

Chapter 5

Environmental Legislations: India and Punjab

Abstract India is a legislation rich country with reference to pollution. Eleven major laws exist to control pollution in India and many forums for their implementation in various ways. Under these laws, provisions are made to protect the environment from all kinds of pollution related to industrial and agricultural activities. The Punjab Pollution Control Board (PPCB) is entrusted with the functions of planning a comprehensive program for the prevention, control and abatement of pollution in Punjab. PPCB has to support and encourage developments in the field of pollution control. PPCB has taken various measures to limit the amount of industrial pollution in the state but not much has been done to address agricultural pollution (<http://www.ppcb.gov.in/index.aspx>).

Keywords Legislation to control pollution • Central Pollution Control Board • Punjab Pollution Control Board • Punjab Energy Development Agency

5.1 Introduction

This chapter discusses the legislation on pollution in India in general and Punjab in particular. It presents provisions of various laws to control pollution like Water Act 1974, Air Prevention and Control of Pollution Act 1981, Environment Protection Act 1986, National Environment Tribunal Act 1995, Noise Pollution Rules 2000, Bio-diversity Act 2000 and so on. The chapter also discusses various functions and activities of Central Pollution Control Board, Punjab Pollution Control Board, Punjab State Council for Science and Technology, Punjab Energy Development Agency and Punjab Bio Diversity Board to control various types of pollution (<http://www.pscst.gov.in/>).

5.1.1 Ministry of Environment and Forest

The Ministry of Environment and Forest (MoEF) is a nodal agency in the administrative setup of the Union Government. The Ministry is entrusted with the task of planning, coordinating, overseeing and implementing various forestry and environment programmes. The Ministry undertakes various activities like prevention and control of pollution, conservation and survey of flora and fauna, forests and wildlife, protection of environment etc., in the framework of legislations. The Ministry works towards its desired objectives by conducting surveys, organizing regeneration programmes, collecting and disseminating environment information, creating awareness among individuals about pollution and its hazardous impacts.

The MoEF has constituted a number of pollution control acts for the prevention, control and abatement of different types of pollution in India. These acts are:

- The National Environment Tribunal Act, 1995 (27 of 1995).
- The National Environment Appellate Authority Act, 1997 (22 of 1997).
- The Water Prevention and Control of Pollution Act, 1974 (6 of 1974).
- The Water (Prevention and Control of Pollution) Cess Act, 1977 (36 of 1977).
- The Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981).
- The Environment (Protection) Act, 1986 (29 of 1986).
- The Public Liability Insurance Act, 1991 (6 of 1991).

The MoEF is further divided into various divisions to achieve its objectives effectively. The different divisions related to the environment are as follows:

- Clean Technology
- Control of Pollution (CP)
- Environmental Education (EE)
- Environmental Impact Assessment (EEA)
- Environmental Information (EI)
 1. Environmental Information System (ENVIS) (<http://punervis.nic.in/>)
 2. ENVIS—A gateway on Sustainable Development (<http://punervis.nic.in/index2.aspx?slid=56&mid=1&langid=1&sublinkid=35>)
 3. Database of Environmental Experts in India 2007
 4. National Natural Resource Management System
 5. NGO Cell (NC)
- Environmental Research
- Policy and Law.

5.1.2 Clean Technology Division

In order to promote the development of clean technology, development of tools and techniques for pollution prevention and to formulate sustainable development

strategies, the Ministry granted an aid in 1994 for the development and promotion of clean technologies. As against the conventional technologies, the cleaner technology aims at avoiding or minimizing the generation of pollution at the production process. They even make lesser use of the natural resources and eliminate emissions and waste.

The clean technology division has laid down several objectives for the adoption of clean technology in India. These include setting up more research and development institutes in India for the development, evaluation and adoption of these cleaner technologies, creating awareness about the existence of any such technology in India or abroad, providing the necessary financial support for the adoption of these technologies. The division has undertaken various projects under its stride since its inception in 1994. A few among these include Natural Resource Accounting Studies for Yamuna Sub-Basin by National Environmental Engineering Research Institute (NEERI); Life Cycle Assessment (LCA) Studies in Thermal Power Plants by Indian Institute of Environment Management, Navi Mumbai; and other pollution prevention and waste utilization strategies.

The MoEF does not provide any financial assistance to projects which involve primary research. However, financial assistance is provided to projects where primary research work has been completed and which are ready for pilot scale demonstrating research on any innovative technologies in the areas of highly polluting categories of industries. Furthermore, the MoEF has also formulated an evaluation and monitoring committee under the chairmanship of Professor L. Kannan, Vice Chancellor, Nagaland University for granting financial assistance to prospective proposals for the development and implementation of clean technology.

5.1.3 Control of Pollution Division

The pollution control division under the MoEF handles all matters connected with the prevention of pollution. It coordinates with the pollution boards of different states in India in ensuring that pollution levels in various states are below the prescribed limits. The main responsibilities of the Control of Pollution division include the following:

Administration of the various pollution control acts in India. These include the Water Act (1974), Air Act (1981) and the Environment Act (1986). These acts are discussed in details in the following paragraphs. The division also deals with litigations, court cases pertaining to matters on Air Act, Water Act, and Environment Protection Act.

- Dealing with all matters relating to the Central Pollution Control Board.
- Providing financial support to various state control boards in procuring scientific equipments to limit or prevent pollution. Financial assistance is also provided to the State Boards/state governments to deal with complaints on air, water and environment pollution. The division also analyzes the environment statement received from the state pollution control boards.

- Addressing complaints from people relating to any pollution issue.
- Monitoring and surveying the 17 highly polluting sectors and 22 critically polluted areas.
- Administering and dealing with financial matters relating to the National Environment Appellate Authority (NEAA).
- Formulating the noise pollution control standards.
- Matters on vehicular pollution emission standards. The division also formulates and reviews emission standards for various industrial units, automobiles etc., including water and air quality standards. The division lays emphasis on the adoption of clean technology in small scale industries.
- Ensuring adequate control on water pollution including marine pollution. It also deals with air and water quality monitoring and surveillance programme.
- Formulation of waste minimization programmes and environment management system. The division prepares the environmental action plan for specific areas.
- The division also works on the World Bank project which includes the schemes of Zoning Atlas, Air quality monitoring and pollution emission standards for industry.
- Dealing with all matters relating to the pollution of river which are not covered under the National River Conservation Programme (NRCP).
- Dealing with matters relating to environment health cell.

5.2 Various Laws to Control Pollution in India

Under Article 48A of the, 42nd Amendment Act under the Indian Constitution, the government of India provided for the protection of environment and forests. As per the Act, “The state shall endeavor to protect and improve the environment and to safeguard the forests and wildlife of the country”. In addition to the above act, under the article 51A of the same amendment, under the fundamental duties of the citizens of India’ the act states that ‘it would be the fundamental duty of every citizen to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have a natural compassion for living creatures’. The act came into force on 3 January 1977.

5.2.1 Water Act (Prevention and Control of Pollution Act, 1974)

The Water Act for the prevention and control of water pollution was the first regulation to be enacted in India with respect to pollution. The objective of the water act is to make provisions for the prevention and control of water pollution along with maintaining and restoring the wholesomeness of water. Furthermore it requires the establishment of Boards for the prevention and control of water pollution, for conferring on and assigning to such board powers and functions relating thereto and for matters concerned therewith.

Section (2) of the Water Act defines:

- Water pollution as the 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 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.
- ‘Sewage effluent’ as effluent from any sewerage system or sewage disposal works and includes sullage from open drains.
- Trade effluent as 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.

The Central Board constituted by the Central Government under Section (3) of the Water Act shall have the requisite powers to perform the functions assigned to it under the Act.

The functions of the Central Board under Section (16) of the ‘Water Act’ comprise of the following:

- Advise the Central Government on any matter concerning the prevention and control of water pollution.
- Coordinate with the working of various State Boards by providing them with the technical assistance and guidance. Also to conduct sponsor investigations and research relating to the problems of water pollution and prevention, control or abatement of water pollution.
- Arrange for the training of persons engaged or to be engaged in programs for the prevention, control or abatement of water pollution.
- To regularly collect, compile and publish all relevant information and data relating to water pollution. Furthermore to work towards the technological advancements in the methods for effective prevention and control of water pollution.
- To lay down standards in consultation with the state governments for the quality of water, flow characteristics of the stream or well and the nature and use of the water in such stream or well or streams or wells.
- Organize nation-wide programmes for the prevention, control or abatement of water pollution.

The State Board as constituted by every state government in which the Water Act is implemented would have the requisite powers to perform the functions vested on it under the water Act of 1974.

The functions of the State Board under Section (17) of this Act consist of the following:

- To apprise the state government on any matter concerning the prevention, control and abatement of water pollution.
- To coordinate with the Central Board in organizing training of persons engaged or to be engaged in programmes relating to prevention, control and abatement of pollution.

- To conduct research and investigations relating to problems of water pollution, prevention, control or abatement of water pollution.
- To inspect sewage or trade effluents, works and plants for the treatment or 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.
- To evolve economical and reliable methods of treatment of sewage and trade effluents, with due care of soils, climate and water resources of different regions.
- To explore ways and methods for utilization of sewage and trade effluents in agriculture.
- 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 stream, after the discharge of such effluents.
- To advise the State government with respect to the location of any industry, that is likely to pollute a water stream in that particular location.
- To perform other functions as may be prescribed by the Central Board and the State Government from time to time.

According to the provisions of Section (18) of this Act:

- The Central Board shall be bound by directions in writing given to it by the Central Government.
- Every State Board shall be bound by directions given to them by the Central or the State Governments.

Furthermore, where the Central Board is of the opinion that the State Board has defaulted in complying with any directions given to it by the Central Government and because of which an emergency has arisen then the Central Board may perform the functions of the State Board in relation to such area, such period and for such purposes.

As per Section (24) of this Act:

- No person shall knowingly cause or permit any poisonous, noxious or polluting matter determined in accordance with such standards as may be laid down by the State Board to enter into any stream or well or on sewer or on land.
- No person shall knowingly cause or permit to enter into any stream any other matter which may tend, either directly or in combination with similar matters, to impede the proper flow of the water of the stream in a manner leading or likely to lead to a substantial aggravation of pollution due to other causes or of its consequences.

Under Section (25) of this Act:

- No person should try to set up an industry, operation or process or any disposal system which is likely to discharge sewage or trade effluents into a stream or well or sewer or on land.

- Bring into use any new or altered outlets for the discharge of sewage.

Every State Board is also required to maintain a register containing particulars or conditions imposed under this section and the contents of the register that relates to any outlet, or to any effluent, from any land or premises shall be open to inspection at all reasonable hours by any person interested in, or affected by such outlet, land or premises.

As per Section (32) of this Act, if it appears to the State Board, that there is a presence of any poisonous, noxious or polluting matter in any stream or well or on land by reason of the discharge of such matter in such stream, well or on such land, and if the State Board is of the opinion that it is necessary to take immediate action, then it may carry out any of the following operations:

- Removing the matter from the stream or well or on land and disposing it in such a manner as the Board considers appropriate.
- Remedying or mitigating any pollution caused by its presence in the stream or well.
- Issuing orders restraining or prohibiting the persons concerned from discharging any poisonous, noxious or polluting matter or from making in sanitary use of the stream or well.

5.2.2 Air Prevention and Control of Pollution Act, 1981

The Air Act was legislated in India in the year 1981 to monitor the quality of air in India and to take measures for the control, prevention and abatement of air pollution. The 'Air Act' came into force on the 1st April 1988. As per Section (1) of the Act, the Act applies to whole of India.

Section (2) of the Act defines the following terms as:

- Air pollutant is defined as the presence of any solid, liquid or gaseous substance in such a concentration/proportion which may prove harmful to the health of human beings, animals and other living creatures and plants and environment.
- Air pollution is defined as the presence of any air in the atmosphere.
- 'Approved appliances' refers to the use of any equipment or gadget used for generating or consuming fume and which is approved by the State Board for the purpose of the Act.
- Control Equipment refers to any apparatus, device or 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.

As per the Section (3) of the Air Act, the Central Pollution Control Board (CPCB) for the prevention and control of water pollution, constituted under section 3 of the Water Act shall also act as a Central Board for the prevention and control of air pollution in India. The CPCB would have all the necessary powers to ensure the prevention, control and abatement of air pollution (<http://cpcb.nic.in/>).

Under Section (4) of the Air Act, any state which has a State Board for the control and prevention of water pollution, under the section 4 of the Water act, shall also act as a State Board for the prevention and control of air pollution, under section (5) of the Air Act, with all the required powers to perform its functions. For those states which do not have a State Board for the prevention and control of water, but are still abiding by the Water Act of 1971, are notified to constitute a State Board for the prevention and control of Air pollution.

The Central Pollution Control Board has also to declare any air pollution control area under the Air Act of 1981. The CPCB has also to lay down standards for treatment of sewage and trade effluent and for emission from automobiles, industrial plants and any other polluting source. The CPCB has also to assess the quality of ambient water and air and inspect waste water installation, air pollution control equipment, industrial plants or manufacturing processes to evaluate their performance and to take steps for the prevention, control and abatement of pollution. For the successful implementation of the Air Act the Board would meet at least once in every 3 months to ensure that all rules in the Act are duly followed.

As per Section (16) of the 'Air Act' the Central Pollution Control Board is assigned the following functions:

- Advise the Central Government on any matter relating to the prevention, control and abatement of air pollution. The Board is responsible for holding nationwide programmes for the purpose of ensuring control, prevention and abatement of air pollution.
- Coordinate with different State Boards, provide technical assistance and guidance, and conduct the necessary investigations and research to ensure adequate measures are being taken for air pollution control and also to resolve any disputes that may arise within the State Boards.
- Organizing adequate training programmes for individuals who would engage in programmes for the control, prevention and abatement of air pollution.
- Organize nation-wide programmes for the prevention, control and abatement of air pollution.
- Lay down standards for ambient quality of air.
- Collect, compile and publish technical and statistical data relating to air pollution and to highlight measures for its effective prevention, control and abatement. Moreover the board has also to ensure that any information on pollution related matters like air pollution level alerts etc., are disseminated regularly to people through media or other means.
- The Central Board has to abide by any directions in writing given to it by the Central Government.

Section (17) of the 'Air Act' defines the functions of the State Boards towards controlling Air pollution as follows:

- Apprise the state governments on all matters relating to the prevention, control and abatement of air pollution. In addition the State Boards have also to advise the state governments on the feasibility of any location or premises from the emission of air pollutants point of view, for setting up an industry.

- Coordinate with the Central Board in disseminating pollution related information among masses. To organize training programmes in coordination with the Central Board for individuals to be involved in the control, abatement and prevention of air pollution programmes.
- Power to inspect any time, any industrial unit, manufacturing plant to ensure that the air quality standards are met and to take steps where ever necessary for the control, abatement and prevention of air pollution.
- Lay down standards for the emission of air pollutants into the atmosphere from industrial plants, automobiles or for the discharge of air pollutants from any other source.
- To ensure that all the functions are being carried out in a timely manner. Furthermore to ensure that any task towards air pollution control and abatement prescribed by the Central Board, state governments from time to time is carried out satisfactorily.
- To adhere by the directions in writing given to it by the state government or the Central Board. However if the State Board fails or defaults in complying with the directions given to it by the Central Board and an emergency situation has arisen because of it, then the Central Government can give orders to the Central Board to perform any of the functions of the State Board in relation to such area, for such period and for such purposes.

Under sub-section (1) of Section (19) of the 'Air Act', state governments have the power to declare any area within a state as pollution sensitive area, or air pollution control area after due consultation with the State Board. If the state government after due consultation with the State Board is of the opinion that any fuel, is likely to cause air pollution in any air pollution control area, it may by notification in the official gazette prohibit the use of such fuel in such area with effect from such date as prescribed in the notification. Similarly if the state government after consultation with the State Board is of the opinion that the burning of any material apart from fuel is likely to cause emission of air pollutants in the air pollution control area, then it may by notification in the official gazette prohibit the burning of such material in such area. Any disputes/inconsistencies between the Central and the state boards in the discharge of their functions would be taken care of by the Central government.

As per section (21) of the Act, no industrial unit can set up a plant in the air pollution control area without the prior consent of the State Board. Under Section (22 A) of the Act if the State Board finds that the emission of air pollutants is in excess of the standards laid down by the State Board, the State Board may make an application to the court restraining such person or industrial unit from emitting such air pollutants.

A State Board or any officer empowered by it in this behalf, under Section (26) of the Act, have the power at all times to take samples of air or emissions from any chimney, flue or duct or any other outlet for the purpose of analysis of the air pollutants discharged.

5.2.3 The Environment Protection Act, 1986

The Environment Protection Act for the protection and improvement of environment and for matters connected therewith was enacted in the year 1986. Under section (1) of the Act, it extends to the whole of India. This Act of Parliament got consent from the President of India on the 23rd May 1986.

Under the section (2) of the Act,

- Environmental pollutant is defined as the presence of any solid, liquid or gaseous substance present in such concentration as may be or tend to be injurious to environment.
- Environment pollution refers to the presence of any environmental pollutant in the atmosphere.

As per section (3) of the Act, all the necessary powers for the purpose of protecting and improving the quality of the environment and preventing, controlling and abating environment pollution are vested with the Central Government.

The following are considered to be the functions of the Central Government under the Section (3) of the Act:

- Coordinating with various state governments, officers and other authorities under this act, or the rules made there under.
- Organizing and planning nationwide programmes for the prevention, control and abatement of environmental pollution.
- Laying down standards for the quality of environment for the prevention, control and abatement of pollution. This includes laying down standards of emissions from different sources taking care of the quality or composition of the emission or discharge of environment pollutants from such sources.
- Providing clear guidelines on areas or regions where any industrial operations cannot be carried out and if industrial operations do take place then to ensure that adequate precautions are taken for the same.
- Laying down procedures and safeguards for the prevention of accidents which may cause environment pollution and mentioning the remedial measures for such accidents.
- Laying down procedures and safeguards for the handling of hazardous substances.

The Central Government under sub-section (3) of section 3 may appoint officers with such designations as it thinks fit for the purposes of this Act and may entrust to them such powers and functions under this Act as it may deem fit. The Central Government may, in the exercise of its powers under this Act, issue directions in writing to any person, officer or any other authority and such person, officer or authority shall bound to comply with such directions. The Environment protection Act does not require the institution of the Central Board for the same. Under Section (6) of this Act, the Central Government may make rules in respect for all or any of the following matters through notification in the Official Gazette:

- The air, soil and water quality standards for various areas and purposes.
- Maximum allowable limits of concentration of various environmental pollutants.
- The procedures and safeguards for handling of hazardous substances.
- Prohibition and restriction on the handling of hazardous substances.
- Prohibition and restrictions on the location of industries.
- Procedures and safeguards for the prevention of accidents which may cause environment pollution and providing remedial measures for such accidents.

Sections (7) and (8) of this Act require that:

- No person carrying any industry, operation or process shall discharge or emit or permitted to discharge any environment pollutant in excess of such standards as may be prescribed.
- No person shall handle or cause handling any hazardous substance except in accordance with such procedure and after complying with such safeguards as may be prescribed.

As per Section (9) of the Act in a situation where the discharge of any environment pollutant is in excess of the prescribed standards or is expected to occur due to any accident or other unforeseen act or event, the person responsible for such discharge and the person in charge of the place at which such discharge occurs or is apprehended to occur shall be bound to prevent or mitigate the environment pollution caused as a result of such discharge and shall also forthwith:

- Intimate the fact of such occurrences or apprehensions of such occurrence;
- Be bound if called upon, to render all assistance, to such authorities or agencies as may be prescribed.

On receiving such information with respect to the occurrence of any such environment pollution due to the discharge of any environment pollution in excess of the prescribed standards, either through intimation or otherwise, the authorities or agencies referred to in sub-section (1) shall, as early as practicable, because such remedial measures to be taken as are necessary to prevent or mitigate the environment pollution. The expenses incurred on any remedial measures taken by the authorities or agencies together with interest from the date when the demand for the expenses is made until it is paid may be recovered by such authority or agency from the person concerned as arrears of land revenue or of public demand.

As per Section (10) of the Act, any person empowered by the Central Government in this behalf shall have the right to enter any place for the purpose of examining and testing any equipment, industrial plant, record, register, document or any other material object or for conducting a search of any building in which he has reason to believe that any offence under this Act or the rules made there under has been or is being or is about to be committed and for seizing any such equipment, industrial plant, record, register, document that it may furnish evidence of the commission of an offence punishable under this Act or the rules made there under or that such seizure is necessary to prevent or mitigate environmental pollution. Moreover any person carrying on any industrial operation or handling any

hazardous substance is bound to render all assistance to the person empowered by the Central Government. If the person fails to do so then the person shall be guilty of the offence under this Act.

Under section (11) of the Act, the Central Government or any of its officer empowered by it in this behalf, shall have the power to take samples of air, water, soil or any other substance from any of the factory, premises or any other place for the purpose of analysis. The person taking the sample shall specify to the person in charge of the place his intentions for taking the sample for analysis purposes.

According to Section (15) of the Act, any person whosoever if fails to comply with or contravenes any of the provisions of this Act, or the rules made or orders or directions issued there under, shall, in respect of each such failure or contravention, be punishable with an imprisonment of up to 5 years or a fine of up to one lakh Rupees or both. In case the failure, contravention continues, there would be an additional fine which may extend to five thousand Rupees for every day during which such failure or contravention continues after the conviction of the first such failure or contravention, with an imprisonment of up to 7 years in case the failure extends beyond 1 year.

Under Section (16) of the Act, if an offence under the Act is committed by a company, then every person in the company, who at the time of the offence was committed, was directly in charge of, and was responsible to the company for the conduct of the business of the company shall be deemed to be guilty of the offence and liable to be punished accordingly.

Under Section (17) of the Act, if any Department of the Government is responsible for committing offence under the Act, the Head of the Department shall be deemed guilty of the offence and shall be liable to be punished accordingly.

The State Government or any other authority or officer, under Section (20) of this Act, shall be liable to furnish any report, returns, statistics, accounts and other information to the Central Government as and when it requires.

The Central Government, under Section (25) of this Act, may by notification in the Official Gazette make rules on all or any of the following matter:

- The standards in excess of which the environmental pollutants shall not be discharged.
- The procedure and safeguards for handling hazardous substances.
- The authorities or agencies to which the knowledge of the occurrence or the likely occurrence of the discharge of any environment pollutant in excess of the prescribed standards shall be given. Moreover all assistance would also be rendered accordingly.
- The manner for taking samples of air, water and soil or other substance for the purpose of analysis shall be taken.

5.2.4 The Environment (Protection) Rules, 1986

These rules were formulated by the Central Government in exercise of the powers conferred by Sections 6 and 25 of the Environment (Protection) Act, 1986. Under

Section (3) of these rules, for the purpose of protecting and improving the quality of the environment and preventing and abating environment pollution, the standards for emission or discharge of environmental pollutants from the industries, operations or processes is specified.

5.2.5 The National Environment Tribunal Act, 1995

This Act was constituted in the year 1995 with the objective of providing strict liability arising out of any accident occurring in handling hazardous substances and for the establishment of a National Environment Tribunal for quick and effective disposal of cases arising from such accidents, with a view to give relief and compensation for damages to person, property and environment and for matters connected therewith or incidental thereto.

As per Section (2) of the Act,

- ‘Accident’ is defined as an accident involving a sudden or unexpected or unintended occurrence while handling any hazardous substance resulting in continuous or intermittent or repeated exposure to death of, or injury to, any person or damage to any property or environment.
- ‘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 by the Central Government under the Public Liability Insurance Act, 1991

Under Section (3) of the Act, if there is death or injury to any person or damage to any property or environment, from an accident’ the owner shall be liable to pay compensation for such death, injury or damage. If the death, injury caused an accident is not due to individual activity but the combined or resultant effect of several such activities, operations and processes, the Tribunal be equitably divide the liability for compensation among those responsible for such activities. For any compensation awarded by the Tribunal on grounds of damage to the environment shall be remitted, as per Section (22) of the Act, to the authority specified under sub-section (3) of section 7A of the Public Liability Insurance Act, 1991 for being credited to the Environmental Relief Fund established under that section.

Under Section 3(1) of the Act, the compensation for damages may be claimed under any of the following:

- Death, permanent, temporary, total or partial disability or other injury or sickness.
- Loss of employment, business or both. Also loss of wages due to total or partial disability or permanent or temporary disability.
- Medical expenses incurred for treatment of injuries, sickness.
- Damage to private property.
- Expenses incurred by the government or any local authority in providing relief aid and rehabilitation to the affected persons.

- Expenses incurred by government for any administrative or legal action to cope with any harm or damage, including compensation for environmental degradation and restoration of the quality of the environment.
- Claims on account of any harm, damage or destruction to the fauna including milch and draught animals.
- Claims on account of any harm, damage or destruction to flora including aquatic flora, crops, vegetables, trees and orchards.
- Claims including cost of restoration on account of any harm or damage to environment including pollution of soil, air, water, land and ecosystems.
- Loss and destruction of any property other than private property.
- Any other claim arising out of, or connected with, any activity of handling hazardous substance.

The application for claim for compensation as per Section (4) of the Act can be made by any of the following:

- The person who has got the injury.
- Owner of the property to which damage is caused.
- In case of the death, by the legal representatives of the deceased, whether any person or the owner of a property.
- Any organization or body functioning in the field of environment and recognized in this behalf by the central government, or by the central or the state government itself.

5.2.6 The National Environment Appellate Authority Act, 1997

This Act was initiated in the year 1997, with the objective of establishing a National Environment Appellate Authority for hearing appeals with respect to restriction of areas in which any industries, operations or processes or class of industries, operations or processes shall not be carried out subject to certain safeguards under the Environment (Protection) Act, 1986 and for matters connected therewith or incident thereto. This Act came into force on the 30th of January 1997. As per Section (3) of the Act, the Central Government by notification in the official Gazette establishes the National Environment Authority to exercise the powers conferred upon it, and to perform the functions assigned to it under the Act.

As per Section (11) of the Act, any individual dissatisfied by an order granting environment clearance in the areas in which any industries, operations or processes or class of industries shall not be carried out or shall be carried out subject to certain safeguards, may appeal to the Authority within 30 days from the date of such order. Under Section (15) of the Act, no civil court or other authority shall have jurisdiction to deal with any appeal in respect of any matter which the 'National Environment Authority' is so empowered by this Act.

If any offence under this Act is committed by a company then, every person directly in charge of and responsible for the business of the company, at the time of the offence, shall be punishable according to Section (20) of the Act. Furthermore, if an offence is committed by a company and it is proved that the offence has been committed with the consent of any director, manger, secretary or any other officer of the company, shall also be deemed guilty of the offence and shall be liable to be punished accordingly.

5.2.7 *The Noise Pollution (Regulation and Control) Rules, 2000*

The Central Government in exercise of the powers conferred by Section 3, 6 and 25 of the Environment (Protection) Rules, 1986 and with rule 5 of the Environment (Protection) Rules, 1986 made the following rules for the regulation and control of noise producing and generating sources.

As per rule 3 of this Act, the ambient air quality standards in respect of noise for different areas/zones are specified below:

Area code	Category of area/zone	Limits in dB(A) leq*	
		Day time	Night time
(A)	Industrial area	75	70
(B)	Commercial area	65	55
(C)	Residential area	55	45
(D)	Silence zone	50	40

‘Day Time’ shall mean from 6.00 a.m to 10.00 p.m; ‘Night Time’ shall mean from 10:00 p.m to 6.00 a.m.; * dB (A) Leq denotes the time weighted average of the level of sound in decibels on Scale A which is relatable to human being.; ‘A’ in dB (A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.

Also Under rule 3 of this Act:

- The State Government has to take measures for the abatement of noise including noise emanating from vehicular movements, blowing of horns, bursting of crackers, use of loud speakers or public address system, and sound producing instruments and also to ensure that the existing noise levels do not exceed the ambient air quality standards specified above.
- Also a silence zone is defined as an area comprising not less than 100 metres around hospitals, educational institutions, courts, religious places or any other area which is declared as such by the competent authority.
- The noise level at the boundary of the public place, where loudspeaker or public address system or any other noise source is being used shall not exceed 10 dB (A) above the ambient noise standards for the area or 75 dB (A) whichever is lower.

Under the Noise Pollution (Regulation and Control) Amendment Rules, 2009, the State Government shall take measures to prevent the blowing of horn at night time in silence zones and residential areas except during an emergency. Under rule 4 of this Act, the authority shall be responsible for the enforcement of noise pollution control measures and for ensuring due compliance with the ambient air quality standards with respect of noise.

Furthermore as per the Noise Pollution (Regulation and Control) Amendment Rules, 2006, the respective State Pollution Control Boards in consultation with the Central Pollution Control Board shall collect, compile technical and statistical data relating to noise pollution and measures devised for its effective prevention, control and abatement, under rule 4 of this Act.

Under rule 5 of this Act, a loudspeaker or a public address system shall not be used except after obtaining written permission from the authority. Also a loud speaker or a public address system cannot be used at night (between 10 p.m and 6.00 a.m.) except in closed premises for communication within, e.g. auditoria, conference rooms, and community and banquet halls or during a public emergency. There would be no blowing of horns or bursting of crackers during night time in the silent zones/areas and residential areas except during public emergency.

As per rule (7) of this Act, any person can make a complaint to any officer authorized by the Central Government, or by the State Government in accordance with the laws in force and includes a District Magistrate, Police Commissioner, or any other officer designated for the maintenance of the ambient air quality standards, if the noise level exceeds the ambient noise standards by 10 dB (A) or more given in the corresponding columns above against any area/zone. The authority then shall act on the complaint and take action against the violator in accordance with the provisions of these rules and any other law in force.

Under rule 6(A) of this Act, whosoever violates any provision of these rules regarding restrictions imposed during night time shall be liable for penalty under the provisions of the 'Act'.

5.2.8 Biological Diversity Act, 2002

The Biological diversity act, with the objective of conservation of biological diversity, sustainable use of its components, and fair and equitable sharing of the benefits arising out of the use of biological resources, knowledge and matters connected therewith or incidental thereto was initiated in the year 2002. Under Section (1), this Act is valid for whole of India.

Under Section (2) of this Act:

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

- Biological resources means plants, animals and microorganisms or parts thereof, their genetic material and byproducts (excluding value added products) with actual or potential use or value but does not include human genetic material.

The National Biodiversity Authority established by the Central Government under Section (8) of this Act, may as per Section (18) of this Act can:

- Advise 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.
- Advise the State Governments in the selection of areas of biodiversity importance.

Under Section (22) of this Act, the various state governments can establish their respective State Bio-diversity Boards. The state of Punjab has established, Punjab Biodiversity Board. Under Section (23) of this Act, the functions of the State Biodiversity Board would be:

- Advise the State governments, 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 bio-logical resources.

Under Section (36) of this Act, the Central Government shall develop national strategies, plans and programmes for the conservation, promotion and sustainable use of the biological diversity including measures for identification and monitoring of areas rich in biological resources, incentives for training research and public education to create awareness with respect to biodiversity. Wherever the Central Government feels that the biological diversity or biological resources are being threatened by overuse, abuse or neglect, then it can issue directives to the concerned State Government to take immediate corrective measures along with any technical or other assistance which the State Government may need. The Central Government shall also undertake measures:

- To analyze the environmental impact of the project which is likely to have an adverse impact on the biological diversity, with a view to avoid or minimize such effects and wherever necessary provide for the public participation is such assessment.
- To regulate, manage and control the risk 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 the biological diversity and human health.

Any person, whosoever, if fails to abide by the directions and orders given by the Central Government, State Government, National Biodiversity Authority or the State Biodiversity Board shall under Section (56) of this Act, be punishable.

5.3 Central Pollution Control Board (CPCB)

The CPCB is the 'Central Board' for the prevention, control and abatement of air and water pollution in India. The Central Pollution Control Board (CPCB) was constituted in September 1974, under the Water Prevention and Control Act of 1974. The board was later also assigned the functions and powers under the Air Protection and Control Act of 1981. The primary function of the CPCB under the Water and Air Act is to emphasize and promote the prevention, control and abatement of water and air pollution respectively.

5.3.1 *Functions of the Central Board*

In addition to the main functions of promoting cleanliness of streams and wells and improving the quality of air and to prevent control or abate air pollution, CPCB has been assigned following functions:

- Advise the Central Government on any matter concerning prevention and control of water and air pollution and improvement of the quality of air;
- Plan and cause to be executed a nation-wide programme for the prevention, control or abatement of water and air pollution;
- Co-ordinate the activities of the State Boards and resolve disputes among them;
- Provide technical assistance and guidance to the State Boards, carry out and sponsor investigations and research relating to problems of water and air pollution, and for their prevention, control or abatement;
- Plan and organize training of persons engaged in programmes for prevention, control or abatement of water and air pollution;
- Organize through mass media, a comprehensive mass awareness programme on prevention, control or abatement of water and air pollution;
- Collect, compile and publish technical and statistical data relating to water and air pollution and the measures devised for their effective prevention, control or abatement;
- Prepare manuals, codes and guidelines relating to treatment and disposal of sewage and trade effluents as well as for stack gas cleaning devices, stacks and ducts;
- Disseminate information in respect of matters relating to water and air pollution and their prevention and control;
- Lay down, modify or terminate, in consultation with the state governments;
- Concerned, the standards for stream or well, and lay down standards for the quality of air;
- Establish or recognize laboratories to enable the Board to perform, and;
- Perform such other functions as and when prescribed by the Government of India.

For the successful discharge of its functions the CPCB formulated the National Ambient Air Monitoring Programme (NAMP). Under this programme the CPCB finds out about the air quality status and trends in different parts of the country and

also takes measures to control the emission of pollutants from the industries and other sources and to keep them within the air quality standards. Furthermore the background air quality data is also provided to facilitate the setting up of industrial units and town planning. With regard to the Water quality standards, the CPCB initiated the Water Quality Monitoring and Surveillance Programme.

5.3.2 National Ambient Air Monitoring Programme (NAMP)

CPCB has initiated a nationwide programme of ambient air quality monitoring called NAMP. The objectives of this programme are:

- To determine the status and trends of ambient air quality,
- To determine whether the ambient air quality standards are violated,
- To identify non-attainment cities,
- To obtain knowledge and understanding for developing preventive and corrective measures and
- To understand the natural cleansing process undergoing in the environment through pollution dilution, dispersion, wind based movement, dry deposition, precipitation and chemical transformation of pollutants generated.

The programme covers three hundred and forty two operating stations covering one hundred and twenty seven cities in twenty six states and six Union Territories. Four air pollutants, namely Sulphur Dioxide (SO₂), Oxides of Nitrogen (NO₂), Suspended Particulate Matter (SPM) and Reparable Suspended Particulate Matter (RSPM/PM₁₀) have been identified for regular monitoring at all the locations. Meteorological Parameters like wind speed, wind direction, relative humidity and temperature were also monitored.

The monitoring of pollutants takes place for 24-h (4-h sampling for gaseous pollutants and 8-h sampling for particulate matter) with a frequency of twice a week to have one hundred and four observations in a year. The monitoring takes place with the help of the Central Pollution Control Board, State Pollution Control Boards, Pollution Control Committees and National Environmental Engineering Research Institute (NEERI), Nagpur. The CPCB coordinates as well as provides all the technical and financial support to these agencies for ensuring uniformity and consistency of the air quality of data monitored.

5.3.3 Water Quality Monitoring and Surveillance Programme

This programme consists of 1,019 stations in 27 states and six Union Territories. The monitoring is done on quarterly or monthly basis in surface waters and on half yearly basis in ground waters. 200 rivers, 60 lakes, 5 tanks, 3 ponds, 3 creeks, 13 canals, 17 drains and 321 wells are covered for monitoring under the programme.

At present as per the CPCB, the inland water quality monitoring network is operated under a three tier programme:

- Global Environment Monitoring System (GEMS)
- Monitoring of Indian National Aquatic Resources System (MINARS)
- Yamuna Action Plan (YAP).

5.4 Punjab Pollution Control Board (PPCB)

The Punjab Pollution Control Board (PPCB) was constituted in the year 1975, under Section 4 of the Water (Prevention and Control of Pollution) Act, 1974. The PPCB is the main governing body in Punjab for ensuring that the national ambient air quality standards are met. It works in close coordination with the Government of Punjab, in ensuring that any obstacles or hazards to clean air in Punjab are addressed in a timely fashion. During the Tenth Plan, government of Punjab provided a sum of Rs. 572 lakh to the PPCB towards its operations and Rs. 85 lakh in the Annual Plan 2004–2005 (<http://www.punjabgovt.gov.in/>).

The PPCB has three zonal offices and twelve regional offices. The PPCB has constituted the following cells for the effective implementation of the policies and decisions taken by the Board:

- Consent Management Cell
- Administrative Cell
- Finance and Accounts Cell
- Legal Cell
- Scientific Cell
- Hazardous Wastes Management Cell
- General Planning and Computer Cell
- Construction Cell
- Computer Section.

The Punjab Pollution Control Board abides by the following Acts for the control of environment pollution in the state of Punjab:

- *The Water (Prevention and Control of Pollution) Act, 1974 as amended till date.*
- *The Water (Prevention and Control of Pollution) Cess Act, 1977.*
- *The Air (Prevention and Control of Pollution) Act, 1981 as amended till date.*

In addition to the above Acts, the Ministry of Forests and Environment has also laid down the following rules for the management of hazardous wastes, Bio medical waste, solid waste management, recycled plastic, used batteries, noise pollution control and protection of the ozone layer under the environment. The objectives of the Punjab Pollution Control Board in pursuing its objective of abating and preventing pollution in Punjab are as follows:

- To control pollution at source with due regard to techno-economic feasibility for liquid effluents as well as gaseous emissions.

- To ensure that natural waters are not polluted by the discharge of untreated city sewage.
- To maximize the reuse of sewage and trade effluents and to use the treated effluent for irrigation and for industrial purposes.
- To minimize pollution control requirements through judicious location of new industries and relocation of industries wherever necessary.
- To control and minimize the pollution of air and water and to maintain the quality of air and water for designated use and purposes.

The strategy of the Punjab Pollution Control Board in controlling environment pollution in Punjab includes

- To deal with highly polluted areas of the state and highly polluted river stretches on priority basis for the control of pollution.
- To identify the various sources of pollution and to take measures for the abatement, control and prevention of pollution.
- To create awareness about environment pollution among local authorities, industries and people and to motivate them to take preventive measures for the control of pollution.
- To adopt measures for the control of pollution by adopting cost effective and less polluting technologies.
- To enhance the pollution control activities through training of manpower on pollution related matters and development of laboratories.

The functions of the Punjab Pollution Control Board in its pursuit of controlling and preventing pollution in Punjab include the following:

- To plan a comprehensive program for the abatement, control and prevention of pollution in Punjab and secure executions thereof.
- To apprise the industrialists and local authorities on information relating to pollution and assist them in adopting appropriate pollution control technologies and techniques.
- To create awareness among individuals about the benefits of clean and healthy environment and also to address public complaints on pollution.
- To support the development of pollution control technologies, eco friendly practices.
- To inspect sewage or trade effluent treatment and disposal facilities and air pollution control systems and to review plans, specifications or any other data relating to treatment plants, disposal systems and air pollution control systems in connection with the consent granted.

The Punjab Pollution Control Board has been monitoring the pollution levels at 20 locations out of which nine are in the residential cum commercial areas and 11 are in the industrial areas. As per the statistics of the period from 1995–2005, both the 24-h and annual averages of SPM/RSPM at residential cum commercial monitoring locations exceeded the permissible limits for residential areas (24 hourly permissible limits for SPM and RSPM are 200 and 100 $\mu\text{g}/\text{m}^3$ respectively and for Annual average permissible limits are 140 and 60 $\mu\text{g}/\text{m}^3$) throughout the year, with the maximum values being observed in Ludhiana followed by Mandi Gobindgarh, Jalandhar and Amritsar.

The Punjab Pollution Control Board has laid down guidelines with regard to pollution control for any entrepreneur wanting to set up an industrial unit in the state of Punjab. As per the provisions of the Water (Protection and Conservation) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981, any entrepreneur wanting to set up a new industrial unit or wanting to expand its existing industrial unit in the state of Punjab is required to obtain a 'consent to establish' (No Objection Certificate) from the Punjab Pollution Control Board. The Ministry of Forest and Environment has divided the industries in three different categories as per the pollutants being emitted by them. The three categories are: (i) Green Category (ii) Orange Category (iii) Red Category.

Industries falling in each of the three categories are mentioned in the **Appendix Table**. Industries which do not fall in any of the above three categories, the decision with regard to their categorization would be taken by the Punjab Pollution Control Board (PPCB).

The Punjab Pollution Control Board has divided the small scale industries into two categories namely, green and red categories, taking into account their potential pollution loads for determining the standards for establishing or expanding an industry. The procedure for obtaining consent for large or medium industry is same as that for a small industry falling in the red category. However in the case of the small scale red category industries, the decision to grant consent to establish or expand an industrial unit are taken at the zonal office level by the concerned senior environment engineer. However, for industries like brick kiln, dry rice sheller, cupola furnaces heat treatment units, the decision is made by the concerned regional office. With regard to the large and medium industries, the decision is made by the head office.

Moreover all industries whether large/medium or small are as per the Factories Act, 1948 require to obtain site clearance from the site appraisal committee (SAC) before obtaining the consent from the Punjab Pollution Control Board (PPCB). Furthermore, any new entrepreneur wishing to establish a new project or expand an existing one shall also check whether his category of industry falls under Schedule 1 appended to the EIA notification No. SO (60)-E dt. 27.1.1994 as amended on 4.5.1994, specified in the **Appendix Table**. If so, the entrepreneur is required to follow the procedure of Environment clearance also. In case the industry is among the one mentioned in **schedule 1 of the Appendix Table**, then the entrepreneur is required to obtain environment clearance from the Ministry of Environment and Forests. The application shall be made in the specified Performa along with the project report which should include the Environment management plans.

5.5 Punjab State Council for Science and Technology

The Punjab State Council for Science and Technology was established on 21 July 1983, with the objective of infusing scientific knowledge in the minds of people. The institute has been trying to achieve this through various means of display and publications, about the nature of life while signifying the useable aspects of available technologies.

Some of the main objectives of the institute include the following:

- Conservation of environment
- Pollution Control in the state of Punjab
- Providing consultation to various industrial units for undertaking development.

The institute tries to achieve these objectives by working towards the development of new technologies, providing technical support to the state government on development through development of science and technology etc. The institute focuses in providing both formal and informal assistance to the industrial and agricultural sector in carrying out their activities, in such a manner to ensure judicious utilization of natural resources with the least stress on the environment. The institute is trying to resolve the problems of water logging, chemically over saturated soils and their deteriorating fertility, stagnating agricultural productivity, ground water depletion and its pollution, selenium toxicity, conservation of eco-systems etc., persistent in Punjab as early as possible. Also, in future the institute aims at focusing on matters such as pollution control in Punjab, biotechnology, nanotechnology, and socio-economic development. The institute is divided into five divisions in working towards its goals:

- Environment
- Biotechnology
- Popularization of Science
- Consultancy Cell
- Water Regime Management.

5.6 Environment Division

The division of environment assists the State Department of Environment, Government of Punjab in technical matters pertaining to environment, identification of major areas of ecological concern, defining the state government policies and plans on various environmental issues, coordinating and monitoring schemes related to environment, creating environmental awareness and promoting environmental education, training and research. It is also implementing projects and programmes related to environment for international bodies like, UNESCO, UNDP, etc., as well as, programmes of the Ministry of Environment and Forests at the national level. A large number of projects are being undertaken by the institute under the Environment division (<http://www.punjabgovt.gov.in/jsp/apps/work/MappingOfMinistersPunjab.pdf>).

Moreover Punjab State Council for Science and Technology was also recognized as one of the institutes for imparting training on pollution control, waste management, clean technologies, environment policies, health monitoring-and-assessment and solid waste management conducted by the Central Pollution Control Board under the human resource development programme. The first such

training was conducted in December 2005 in Chandigarh. Since then this training exercise is expected to be a regular feature.

The Environmental Management Capacity Building-Environmental Information System (EMCB-ENVIS) node on State Environment issues was established at the Punjab State Council for Science and Technology in December 2002 under the World Bank assisted project (EMCB-ENVIS) of the Ministry of Environment and Forests for identifying the state of the environment and related issues. In January 2005, the node got upgraded to ENVIS Centre, under the sponsorship of the Ministry of Environment and Forest under the tenth 5 year plan.

5.7 Punjab Energy Development Agency (PEDA)

The Punjab Energy Development Agency was established in the year 1991, for the promotion and development of non-conventional and renewable energy programs or projects in the state of Punjab.

The objectives of PEDA in this regard are as follows (<http://www.peda.gov.in/>):

- Promotion, development and implementation of non-conventional energy technologies programs and projects.
- Promotion and development of Biomass/Agro residue based power projects.
- Implementation of a comprehensive energy conservation program in the industrial, agricultural, commercial as well as household sector.
- Promotion and implementation of new technologies for energy saving.
- Collection of energy data base to provide policy and planning input to the state government.
- Measures for improving the combustion efficiency of rice husk fired boilers.
- Analyze the availability and utility of biomass as energy source.
- Installing community/institutional biogas plants.
- Implementation of Integrated Rural Energy Program (IREP).

The projects undertaken by PEDA to meet its above objectives include the following:

- Mini hydel power generation.
- Solar energy based power generation projects.
- Biomass, Agro based power generation projects.
- Power generation from urban, industrial waste.
- Promotion and development of co-generation.
- Integrated rural energy program (IREP).
- Community institutional/Night soil biogas plants.
- National project on biogas development program.
- Solar Photovoltaic (SPV) water pumping systems.
- Solar cooker implementation program.
- Biomass gasification program.

- National program on improved chulah.
- Energy conservation study/feasibility study/Energy audit in the industry and other user sectors.
- Solar passive architecture–PEDA office complex.
- Power generation potential from non-conventional energy sources.

5.8 Punjab Biodiversity Board

The Punjab Biodiversity Board was notified in the state in December 2004 under section 22 of the Biological Diversity Act, 2002, to protect Punjab's natural ecosystems and its flora and fauna. The Board has been set up in the Department of Environment to ensure that biodiversity in both wild and cultivated areas are properly protected. Under the Act, no corporate body or association can commercially utilize the state's biodiversity without approval of State Biodiversity Board. Further, no foreigner without the approval of the National Biodiversity Authority (NBA) can obtain any biological sample or knowledge associated for research or for commercial utilisation or for bio-survey and bio-utilisation. These include wild relatives of crop species also. The Board has already notified committees to identify biological heritage sites outside Protected Area Network (PAN) and for identifying commercially important flora and fauna in the state.

Some of the functions of the board in meeting its objective are:

- To promote biodiversity conservation activities in both agriculture and wild areas.
- To implement the provisions of the Biological Diversity Act, 2002 in Punjab.
- To assist setting up of Biological Diversity committee at village and town level and expert committee at the state and district level.

The Punjab Biodiversity Board also maintains a database on the State's Biodiversity Strategy and Action Plan, Punjab's Environment status which includes both wild and agriculture biodiversity in the state of Punjab.

5.9 Summary of the Chapter

India is a legislation rich country with reference to pollution. The Ministry of Forest and Environment is a nodal agency in the administrative setup of the Union Government. The Ministry is entrusted with the task of planning, coordinating, overseeing and implementing various forestry and environment programmes. In order to promote the development of clean technology, development of tools and techniques for pollution prevention and to formulate sustainable development strategies, the Ministry granted an aid in 1994 for the development and promotion

of clean technologies. Eleven major laws exist to control pollution in India and many forums for their implementation in various ways. Among the existing legislation on air pollution in India includes: Air Prevention and Control of Pollution Act, 1981; The Environment Protection Act, 1986; The National Environment Tribunal Act, 1995; The National Environment Appellate Authority Act, 1997; and Biological Diversity Act, 2002. Under these different Acts, provisions are made to protect the environment from all kinds of pollution related to industrial and agricultural activities. The Punjab Pollution Control Board (PPCB) is entrusted with the functions of planning a comprehensive program for the prevention, control and abatement of pollution in Punjab. PPCB has to support and encourage developments in the field of pollution control. PPCB has taken various measures to limit the amount of industrial pollution in the state but not much has been done to address agricultural pollution.

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