

**ENVIRONMENTAL LEGISLATION FOR DISASTER RISK MANAGEMENT IN
INDIA**

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Abstract

Preparation through education is less costly than learning through tragedy.

..... **Max Mayfield**

In the entire globe a major damage take place to the life and property of individual is due to Natural calamities. Natural calamities occur either due to natural cause or man-made cause. Both the causes are inevitable and beyond the control of an individual. The damage or the loss sustained due to natural calamities is beyond the scope of remedy. From the past history one can easily identify that after the calamities, if anything work out is nothing but the disaster management Act. It helps to overcome from the loss sustained due to calamities. As the entire globe is moving towards more progressive and constructive in terms of advancement of science and technology, somehow it is effecting to the life and property of an individual too. Development is a key factor for the growth and development of any nation but at the same time one must make sure that it must not affect the environment. Development at the cost of environment is no development. In this paper researcher has tried to explain the various constitutional provisions and disaster management law and policies in India with the help of secondary method of research. Disaster management is not only a factor of concern in India but at the international level too it plays an important role. Proper management of various waste and prevention, control and abatement of environment pollution also lead a crucial role in disaster management. A holistic approach should be adopted at large by the international states, at national level, at individual as well as at conscious levels for development of human society, technological development and strategic combat of occurrence of natural or man- made disasters in a sustainable manner.

Key words

Constitutional provisions, Climate Change, Disaster management, Environment, Hazardous waste

INTRODUCTION

In international perspective there is increasing concern relating to the link of disaster risk reduction and management of environment. Disaster management now highlights a very important scenario at the international perspective as it also speaks of encouragement of sustainable use of ecosystem. It aims in promotion of integrated environment and risk management policy for combating non-anticipated hazards and disasters around the globe. The usage of land has been done in such a manner that the people's capacity to recover from the disaster has been lessened. Environmental regulation has caused huge impact on the ecological needs as well as the increase in vulnerability of the climate change has caused loss of flora and fauna. This also includes instances of land degradation, loss of biodiversity, climate change, sea level rise, ozone depletion and many more. Disasters are events where the environment reaches at its peak and becomes inevitable for human to control.

Disasters cause enormous damages to the natural environment which underpins human survival, yet we largely fail to account for the loss of services from the damaged environmental when it comes to accounting for disaster-related costs. This is mainly due to lack of conventional market price-tag for the services that are readily obtained from the natural environment. ^[1]

LINK BETWEEN DISASTER OCCURRENCE AND LOSS OF ENVIRONMENT

The term "disaster management" refers to the process of coordinating catastrophe response throughout the nation. Due to its unique geo-climatic characteristics, India has always been susceptible to natural catastrophes. Floods, droughts, cyclones, earthquakes, and landslides would all have been common occurrences.^[2]

Disaster and environment belong to the same genus and it cannot be understood from one point. To understand, it is important to understand the factors which impact the disaster whether man-made or natural disasters. Disaster includes earthquake, flood, storm, hurricane, typhoons, cyclones, forest fires, landslides and many more. Environment degradation leads to disaster as it aggravates the environment. It also causes damage to the ecosystem. The environment degradation reduces productivity water, food, health of the community leading to high exposure of social unrest and hazardous locations. It is mainly because it is affecting natural resources and also compromising environmental sustainability. The cycle of disaster management and environment management are correlated to each other.

Disaster can be classified into environmental disasters, technology disasters and civil disasters. Environmental disasters include vegetation fire, chemical usages, epidemics etc. Technological disasters include industrial, mechanical, nuclear, structural collapse etc. Civil disasters include war, mass poisoning, bomb blast, transport accident etc. Therefore, disaster reduction is done for proper environment management and environmental approach should be undertaken for utilizing environmental knowledge to reduce the risk of disaster. Human society cannot be considered as disassociated from environment as both are belonging to the same coin. The main linkage of disaster management with environmental includes national disaster risk management mechanism to reduce the risk of environmental regulation. The framework involved in environmental changes, making local knowledge as a parameter for environment protection, engaging scientific research and innovation protecting the valuable ecological system, generating structural designs and technologies which are environmental friendly, preparing environmental emergencies and strengthening of the government for environmental recovery due to disasters is a concern.

LAWS RELATING TO DISASTER MANAGEMENT

- Constitutional and other legal provisions in India

The Indian Constitution has placed human rights and environment in correlation with each other. Article 21 of the Constitution with states that no person shall be deprived of life and personal liberty, except according to the procedure established by law has been inculcated in a very diversified manner.^[3] The major right to survival does not mean enough and the Article 21 is evident of it. Article 14 speaks that the State shall not deny to any person equality before law or equal protection of law within the territory of India, which can be used as a challenge towards the government for environment protection, without taking any arbitrary action and that adequate consideration be given to of environmental impact. After the 42nd Amendment, which was included in the year 1976, incorporated Article 48- A which provides that the State shall endeavour to protect and improve the environment and safeguard the forest and wildlife of the country. Apart from that, the fundamental duties under Articles 51- A impose responsibility on the citizen to improve the natural environment which includes forest, lakes, river and wildlife and also to have compassion towards living creatures. Here protection of natural environment is considered as a positive aspect in India.

Apart from that, the Indian Penal Code also provides provisions relating to environment protection under Section 268 and 294- A of IPC.^[4] CrPC also covers provisions pertaining to

prevention of pollution in which is incorporated from Section 133 to 143 which includes public nuisance.^[5]

DISASTER RISK REDUCTION AND ENVIRONMENT

The vulnerability of disasters towards mankind has increased throughout globally. This has posed new challenge on the nations for policy making and India also in the same manner is equally vulnerable to natural and man-made disasters. India's geographical condition is diversified. There is multi- hazard disaster happening throughout the territory. Man-made emergency is also causing disasters, leading to fatalities and economic losses in India. Due to diverse geological locations, the country faces higher frequency of different disasters at different places which includes flood, cyclones, earthquake and landslides. Almost all the parts of India experience disaster and it is important to deal with such.

The impact of disaster causes loss of property and life, damage to livelihood, economic and environmental damages, sociological and psychological effects and even sometimes leading to war. The Indian Disaster Management Policy has been created to change the calamity relief for disaster prevention, preparation of disaster management and mitigation and other significant change which has been inculcated to manage community disaster management through risk reduction.

India has grown at a very fast pace complementing the international environmental laws. The Environment Protection Act^[6] acts in umbrella legislation which deals with major environmental hazards and makes the central government responsible for protecting and improving the quality of environment. It also empowers a central government to regulate laws relating to environmental pollution and handling of hazardous substances with procedural safeguards. The act also covers discharge of environmental pollution and the manner in which and unforeseen accident can be avoided. Apart from that, there are laws made for waste management which includes Manufacture, Storage and Import of Chemical Rules of 1989 which was later amended in 1994 and 2000. The rules define major accident as which includes loss of life, multiple injuries due to release of toxic chemicals or expulsion of fire or spilling of hazardous chemicals. It also makes the occupier of the industrial premises responsible authority for taking adequate actions for prevention, if any major accident happens in the industrial premises within a period of 48 hours. It aims that one should be required to prepare and keep an emergency plan at hand all the times. The rule also speaks about transportation services, where says that transportation should be carried out in such a

manner that the Motor Vehicle Rules and other laws relating to chemical accidents are complied.

The Chemical Accident Rule of 1996 are notified under Environment Protection Act of 1986 to strengthen the response relating to hazardous accidents due to chemical leakages. It speaks about functioning of crisis group at district, local, State as well as central level for dealing with major chemical accidents. Major chemical accident includes major chemical emission, fire exclusion or involving one or more hazardous chemicals which are uncontrolled in nature and it may also include activities or events which occur naturally leading to serious effect and substantial laws of life and property for this purpose. The Rule speaks about the Central Government to set up a functional control room and also a district crisis group for industrial level.

Manufacture, Use, Import, Export and Storage of Hazardous Microorganisms Genetically Engineered Organisms or Cells Rules of 1989 deals with uses of such tools in industries, research institutions, and hospitals where microorganisms are handled for genetically testing. It speaks about formation of a Committee which recommends safety regulations and also handling of such as micro- organisms and preparation of emergency plan in case of any major accident due to escape of harmful microorganism.

Dumping and Disposal of Fly Ash Discharge from Coal of Lignite based Thermal Power Plant on Land Rule was implemented in the year 1999 and its objective is to conserve the top soil, protect the environment and to also keep this in mind that the discharged lignite based coal does not cause any harm to personal property.

Biomedical Waste Management Rules have been enacted to regulate, analyse biomedical waste generated by clinics, blood banks, hospitals and it speaks about treatment, diagnosis and immunization of such bio medical waste.^[7] The duty of the occupier of the institution is to ensure that these biomedical wastes are handled carefully without affecting the environment. It also speaks about preventive measures which have to be adopted and also that untreated waste should not be kept for more than 48 hours without prior permission of the authority. The Rule also establishes a Committee which advises the government about how to implement these rules and also talks about accidents which take place.

Hazardous Waste Management Rules provide for handling hazardous substances which are usually discrete from water discharge functions and also causes damage to human health and environment.^[8] The Rule has made responsible for managing such waste and this Rule is in

compliance with Water Act and Air Act as well. The Rule speaks about packing, labelling and transportation of such wastes and also about Trans boundary movement of such waste for dumping and disposal. It lays a duty over the ministry of environment and forest, which allows them to take actions regarding granting of permission for import of such waste and what steps could be taken in case of accidents which are not anticipated.

The Municipal Solid Waste Rule of 2000 provides that every municipal authority will be responsible for implementation of these rules and make such infrastructure development in such a manner that solid waste generated in the city or town should be managed in such a manner that it does not cause any damage to a person's health and even to the property. The Rule says that there should be segregation of these wastes, material reuse and recycling of aggregated material is also promoted. It also speaks that the solid waste should not be stored in such a manner that it becomes unhygienic and unsanitary conditions are created. The Rule also speaks about formulation of urban development in metropolitan areas and district levels.

Hazardous Waste Rules of 2008 defines waste which is toxic, explosive, flammable and corrosive in nature which could include e- waste, radioactive waste and municipal waste. The Rule speaks about the responsibility of the occupier to prevent accidents relating to leakages of hazardous waste. It also speaks about the accidents which are made during transportation of such wastes and about penalty which can be imposed on the occupier if the rules are being infringed.

Plastic Waste Rules of 2011 speaks about ban on use of plastic materials for storing, packing or selling good, including the usage of it in Gutka, tobacco, Pan masala or food stuffs which cannot be recycled or composed. It is initiated that recycled carry bags should be used and uniform thickness should not be less than 40 microns in the carry bag. One of the provisions of this Rule is that the municipal authority should give the agency directions for waste management and that rag pickers have been given for the first time special recognition under the Act. The authority is made responsible for setting up and coordination of waste management, specially plastic waste as it causes a lot of environmental damages and also setting up centre which collect plastic waste and recycles them. The act ensures that open burning of plastic waste is not allowed.

Explosive Rules of 2008 regulates manufacturing, production, sale, use, transportation of explosives, that includes gunpowder, nitro glycerine, nitro glycol, peric acid and other chemicals which when been produced can also cause explosion. The explosive materials are used in fireworks, rockets, caps, cartridges and when set at free it could cause danger to the

life and property of a person. The Rules have provided various safety measures which could be implemented for prevention of the accident.

The Factories Act is the post independent statute which provides healthy working conditions in the factories for the employment of the workers and it also contributes to environmental protection.^[9]

DISASTER MANAGEMENT LAW IN INDIA

The Disaster Management Act lays down a strong foundation at National, state and district level and defines disaster as a means of catastrophe, mishap, calamity or grave occurrence in any area arising due to natural or man-made causes or by accident or negligence which results in substantial loss to life or human suffering or damage to, and destruction of property or damage to, or degradation to environment and is of such a nature or magnitude which is beyond the coping capacity of the community of the affected area. The Act establishes National Disaster Management agency which has responsibility of laying down guidelines for coordination and implementation of effective response during disasters. It is also supported by an Executive Committee which is State Disaster Management Authority and even Industrial Disaster Management Authority for effective implementation of disaster planning management planning.

DISASTER RISK MANAGEMENT POLICIES

National Forest Policy^[10] it aims at maintenance of environmental stability by preservation of ecological balance which has been aggravated due to depletion of forests in the country the policy has made recommendations for checking soil erosion and also for planting more and more trees.

National water policy^[11] which is an effective policy for development and management of water resources. It speaks about the need of conservation of water and to mitigate hydro hazards and climate change. Water is recognised as an integral part of the environment and disasters like flood and draught are of concern of the water policy in India. The social and economic aspects which include environmental sustainability, rehabilitation of project affected people and livestock are envisaged under the policy. The policy also recognizes water logging and soil salinity as an emerging challenge in agriculture area. Besides this, the policy also speaks about equitable distribution of water resources and also is concerned relating to the decline of the quality and quantity of underground water. The policy speaks about making recommendations relating to zoning of country and segregating it into different

parts in relation to the water crisis which are being faced in different parts of the country. Water environment management is also spoken over here, the use of science and technology in such a manner that the gap between environment and technology could be removed. The policy also recommends concerns relating to water research resource management in development activities.

National Agricultural Policy of 2008 speaks about protection and management of natural resources at rural areas and also in developing a sustainable agriculture framework for the country. Farm plantation and ponds are considered to be natural system for biodiversity purpose and it is important to cover these for food, dairy fisheries and other livestock purposes.

The National Environment Policy of 2006 adapts an approach which includes management of coastal zone management of wetlands, conservation of mountain ecosystem, usage of land, watershed management and the impact reduction in natural hazards like flood, landslides and climate change.

The Urban Sanitation Policy^[12] aims for good sanitation and works in pre and post disaster risk relating to disasters like flood, cyclone and draught. While the policy is also concerned with natural disasters, it also includes management of human excreta which is associated with public health and environment impacts. Sanitation policy includes addressing the poor people in integrated manner in and also proper City sanitation plant for this purpose.

RECOMMENDATIONS RELATING TO DISASTER MANAGEMENT INTEGRATION WITH ENVIRONMENT PROTECTION

- India should adopt static and professional environmental policies with the help of environmental experts at the apex level and thereafter policy implementation within the ministry of environment and forest resources at ground level.
- Establishment of inter disciplinary centres for disaster reduction should be implemented and apex organisation for policy making research conduction and monetary of environmental natural resources should be organised. These should also be worked in collaboration with forest education, council of agriculture, research planning commission and many more.
- There should be introduction of regional environmental authority which does a prerequisite for five years planning of disaster management in context of environmental laws.

- Disaster risk reduction and post relief recovery should be introduced as a compulsory subject with in the University, colleges and school and even at workplace. A curriculum approach should be inculcated in such a manner that proper training and sensitization should be made at the legislative as well as at the society level.
- Environment sustainability system management should be established in such a manner that researchers, NGOs, international agencies and other bodies are able to generate and maintain environment database for disaster management and also international promotion and cooperation should be made to prepare strategies and functional partnership in context of environmental disaster management.

CONCLUSION

As rightly quoted by Petra Nemcova “We cannot stop natural disasters but we can arm ourselves with knowledge: so many lives wouldn't have to be lost if there was enough disaster preparedness.” it is conclusive that a holistic approach should be adopted at large by the international states, at national level, at individual as well as at conscious levels for development of human society, technological development and strategic combat of occurrence of natural or man- made disasters in a sustainable manner. The environmental policies play a significant role, but will have a more significant value if adopted at a holistic and insightful manner, with conscious approaches.

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