

CHAPTER –IX

POLICY, INDIAN LEGAL AND ADMINISTRATIVE FRAMEWORK

ENVIRONMENTAL REGULATORY SYSTEM IN INDIA

1. In 1980, Government of India constituted Department of Environment for coordinating programmes related to environment. Subsequently in 1985, full-fledged Ministry of Environment and Forest (MoEF) was constituted which is the apex administrative body in the country for regulating and ensuring environmental protection. Since 1970s an extensive network of environmental legislation has grown in the country. The MoEF and the pollution control boards (CPCB i.e. Central Pollution Control Board and SPCBs i.e. State Pollution Control Boards) together form the regulatory and administrative core of the sector.
2. A policy framework comprising of Environmental legislation and regulatory systems were established for the purpose of achieving sustainable industrial progress within the country. The Environment Protection Act, 1986; The Water Act, 1974 as amended in 1988; and The Air Act, 1981 as amended in 1987; are the principal environmental legislation in the country which ensure that ecological balance is maintained with industrial progress.
3. This section outlines the regulatory system for prevention and control of environmental pollution and the pollution control standards applicable in India. Organisational structure and responsibilities of the Ministry of Environment and Forests (MoEF), the nodal agency for environmental in the country, is covered in brief and standard relevant to the current project activities are discussed.

ENVIRONMENTAL LEGISLATION

THE WATER (PREVENTION & CONTROL OF POLLUTION) ACT, 1974 (WATER ACT)

4. This Act represented India's first attempts to comprehensively deal with environmental issues. The purpose of this act is to prevent and control water pollution and to maintain or restore the quality of water. This act is applicable to States specified within the act.
5. It directs the Central and State Government to respectively constitute a Central and State Board. Subsequent amendments to this act and passage of the Air (Prevention And Control of Pollution) Act, 1981, entrusts the Central and State Pollution Control Boards the responsibility to prevent and control air pollution. These boards were therefore renamed as the CPCB and SPCB respectively.
6. This Act requires industries, local bodies and agencies engaged in any trade to obtain consent from the SPCB for discharge of effluent into water bodies. The SPCBs have the authority to enforce this Act. The consent to operate regulates the quality and quantity of trade effluent that the industry can discharge into the water body. It prescribes a time bound program for installation of wastewater treatment plants to comply with its provisions.



7. The constitution, powers and functions of the CPCB and SPCB are defined by this Act. An important function of the CPCB is to establish or modify standards for the quality of water bodies. At State level, the SPCBs function under the direction of the CPCB and the state government. Powers of the SPCBs include power to obtain information, collect effluent discharge, grant, refuse or withdraw consent to industries for pollution discharges into water bodies and take emergency measures, if necessary, to restrict water pollution. Gujarat Pollution Control board (GPCB) has stipulated the guidelines for discharge of boiler blow down and ash pond effluent. The new ultra mega power plant at Mundra will need to obtain consent to operate with respect to air and water emission and Hazardous Wastes (Management and Handling) Rules, 1989 from Gujarat State Pollution Control Board.

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

8. The Water Act requires the Central Government to establish rules in consultation with the CPCB. These rules, known as The Water Rules, direct the CPCB to perform the functions of an SPCB in Union Territories. In this regards the CPCB has powers similar to those of a SPCB. These rules define the procedures that the SPCB and CPCB should follow in performing their duties.

THE WATER (PREVENTION AND CONTROL OF POLLUTION) CESS ACT, 1977

9. The purpose of this act is to augment the resources of the CPCB and SPCBs constituted under Water Act, 1974. The Water Cess Act makes provisions for the levy and collection of a cess on water consumed, by certain categories of industries in the schedule appended to the act. Local authorities may also specify the categories of such industries. There is provision of 25% reduction on cess payable to those industries that consume water within the quantity prescribed for that category of industries and also comply with effluent standards prescribed under Water Act or the EPA.

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

10. The purpose of this act is to prevent, and control air pollution including noise pollution and preserve air quality. In order to achieve its goals this act empowers the CPCB and SPCB and defines their functions. An important function of the CPCB is to establish standards for the ambient air quality. Important functions of the SPCB include setting standards for the emission of air pollutants into the atmosphere from industrial plants and automobiles. Such standards also consider the ambient air quality standards laid down by the CPCB. For obtaining consent to establish the ultra mega power plant, the investor has to apply to the SPCB in the prescribed form accompanied by the prescribed fees.
11. Ambient Air Quality Standard is the levels of air quality necessary with an adequate margin of safety to protect the public health, vegetation and property (Appendix 4). Whenever and wherever two consecutive values exceed the limit specified above for the respective category it would be considered adequate reason to institute regular/ continuous monitoring and further investigations.
12. Powers of the SPCBs include declaration and inspection of air pollution control areas, inspection of air pollution control equipment, collection of



samples, grant, refuse or withdraw consent or restrict emission discharges into the atmosphere from industries.

13. This Act has gone through several amendments since 1987 for the purpose of incorporating provisions similar to the amendments of The Water Act. The most significant amendment is the inclusion of noise. This act is now covered under The Noise Regulation and (Control) Rules, 2000. Appendix 6 includes the ambient noise standards. This is now applicable to all activities.
14. Separate Noise regulations for DG set of various capacities were introduced in 2002 vide notification of MoEF of 17 May 2002 under the Environmental (Protection) Second Amendment Rules 2002. This required that all DG sets should be provided with exhaust muffler with insertion loss of minimum 25 dB(A). All DG sets manufactured on or after 1 July 2003 have to comply with these regulations.

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

15. The Air Act of 1981 requires the central government to establish rules in consultation with the CPCB for the prevention and control of air pollution. These rules define administrative procedures that the CPCB and SPCBs should follow. They also require that all industries operating in an air pollution control area obtain consent from the concerned SPCB for discharge of air pollutant emissions into the region. This provision is similar to the one established in the Water Act wherein all industries are required to obtain consent from the SPCB for discharge of effluents. Operation of DG sets at various plant locations will compliance with these Rules for emission discharge and noise control.

INDIAN AND WORLD BANK STACK EMISSION REGULATIONS

16. Emission norms for power plants are set for particular pollutants based on the desired level of control that needs to be achieved from particular sources or activities. Emission standards in many countries are determined by the policy of promotion of best available technology, or state of art technology or best practices apart from ensuring protection of environment and human health. In India, the CPCB has prescribed emission standards for particulate matter and gaseous pollutants emanating from power plants using coal, naphtha and natural gas fuels. The existing emission standards for India and World Bank are shown in following table:

Emission Standards

	Particulate matter ($\mu\text{g}/\text{Nm}^3$)	SO ₂ ($\mu\text{g}/\text{Nm}^3$)	NO _x ($\mu\text{g}/\text{Nm}^3$)
India	150 (210 MW and above)	220m stack height (200 to 500 MW)	50 ppm (Natural gas)
	350 (<210 MW)	275m stack height (500 MW and above)	100 ppm (Naphtha) 75 ppm (Natural gas)
World bank	50	2000 or maxm level 0.2 tpd per MW upto 500 MW	750 (365 ppm (coal) 460 (225 ppm) (gas)

17. The WB has prescribed emission standards of 2000 mg/m^3 for SO₂. It also states that the maximum permissible emission level would be 0.2 tonnes per day (tpd) per MW upto 500 MW and 0.1 tpd per MW for each additional MW over 500 MW but not more than 500 tpd for any plant. Emission standards for SO₂ are prescribed to be 960, 400, 1200-2100 mg/m^3 for USA, EU and China respectively.

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THE ENVIRONMENT (PROTECTION) ACT, 1986

18. The Environment (Protection) Act is an umbrella act designed to provide a framework for the coordination of central and state authorities established under Water and Air Act. The Environment (Protection) Act, 1986 is established by the GOI to fulfil its commitment to protect and improve the human environment. It is applicable to the entire country. From time to time the central government issues notifications under the EPA for the protection of ecologically-sensitive areas or issues guidelines for matters under the EPA
19. It empowers the Central Government to take necessary measures for the purpose of protecting and improving environmental quality and preventing, controlling and abating environmental pollution. Important powers of the Central Government includes laying down standards for environmental quality and emission/discharge of environmental pollution from various sources, define procedures and establish safeguards for handling of hazardous substances, and establish rules to regulate environmental pollution.
20. In addition to the above regulations, the MoEF has issued a notification under which all industries requiring consent under the Air or Water Pollution Control Acts or Authorisation under the Hazardous waste (Management and Handling) Rules, 1989 must submit an annual Environment Audit Report to the SPCB. This is to be done for every financial year ending 31st March and must be submitted on or before the 30th of September of the subsequent financial year.
21. The audit report must contain information regarding consumption of raw material and water, pollution generated, hazardous and solid wastes generated along with their disposal practices. The industry is also required to specify in the audit report the impact of pollution control measures on conservation of natural resources, cost of production and additional investment proposed for environmental protection and pollution abatement.

ENVIRONMENT (PROTECTION) RULES, 1986

22. The Environment (Protection) Rules, 1986 establish standards for emission or discharge of environmental pollutants, factors to be considered while prohibiting or restricting the location of industries, and sampling procedures. The MoEF in notifications published from time to time defines requirements and procedures for seeking environmental clearances of projects. These requirements include submission of an application to the MoEF with an Environmental Impact Assessment Report / Environmental Management Plan prepared in accordance with the guidelines issued by the Central Government and MoEF.
23. These rules have been revised to include standards for discharge of pollutants. Schedule VI of these rules contains the following general standards for discharge of environmental pollutants.
 - Part A: Effluent Discharge Standards (for discharge into an inland surface water body, public sewer, land used for irrigation, and marine coastal area)
 - Part B: Waste water Generation Standards (for industries)
 - Part C: Load Based Standards (for oil refineries)
 - Part D: General Emission Standards (for air pollutants from industries)
 - a) Concentration Based Standards
 - b) Equipment Based Standards
 - c) Load/Mass Based Standards

Part E: Noise Standards for specific equipment

24. The CPCB through the MoEF and respective SPCBs is responsible for establishing and enforcing these standards in each state. The SPCBs are empowered to prescribe more stringent limits depending upon the environmental conditions prevailing in a particular area, the technology used and the ultimate point of discharge or emission. The proposed ultra mega thermal power plant requires clearance from both MoEF and State Pollution Control Board.

COASTAL REGULATION ZONE NOTIFICATION (CRZ) (1991)

25. CRZ notification regulates activities along coastal stretches. The objective of the CRZ Notification is to protect the coastal areas from becoming degraded due to unplanned and/or excessive development which results in pollution and the eventual destruction of this highly prized, fragile and irreplaceable natural resource. The Notification is a unique piece of statutory regulation and other countries that seek to also regulate activities in their coastal areas for environmental reasons may benefit from studying India's experiences.
26. As per this notification, dumping ash or any other waste in the CRZ is prohibited. Notification classifies the coastal areas as CRZ I, II, III and IV. The thermal power plants (only foreshore facilities for transport of raw materials, facilities for intake of cooling water and outfall for discharge of treated waste water/cooling water) require clearance from the MoEF. Non-polluting industries in the field of information technology and other service industries in the coastal regulation zone of special economic zones (SEZ) can be allowed. However it is not much clear that which kind of industries are included in service industries. The IT industry is also not non-polluting industry. It accommodates people, use resources and generate waste.
27. As per CRZ-III category, the area upto 200 m from the High tide line is to embarked as "No development zone" provided that such area does not fall within any notified port limits or any notified Special Economic Zone" The proposed power plant is located 500m away from CRZ line. However, intake and outfall structures need clearance from state Department of Environment and Forest./ CRZ authority.
28. As per Coastal Regulation Zone Notification, 1991, which regulates developmental activities within 500 mts from the high tide line and the inter tidal region of the country, all 13 Coastal States/Union Territory Governments have prepared Coastal Zone Management Plans demarcating ecologically sensitive areas, built up areas and rural regions.
29. **The Territorial Waters, continental shelf, exclusive economic zone and other maritime zones act, 1976 Section 5(4) (b)** of the Act says: The central government may take measures in contiguous zone with respect to sanitation. According to Section 6 (3) (d), the union has in the continental shelf "Exclusive jurisdiction to preserve and protect the marine environment and to prevent and control marine pollution. The central government may make provisions with respect to the protection of marine environment in the continental shelf and in the exclusive economic zone. In the Exclusive economic zone also the union has exclusive jurisdiction. According to section 15(2)(e), the central executive has power to make rules for preservation and protection of the marine environment and prevention and control of marine pollution.

THE NATIONAL ENVIRONMENT APPELLATE AUTHORITY ACT, 1997

30. This Act provided for the establishment of a National Environment Appellate Authority to hear appeals with respect to restriction of areas in which any industry operation or process or class of industries, operations or processes could not carry out or would be allowed to carry out subject to certain safeguards under the Environment (Protection) Act, 1986.
31. In addition to these, various Acts specific to the coal sector have been enacted. The first attempts in this direction can be traced back to the Mines Act, 1952, which promoted health and safety standards in coal mines. Later the Coal Mines (Conservation and Development) Act (1974) came up for conservation of coal during mining operations.

HAZARDOUS WASTES (MANAGEMENT AND HANDLING) RULES, 1989

32. These rules were notified on 28th July, 1989, under the Environment Protection Act, 1986. They aim at controlling the generation, collection, treatment, transportation, and disposal of hazardous wastes. The principal objective of these regulations is to establish a control mechanism for the management of hazardous wastes. These rules have been amended subsequently in 1998, 2001, 2002 and in 2003 to include modalities for disposal of lead acid batteries, bio-medical waste and several other categories of industrial waste including waste oils. Old transformer oil disposal and lead acid batteries replacement in the project will need to be done through authorised recyclers under this regulation.

MANUFACTURE, STORAGE AND IMPORT OF HAZARDOUS CHEMICALS RULES 1989

33. These rules were notified on 27th November, 1989, under the Environment Protection Act, 1986. Their principal objective is to prevent occurrence of major accidents during industrial activities. An important feature of the regulation is that the storage of hazardous/toxic chemicals not associated with a process are treated differently from process used chemicals. New industries are required to prepare the safety report within 5 years of coming into operation. The occupier of the industries handling any of the chemical specified in Schedule 2 and 3 of the Rules is also required to prepare and maintain an up-to-date onsite emergency plan for dealing with major accidents, Material Safety and Data Sheets (MSDS) for all chemicals handled before commencement of the activity. Further, these rules do not override any existing regulations like The Explosives Act, The Petroleum Act, The Factories Act, etc. Chlorine storage will be designed and stored as per Gas Cylinders Rules.

THE PUBLIC LIABILITY INSURANCE ACT, 1991

34. This Act, unique to India, which came into force since 22th January, 1991, provides immediate relief to persons affected by accidents during handling of any hazardous substances. The Act compels the owner to insure third parties against death, injury and damage to property incurred during handling of any hazardous substances. This relief has to be provided on "on fault basis". The payment under this act is only for the immediate relief; owners shall have to provide the final compensation, if any, arising out of legal proceedings.

ENVIRONMENTAL IMPACT ASSESSMENT NOTIFICATION, 1994

35. EIA notification issued by Ministry of Environment and Forest in January 1994, makes Environmental Impact Assessment statutory for 32 different identified activities for expansion or modernization of any activity or for setting up new projects listed in schedule I of the notification. This notification includes the details of the procedures for obtaining environmental clearance and for public involvement besides setting time schedule for decision taking. As per notification comprehensive EIA is necessary for proposed ultra mega power plant to get environmental clearance.

PUBLIC HEARING NOTIFICATION- S.O. 318 (E) DATED 10TH. APRIL.1997

36. The Environmental (Protection Rules), 1986 imposes certain restrictions and prohibitions on the expansion and modernisation of any activity or undertaking of any project, unless clearance has been granted by the Government. Schedule IV of this Notification deals with the Procedure of Public Hearing which requires Public participation of all persons including bona fide residents, environmental groups and other located at Project site. Under this Notification, State Pollution Control Board has to conduct public hearing before sending the proposal to MoEF for obtaining environmental clearance and for site specific projects, it is even before the site clearance applications are forwarded to MoEF. SPCB initiate public hearing by publishing the notice in two leading newspapers. As the new project are within the criteria set in terms of its investment and number of persons employed, the need to obtain EIA clearance and of public hearing is required.

ASH CONTENT NOTIFICATION, 1997

37. Ash Content Notification (1997), required the use of beneficiated coal with ash content not exceeding 34% with effect from June 2001, (the date later was extended to June 2002). This applies to all thermal plants located beyond one thousand kilometres from the pithead and any thermal plant located in an urban area or, sensitive area irrespective of the distance from the pithead except any pithead power plant. Proposed UMPP has planned to use imported coal having maximum ash content upto 15%.

DISPOSAL OF FLY ASH NOTIFICATION, 1999

38. The main objective of this notification is to conserve the topsoil, protect the environment and prevent the dumping and disposal of fly ash discharged from lignite-based power plants. The salient feature of this notification is that no person within a radius of 50 km from a coal-or lignite-based power plant shall manufacture clay bricks or tiles without mixing at least 25% of ash with soil on a weight-to-weight basis.
39. For the thermal power plants the utilisation of the flyash is given as a) Every coal-or lignite-based power plant shall make available ash for at least ten years from the date of publication of the above notification without any payment or any other consideration, for the purpose of manufacturing ash-based products such as cement, concrete blocks, bricks, panels or any other material or for construction of roads, embankments, dams, dykes or for any other construction activity, b) Every coal or lignite based thermal power plant commissioned subject to environmental clearance conditions stipulating the submission of an action plan for full utilisation of fly ash shall, within a period

of nine years from the publication of this notification, phase out the dumping and disposal of fly ash on land in accordance with the plan.

FOREST (CONSERVATION) ACT, 1980 AS AMENDED IN 1988

40. This act imposes restriction on the reservation of the Forest or use of forest land for non-forest purpose. There is no forest land in the proposed site.

FOREST CONSERVATION RULES, 2003

41. Every user agency, who wants to use any forest land for non-forest purposes shall make his proposal in the appropriate Form appended to these rules, i.e. Form 'A' for proposals seeking first time approval under the Act and Form 'B' for proposals seeking renewal of leases where approval of the Central Government under the Act had already been obtained earlier, to the concerned nodal officer authorized in this behalf by the State Government, alongwith requisite information and documents, complete in all respects, well in advance of taking up any non-forest activity on the forest land. Industry seeking forest clearance has to provide map of the forest are required showing the boundary of the adjoining forests, etc. If area is very small, an index map may be submitted showing forest boundaries and a location map on larger scale with a land use of the area required.

ENVIRONMENTAL REGULATORY INSTITUTION -ROLES & FUNCTIONS

42. In the wake of environmental pollution due to industrialisation, a need was felt to establish a national apex body for the protection and conservation of the environment and natural resources of the country. The Environment Protection Act, 1986, also had provisions for the central government to constitute an authority to meet its responsibilities and achieve the goals of the act. In 1985, the Ministry of Environment and Forest (MoEF) was formed and included in the administrative structure of the Government of India (GOI) for the sole purpose of planning, promotion and co-ordination of environment and forest programs.

The key responsibilities of the MoEF are as under:

- a) Environmental, Policy planning
 - b) Ensure effective implementation of legislation
 - c) Pollution Monitoring and Control
 - d) Survey and Conservation of Natural Resources
 - e) Eco development and biosphere reserve programme
 - f) Management of Forests and Conservation and Wildlife
 - g) Environment Clearance for Industrial and Development Projects
 - h) Environmental Education, Awareness and Information
 - i) Co-ordination with concerned agencies at National and International Levels
43. The MoEF discharges its above responsibilities through various support divisions of its Environment and Forest wings. The Pollution Control and the Impact Assessment (IA) divisions grant environmental clearances to proposed projects.
44. The Central Pollution Control Board (CPCB) is an autonomous agency. It plays an advisory role to the Government and State Pollution Control Boards (SPCB) in matters relating to the implementation and enforcement of the Air, Water and Environmental Acts. In this sense, the CPCB through various SPCBs is responsible for the enforcement and implementation of pollution control legislation, and discharge standards. In addition, the EIA review



committee formed by the IA division consists of a representative from the CPCB.

45. The SPCB is responsible for issuing consent to operate to all proposed industries within the state. This is as per the requirements of the Water Act and Air Rules. This consent identifies the pollutant discharge standards applicable to the proposed industry.
46. The MoEF is responsible for issuing environmental clearances for the proposed project site to certain categories of projects. The procedure for obtaining environmental clearances requires an application to be submitted to the secretary, MoEF, New Delhi. Such an application should be accompanied by a project report, which includes an Environmental Impact Assessment (EIA) Report and Environmental Management Plan (EMP).

STACK HEIGHT CLEARANCE FROM AIRPORT AUTHORITY OF INDIA

47. Apart from the above rules and regulations, a No Objection Certificate will be required from Airport Authority of India for construction of highrise structures (In this case, stacks) around the vicinity of airports (Bhuj Airport).