
National Disaster Management Authority
A-1, Safdarjung Enclave
New Delhi-110029

Tel: (011) 26701859/868
Fax: (011) 26701820
e-mail: policyplan@ndma.gov.in, aoit@ndma.in

Web: www.ndma.gov.in