

ENVIRONMENTAL POLICY: CONCERN OF EVERY CITIZEN OF INDIA

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Abstract

Environment policies of the Government of India includes legislations related to environment. In the Directive Principles of State Policy, Article 48 says "the state shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country"; Article 51-A states that "it shall be the duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for living creatures."

The present study covers almost all the aspects of Legislation of Environmental policy in India and actual scenario in this sub continent.

Keywords: Environmental policy, Legislation, Environmental Law, Impact assessment, Sustainable development Trance boundary responsibility.

India is one of the parties of the Convention on Biological Diversity (CBD) treaty. Prior to the CBD, India had different laws to govern the environment. The Indian Wildlife Protection Act 1972 protected the biodiversity. It was amended later multiple times. The 1988 National Forest Policy had conservation as its fundamental principle. In addition to these acts, the government passed the Environment (Protection) Act 1986 and Foreign Trade (Development and Regulation) Act 1992 for control of biodiversity.

Status

Since about the late 1980s, the Supreme Court of India has been pro-actively engaged in India's environmental issues. In most countries, it is the executive and the legislative branches of the government that plan, implement and address environmental issues; the Indian experience is different. The Supreme Court of India has been engaged in interpreting and introducing new changes in the environmental jurisprudence directly. The Court has laid down new principles to protect the environment, re interpreted environmental laws, created new institutions and structures, and conferred additional powers on the existing ones through a series of directions and judgments.

The Court's directions on environmental issues goes beyond the general questions of law, as is usually expected from the highest Court of a democratic country. The Supreme Court of India, in its order, includes executive actions and technical details of environmental actions to be implemented. Indeed, some critics of India's Supreme Court describe the Court as the Lords of Green Bench or Garbage Supervisor. Supporters of India's Supreme Court term these orders and the Indian bench as pioneering, both in terms of laying down new principles of law, and in delivering environmental justice.

The reasons for the increasing interjection of India's Supreme Court in governance arenas are, experts claim, complex. A key factor has been the failure of government agencies and the state owned enterprises in discharging their Constitutional and Statutory duties. This has prompted civil society groups to file public interest complaints with the Courts, particularly the Supreme Court, for suitable remedies.

Public interest litigation and judicial activism on environmental issues extends beyond India's Supreme Court. It includes the High Courts of individual states.

India's judicial activism on environmental issues has, some suggest, delivered positive effects to the Indian experience. Proponents claim that the Supreme Court has, through intense judicial activism, become a symbol of hope for the people of India. As a result of judicial activism, India's Supreme Court has delivered a new normative regime of rights and insisted that the Indian state cannot act arbitrarily but must act reasonably and in public interest on pain of its action being invalidated by judicial intervention.

India's judicial activism on environmental issues has, others suggest, had adverse consequences. Public interest cases are repeatedly filed to block infrastructure projects aimed at solving environmental issues in India, such as but not limiting to water works, expressways, land acquisition for projects, and electricity power generation projects. The litigation routinely delays such projects, often for years, whilst rampant pollution continues in India, and tens of thousands die from the unintended effects of pollution. Even after a stay related to an infrastructure project is vacated, or a court order gives a green light to certain project, new issues become grounds for court notices and new public interest litigation.

Judicial activism in India has, in several key cases, found state directed economic development ineffective and a failure, then interpreted laws and issued directives that encourage greater competition and free market to reduce environmental pollution. In other cases, the interpretations and directives have preserved industry protection, labour practices and highly polluting state owned companies detrimental to environmental quality of India. Proactive measures should be taken to conserve the depleting environment.

Impact assessment

Environmental impact assessment (EA) is the term used for the assessment of the environmental consequences (positive and negative) of a plan, policy, program, or project prior to the decision to move forward with the proposed action. In this context, the term 'environmental impact assessment (EIA) is usually used when applied to concrete projects and the term 'strategic environmental assessment' applies to policies, plans and programmes (Fischer, 2016). Environmental assessments may be governed by rules of administrative procedure regarding public participation and documentation of decision making, and may be subject to judicial review.

Air quality

Air quality laws govern the emission of air pollutants into the atmosphere. A specialized subset of air quality laws regulate the quality of air inside buildings. Air quality laws are often designed specifically to protect human health by limiting or eliminating airborne pollutant concentrations. Other initiatives are designed to address broader ecological problems, such as limitations on chemicals that affect the ozone layer, and emissions trading programs to address acid rain or climate change. Regulatory efforts include identifying and categorizing air pollutants, setting limits on acceptable emissions levels, and dictating necessary or appropriate mitigation technologies.

Water quality

Water quality laws govern the release of pollutants into water resources, including surface water, ground water, and stored drinking water. Some water quality laws, such as drinking water regulations, may be designed solely with reference to human health. Many others, including restrictions on the alteration of the chemical, physical, radiological, and biological characteristics of water resources, may also reflect efforts to protect aquatic ecosystems more broadly. Regulatory efforts may include identifying and categorizing water pollutants, dictating acceptable pollutant concentrations in water resources, and limiting pollutant discharges from effluent sources. Regulatory areas include sewage treatment and disposal, industrial and agricultural waste water management, and control of surface runoff from construction sites and urban environments.

Waste management

Waste management laws govern the transport, treatment, storage, and disposal of all manner of waste, including municipal solid waste, hazardous waste, and nuclear waste, among many other types. Waste laws are generally designed to minimize or eliminate the uncontrolled dispersal of waste materials into the environment in a manner that may cause ecological or biological harm, and include laws designed to reduce the generation of waste and promote or mandate waste recycling. Regulatory efforts include identifying and categorizing waste types and mandating transport, treatment, storage, and disposal practices.

Chemical safety

Chemical safety laws govern the use of chemicals in human activities, particularly man-made chemicals in modern industrial applications. As contrasted with media-oriented environmental laws (e.g., air or water quality laws), chemical control laws seek to manage the (potential) pollutants themselves. Regulatory efforts include banning specific chemical constituents in consumer products (e.g., Bisphenol A in plastic bottles), and regulating pesticides.

Water resources

Water resources laws govern the ownership and use of water resources, including surface water and ground water. Regulatory areas may include water conservation, use restrictions, and ownership regimes.

Mineral resources

Mineral resource laws cover several basic topics, including the ownership of the mineral resource and who can work them. Mining is also affected by various regulations regarding the health and safety of miners, as well as the environmental impact of mining.

Forest resources

Forestry laws govern activities in designated forest lands, most commonly with respect to forest management and timber harvesting. Ancillary laws may regulate forest land acquisition and prescribed burn practices. Forest management laws generally adopt management policies, such as multiple use and sustained yield, by which public forest resources are to be managed. Governmental agencies are generally responsible for planning and implementing forestry laws on public forest lands, and may be involved in forest inventory, planning, and conservation, and oversight of timber sales. Broader initiatives may seek to slow or reverse deforestation.

Wildlife and plants

Wildlife laws govern the potential impact of human activity on wild animals, whether directly on individuals or populations, or indirectly via habitat degradation. Similar laws may operate to protect plant species. Such laws may be enacted entirely to protect biodiversity, or as a means for protecting species deemed important for other reasons. Regulatory efforts may include the creation of special conservation statuses, prohibitions on killing, harming, or disturbing protected species, efforts to induce and support species recovery, establishment of wildlife refuges to support conservation, and prohibitions on trafficking in species or animal parts to combat poaching.

Fish and game

Fish and game laws regulate the right to pursue and take or kill certain kinds of fish and wild animal (game). Such laws may restrict the days to harvest fish or game, the number of animals caught per person, the species harvested, or the weapons or fishing gear used. Such laws may seek to balance dueling needs for preservation and harvest and to manage both environment and populations of fish and game. Game laws can provide a legal structure to collect license fees and other money which is used to fund conservation efforts as well as to obtain harvest information used in wildlife management practice.

Sustainable Development

Defined by the United Nations Environment Programme as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs," sustainable development may be considered together with the concepts of "integration" (development cannot be considered in isolation from sustainability) and "interdependence" (social and economic development, and environmental protection, are interdependent). Laws mandating environmental impact assessment and requiring or encouraging development to minimize environmental impacts may be assessed against this principle.

The modern concept of sustainable development was a topic of discussion at the 1972 United Nations Conference on the Human Environment (Stockholm Conference), and the driving force behind the 1983 World Commission on Environment and Development (WCED, or Brundtland Commission). In 1992, the first UN Earth Summit resulted in the Rio Declaration, Principle 3 of which reads: "The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations." Sustainable development has been a core concept of international environmental discussion ever since, including at the World Summit on Sustainable Development (Earth Summit 2002), and the United Nations Conference on Sustainable Development (Earth Summit 2012, or Rio+20).

Equity

Further information: Intergenerational equity

Defined by UNEP to include intergenerational equity - "the right of future generations to enjoy a fair level of the common patrimony" - and intragenerational equity - "the right of all people within the current generation to fair access to the current generation's entitlement to the Earth's natural resources" - environmental equity considers the present generation under an obligation to account for long-term impacts of activities, and to act to sustain the global environment and resource base for future generations. Pollution control and resource management laws may be assessed against this principle.

Transboundary responsibility

Defined in the international law context as an obligation to protect one's own environment, and to prevent damage to neighboring environments, UNEP considers transboundary responsibility at the international level

as a potential limitation on the rights of the sovereign state. Laws that act to limit externalities imposed upon human health and the environment may be assessed against this principle.

Public participation and transparency

Identified as essential conditions for "accountable governments industrial concerns," and organizations generally, public participation and transparency are presented by UNEP as requiring "effective protection of the human right to hold and express opinions and to seek, receive and impart ideas," "a right of access to appropriate, comprehensible and timely information held by governments and industrial concerns on economic and social policies regarding the sustainable use of natural resources and the protection of the environment, without imposing undue financial burdens upon the applicants and with adequate protection of privacy and business confidentiality," and "effective judicial and administrative proceedings." These principles are present in environmental impact assessment, laws requiring publication and access to relevant environmental data, and administrative procedure.

Precautionary principle

One of the most commonly encountered and controversial principles of environmental law, the Rio Declaration formulated the precautionary principle as follows:

In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

The principle may play a role in any debate over the need for environmental regulation.

Factory Acts

The **Factory Acts** were a series of UK labour law Acts passed by the Parliament of the United Kingdom to regulate the conditions of industrial employment. The early Acts concentrated on regulating the hours of work and moral welfare of young children employed in cotton mills but were effectively unenforced until the Act of 1833 established a professional Factory Inspectorate. The regulation of working hours was then extended to women by an Act of 1844. An Act in 1847 (the Ten Hour Act) (together with Acts in 1850 and 1853 remedying defects in the 1847 Act) met a long-standing (and by 1847 well-organised) demand by the millworkers for a ten-hour day. The Factory Acts also sought to ameliorate the conditions under which mill-children worked with requirements on ventilation, sanitation, and guarding of machinery. Introduction of the ten-hour day proved to have none of the dire consequences predicted by its opponents, and its apparent success effectively ended theoretical objections to the principle of factory legislation; from the 1860s onwards more industries were brought within the Factory Act, until by 1910, Sidney Webb reviewing the cumulative effect of century of factory legislation felt able to write

The system of regulation which began with the protection of the tiny class of pauper apprentices in textile mills now includes within its scope every manual worker in every manufacturing industry. From the hours of labour and sanitation, the law has extended to the age of commencing work, protection against accidents, mealtimes and holidays, the methods of remuneration, and in the United Kingdom as well as in the most progressive of English-speaking communities, to the rate of wages itself. The range of Factory Legislation has, in fact, in one country or another, 150

Environmental Policy of India become co-extensive with the conditions of industrial employment. No class of manual-working wage-earners, no item in the wage-contract, no age, no sex, no trade or occupation, is now

beyond its scope. This part, at any rate, of Robert Owen's social philosophy has commended itself to the practical judgment of the civilised world. It has even, though only towards the latter part of the nineteenth century, converted the economists themselves -converted them now to a "legal minimum wage" and the advantage of Factory Legislation is now as soundly orthodox among the present generation of English, German, and American professors as "laissez-faire" was to their predecessors. ... Of all the nineteenth century inventions in social organization, Factory Legislation is the most widely diffused.

He also commented on the gradual (accidentally almost Fabian) way this transformation had been achieved

The merely empirical suggestions of Dr. Thomas Percival and the Manchester Justices of 1784 and 1795, and the experimental legislation of the elder Sir Robert Peel in 1802, were expanded by Robert Owen in 1815 into a general principle of industrial government, which came to be applied in tentative instalments by successive generations of Home Office administrators. ... This century of experiment in Factory Legislation affords a typical example of English practical empiricism. We began with no abstract theory of social justice or the rights of man. We seem always to have been incapable even of taking a general view of the subject we were legislating upon. Each successive statute aimed at remedying a single ascertained evil. It was in vain that objectors urged that other evils, no more defensible existed in other trades, or among other classes, or with persons of ages other than those to which the particular Bill applied. Neither logic nor consistency, neither the over-nice consideration of even handed justice nor the Quixotic appeal of a general humanitarianism, was permitted to stand in the way of a practical remedy for a proved wrong. That this purely empirical method of dealing with industrial evils made progress slow is scarcely an objection to it. With the nineteenth century House of Commons no other method would have secured any progress at all.

Health and Morals of Apprentices Act 1802

The Health and Morals of Apprentices Act 1802 (42 Geo III c.73) was introduced by Sir Robert Peel; it addressed concerns felt by the medical men of Manchester about the health and welfare of children employed in cotton mills, and first expressed by them in 1784 in a report on an outbreak of 'putrid fever' at a mill at Radcliffe owned by Peel. Although the Act included some hygiene requirements for all textile mills, it was largely concerned with the employment of apprentices; it left the employment of 'free' (non-indentured) children unregulated. It allowed (but did not require) local magistrates to enforce compliance with its requirements, and therefore went largely unenforced. As the first attempt to improve the lot of factory children, it is often seen as paving the way for future Factory Acts. At best, it only partially paved the way; its restriction to apprentices (where there was a long tradition of legislation) meant that it was left to later Factory Acts to establish the principle of intervention by Parliament on humanitarian grounds on worker welfare issues against the "laissez-faire" political and economic orthodoxy of the age which held that to be ill-advised.

Under the Act, regulations and rules came into force on 2 December 1802 and applied to all textile mills and factories employing three or more apprentices or twenty employees. The buildings must have sufficient windows and openings for ventilation, and should be cleaned at least twice yearly with quicklime and water; this included ceilings and walls.

Each apprentice was to be given two sets of clothing, suitable linen, stockings, hats, and shoes, and a new set each year thereafter. Apprentices could not work during the night (between 9 pm and 6 am), and their working

hours could not exceed 12 hours a day, excluding the time taken for breaks. A grace period was provided to allow factories time to adjust, but all night-time working by apprentices was to be discontinued by June 1804.

All apprentices were to be educated in reading, writing and arithmetic for the first four years of their apprenticeship. The Act specified that this should be done every working day within usual working hours but did not state how much time should be set aside for it. Educational classes should be held in a part of the mill or factory designed for the purpose. Every Sunday, for one hour, apprentices were to be taught the Christian religion; every other Sunday, divine service should be held in the factory, and every month the apprentices should visit a church. They should be prepared for confirmation in the Church of England between the ages of 14 and 18 and must be examined by a clergyman at least once a year. Male and female apprentices were to sleep separately and not more than two per bed.

Local magistrates had to appoint two inspectors known as visitors to ensure that factories and mills were complying with the Act; one was to be a clergyman and the other a Justice of the Peace, neither to have any connection with the mill or factory. The visitors had the power to impose fines for non-compliance and the authority to visit at any time of the day to inspect the premises.

The Act was to be displayed in two places in the factory. Owners who refused to comply with any part of the Act could be fined between £2 and £5

Motor Vehicles Act, 1988

The **Motor Vehicles Act, 1988** is an Act of the Parliament of India which regulates all aspects of road transport vehicles. The Act came into force from 1 July 1989. It replaced Motor Vehicles Act, 1939 which earlier replaced the first such enactment Motor Vehicles Act, 1914. The Act provides in detail the legislative provisions regarding licensing of drivers/conductors, registration of motor vehicles, control of motor vehicles through permits, special provisions relating to state transport undertakings, traffic regulation, insurance, liability, offences and penalties, etc. For exercising the legislative provisions of the Act, the Government of India made the Central Motor Vehicles Rules 1989.

Definitions

Some of the definitions from the act are given below:

- **motor vehicle:** Any mechanically propelled vehicle adapted for use upon roads whether the power of propulsion is transmitted from an external or internal source
- **Section 111:** It prescribes the minimum speed at which each class or type of motor vehicle can be driven.
- **Section 113:** The driver should not drive a vehicle exceeding the weight permitted to carry.
- **Section 129:** A person driving a motor cycle should wear helmet.
- **Section 134:** Duty of driver in case of accident and injury to a person including securing medical attention for the injured person and reporting to a police officer or at nearest police station within 24 hours.
- **Section 185:** Driving by a drunken person or by a person under the influence of drugs is prohibited.

Biomedical waste

Biomedical waste is waste that is either putrescible or potentially infectious. Biomedical waste may also include waste associated with the generation of biomedical waste that visually appears to be of medical or laboratory origin (e.g., packaging, unused bandages, infusion kits, etc.), as well research laboratory waste

containing biomolecules or organisms that are restricted from environmental release. As detailed below, discarded sharps are considered biomedical waste whether they are contaminated or not, due to the possibility of being contaminated with blood and their propensity to cause injury when not properly contained and disposed of. Biomedical waste is a type of biowaste.

Biomedical waste may be solid or liquid. Examples of infectious waste include discarded blood, sharps, unwanted microbiological cultures and stocks, identifiable body parts (including those as a result of amputation), other human or animal tissue, used bandages and dressings, discarded gloves, other medical supplies that may have been in contact with blood and body fluids, and laboratory waste that exhibits the characteristics described above. Waste sharps include potentially contaminated used (and unused discarded) needles, scalpels, lancets and other devices capable of penetrating skin.

Biomedical waste is generated from biological and medical sources and activities, such as the diagnosis, prevention, or treatment of diseases. Common generators (or producers) of biomedical waste include hospitals, health clinics, nursing homes, medical research laboratories, offices of physicians, dentists, and veterinarians, home health care, and funeral homes. In healthcare facilities (i.e., hospitals, clinics, doctors offices, veterinary hospitals and clinical laboratories), waste with these characteristics may alternatively be called medical or clinical waste.

Biomedical waste is distinct from normal trash or general waste, and differs from other types of hazardous waste, such as chemical, radioactive, universal or industrial waste. Medical facilities generate waste hazardous chemicals and radioactive materials. While such wastes are normally not infectious, they require proper disposal. Some wastes are considered multihazardous, such as tissue samples preserved in formalin.

Management

Biomedical waste must be properly managed and disposed of to protect the environment, general public and workers, especially healthcare and sanitation workers who are at risk of exposure to biomedical waste as an occupational hazard. Steps in the management of biomedical waste include generation, accumulation, handling, storage, treatment, transport and disposal.

Treatment

The goals of biomedical waste treatment are to reduce or eliminate the waste's hazards, and usually to make the waste unrecognizable. Treatment should render the waste safe for subsequent handling and disposal. There are several treatment methods that can accomplish these goals.

Biomedical waste is often incinerated. An efficient incinerator will destroy pathogens and sharps. Source materials are not recognizable in the resulting ash.

An autoclave may also be used to treat biomedical waste. An autoclave uses steam and pressure to sterilize the waste or reduce its microbiological load to a level at which it may be safely disposed of. Many healthcare facilities routinely use an autoclave to sterilize medical supplies. If the same autoclave is used to sterilize supplies and treat biomedical waste, administrative controls must be used to prevent the waste operations from contaminating the supplies. Effective administrative controls include operator training, strict procedures, and separate times and space for processing biomedical waste.

For liquids and small quantities, a 1-10% solution of bleach can be used to disinfect biomedical waste. Solutions of sodium hydroxide and other chemical disinfectants may also be used, depending on the waste's characteristics. Other treatment methods include heat, alkaline digesters and the use of microwaves.

For autoclaves and microwave systems, a shredder may be used as a final treatment step to render the waste unrecognizable.

Regulation and management

In India, The Bio-medical Waste (Management and Handling) Rules, 1998 and further amendments were passed for the regulation of bio-medical waste management. On 28 th Mar 2016 Biomedical Waste Management Rules 2016 were also notified by Central Govt. Each state's Pollution Control Board or Pollution control Committee will be responsible for implementing the new legislation.

In India, there are a number of different disposal methods, yet most are harmful rather than helpful. If body fluids are present, the material needs to be incinerated or put into an autoclave. Although this is the proper method, most medical facilities fail to follow the regulations. It is often found that biomedical waste is put into the ocean, where it eventually washes up on shore, or in landfills due to improper sorting when in the medical facility. Improper disposal can lead to many diseases in animals as well as humans. For example, animals, such as cows in Pondicherry, India, are consuming the infected waste and eventually, these infections can be transported to humans through eating of the meat.

Many studies took place in Gujarat, India regarding the knowledge of workers in facilities such as hospitals, nursing homes, or home health. It was found that 26% of doctors and 43% of paramedical staff were unaware of the risks related to biomedical wastes. After extensively looking at the different facilities, many were undeveloped in the area regarding biomedical waste. The rules and regulations in India work with The Bio-medical Waste (Management and Handling) Rules from 1998, yet a large number of health care facilities were found to be sorting the waste incorrectly. Worldwide, there are specific colored bags, bins and labels that are recommended for each type of waste. For example, syringes, needles and blood-soiled bandages should be all disposed of in a red colored bag or bin, where it will later be incinerated.

Hazardous waste

Hazardous waste is waste that poses substantial or potential threats to public health or the environment. In the United States, the treatment, storage, and disposal of hazardous waste are regulated under the Resource Conservation and Recovery Act (RCRA). Hazardous wastes are defined under RCRA in 40 CFR 261 where they are divided into two major categories: characteristic wastes and listed wastes.

- Characteristic hazardous wastes are materials that are known or tested to exhibit one or more of the following four hazardous traits:
- ignitability
- reactivity
- corrosivity
- toxicity

Listed hazardous wastes are materials specifically listed by regulatory authorities as hazardous wastes which are from non-specific sources, specific sources, or discarded chemical products.

The requirements of RCRA apply to all the companies that generate hazardous waste as well as those companies that store or dispose hazardous waste in the United States. Many types of businesses generate hazardous waste. dry cleaners, automobilerepair shops, hospitals, exterminators, and photo processing centers may all generate hazardous waste. Some hazardous waste generators are larger companies such as chemical manufacturers, electroplating companies, and oil refineries.

These wastes may be found in different physical states such as gaseous, liquids, or solids. A hazardous waste is a special type of waste because it cannot be disposed of by common means like other by-products of our everyday lives. Depending on the physical state of the waste, treatment and solidification might be required. processes

Worldwide, the United Nations Environmental Programme (UNEP) estimated that more than 400 million tons of hazardous wastes are produced universally each year, mostly by industrialized countries (schmit, 1999). About 1 percent of this is shipped across international boundaries, with the majority of the transfers occurring between countries in the Organization for the Economic Cooperation and Development(OECD) (Krueger, 1999). One of the reasons for industrialized countries to ship the hazardous waste to industrializing countries for disposal is the rising cost of disposing hazardous waste in the home country.

Household Hazardous Waste

Household Hazardous Waste (HHW), also referred to as domestic hazardous waste or home generated special materials, is a waste that is generated from residential households. HHW only applies to waste coming from the use of materials that are labeled for and sold for "home use". Waste generated by a company or at an industrial setting is not HHW.

The following list includes categories often applied to HHW. It is important to note that many of these categories overlap and that many household wastes can fall into multiple categories:

- Paints and solvents
- Automotive wastes (used motor oil, antifreeze, etc.)
- Pesticides (insecticides, herbicides, fungicides, etc.)
- Mercury-containing wastes (thermometers, switches, fluorescent lighting, etc.)
- Electronics (computers, televisions, cell phones)
- Aerosols / Propane cylinders
- Caustics/Cleaning agents
- Refrigerant-containing appliances
- Some specialty batteries (e.g. lithium, nickel cadmium, or button cell batteries)
- Ammunition
- Radioactive wastes (some home smoke detectors are classified as radioactive waste because they contain very small amounts of radioactive isotope of americium - see: Disposing of Smoke Detectors).

Waste management law

Waste management laws govern the transport, treatment, storage, and disposal of all manner of waste, including municipal solid waste, hazardous waste, and nuclear waste, among many other types. Waste laws are generally designed to minimize or eliminate the uncontrolled dispersal of waste materials into the environment in a manner that may cause ecological or biological harm, and include laws designed to reduce the generation of waste and promote or mandate waste recycling. Regulatory efforts include identifying and categorizing waste types and mandating transport, treatment, storage, and disposal practices.

HAZARDOUS WASTE MANAGEMENT RULES,1989

- (1) These rules may be called the Hazardous Wastes (Management and Handling) Rules, 1989.
- (2) They shall come into force on the date of their publication in the official Gazette.

2. Application.

These rules shall apply to hazardous wastes as specified in Schedule and shall not apply to-

- (a) waste water and exhaust gases as covered under the provisions of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) and the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981) and rules made thereunder;
- (b) wastes arising out of the operation from ships beyond five kilometres as covered under the provisions of the Merchant Shipping Act, 1958 (44 of 1958) and the rules made thereunder,
- (c) radio-active wastes as covered under the provisions of the Atomic Energy Act, 1962 (33 of 1962) and rules made thereunder,

3. Definitions.

In these rules, unless the context otherwise requires,

- (a) "Act" means the Environment (Protection) Act, 1986 (29 of 1986);
- (b) "applicant" means a person or an organisation that applies, in Form 1, for granting of authorisation to perform specific activities connected with handling of hazardous wastes;
- (c) "authorisation" means permission for collection, reception, treatment, transport, storage and disposal of hazardous wastes granted by the competent authority in Form 2;
- (d) "authorised person" means a person or an organisation authorised by the competent authority to collect, treat, transport, store or dispose of hazardous wastes in accordance with the guidelines to be issued by the competent authority from time to time;
- (e) "export" with its grammatical variation and cognate expression means taking out of India to a place outside India;
- (f) "exporter" means any person under the jurisdiction of the exporting country who exports hazardous wastes and the exporting country itself, who exports hazardous wastes;
- (g) "facility" means any location wherein the processes, incidental to the waste generation collection, reception, treatment, storage and disposal are carried out;
- (h) "Form" means Form appended to these rules;
- (i) "hazardous wastes" means categories of wastes specified in the Schedule;
- (j) "hazardous wastes site" means a place for collection, reception, treatment, storage and disposal of hazardous wastes which has been duly approved by the competent authority;
- (k) "import" with its grammatical variations and cognate expressions, means bringing into India from a place outside India;
- (l) "importer" means an occupier or any person who imports hazardous wastes;

- (m) "operator of a facility" means a person who owns or operates a facility for collection, reception, treatment, storage and disposal of hazardous wastes; (n) "Schedule" means Schedule appended to these rules;
- (o) "State Pollution Control Board" means the Board appointed under sub-section of the section 4 of the Water (Prevention and Control of Pollution) Act 1974 (6 of 1974); and under Section 4 of the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981);
- (p) "transboundary movement" means any movement of hazardous wastes or other wastes from an area under the national jurisdiction of one country to or through an area under the national jurisdiction of another country or to or through an area not under the national jurisdiction of any country, provided at least two countries are involved in the movement;
- (q) the words and expressions used in these rules and not defined but defined in the Act, shall have the meanings respectively assigned to them in the Act.

4. Responsibility of the occupier for handling of wastes.

- (1) The occupier generating hazardous wastes listed in column (2) of the Schedule in quantities equal to or exceeding the limits given in column (3) of the said Schedule, shall take all practical steps to ensure that such wastes are properly handled and disposed of without any adverse effects which may result from such wastes and the occupier shall also be responsible for proper collection, reception, treatment, storage and disposal of these wastes either himself or through the operator of a facility.
- (2) The occupier or any other person acting on his behalf who intends to get his hazardous waste treated by the operator of a facility under sub-rule (1), shall give to the operator of a facility, such information as may be specified by the State Pollution Control Board.

5. Grant of authorisation for handling hazardous wastes.

- (1) Hazardous wastes shall be collected, treated, stored and disposed of only in such facilities as may be authorised for this purpose.
- (2) Every occupier generating hazardous wastes and having a facility for collection, reception, treatment, transport storage and disposal of such wastes shall make an application in Form 1 to the State Pollution Control Board for the grant of authorisation for any of the above activities:

Provided that the occupier not having a facility for the collection, reception, treatment, transport, storage and disposal of hazardous wastes shall make an application to the State Pollution Control Board in Form 1 for the grant of authorisation within a period of six months from the date of commencement of these rules.

- (3) Any person who intends to be an operator of a facility for the collection, reception, treatment, transport, storage and disposal of hazardous wastes, shall make an application in Form 1 to the State Pollution Control Board for the grant of authorisation for any of the above activities:

Provided that the operator engaged in the business of the collection, reception, treatment, transport, storage and disposal of hazardous wastes shall make an application to the State Pollution control Board in Form 1 for the grant of authorisation within a period of six months from the date of commencement of these rules.

- (4) The State Pollution Control Board shall not issue an authorisation unless it is satisfied that the operator of a facility or an occupier, as the case may be, possesses appropriate facilities, technical capabilities and equipment to handle hazardous wastes safely.
- (5) The authorisation to operate a facility shall be issued in Form 2 and shall be subject to conditions laid down therein.
- (6) (i) An authorisation granted under this rule shall unless sooner suspended or cancelled, be in force for a period of two years from the date of issue or from the date of renewal.
(ii) An application for the renewal of an authorisation shall be made in Form Ir before its expiry.
(iii) The authorisation shall continue to be in force until it is renewed or revoked.
- (7) The State Pollution Control Board, may, after giving reasonable opportunity of being heard to the applicant refuse to grant any authorisation.

6. Power to suspend or cancel an authorisation.

- (1) The State Pollution Control Board may cancel an authorisation issued under these rules or suspend it for such period as it thinks fit, if in its opinion, the authorised person has failed to comply with any of the conditions of the authorisation or with any provisions of the Act or these rules, after giving the authorised person an opportunity to show cause and after recording reasons therefor.
- (2) Upon suspension or cancellation of the authorisation and during the pendency of an appeal under rule 12, the State Pollution Control Board may give directions to the persons whose authorisation has been suspended or cancelled for the safe storage of the hazardous wastes, and such persons shall comply with such directions.

7. Packaging, labelling and transport of hazardous wastes.

- (1) Before hazardous wastes is delivered at the hazardous waste site, the occupier or operator of a facility shall ensure that the hazardous wastes is packaged in a manner suitable for storage and transport and the labelling and packaging shall be easily visible and be able to withstand physical conditions and climate factors.
- (2) Packaging, labelling and transport of hazardous wastes shall be in accordance with the provisions of the rules issued by the Central Government under the Motor Vehicles Act, 1988 and other guidelines issued from time to time.

8. Inventory of disposal sites.

- (1) The State Government or a person authorised by it shall undertake a continuing programme to identify the sites and compile and publish periodically an inventory of disposal sites within the State for the disposal of hazardous wastes.
- (2) The State Government or a person authorised by it shall undertake an environmental impact study before identifying a site as waste disposal site in the State.
- (3) The State Government or a person authorised by it shall undertake a continuing programme to compile and publish an inventory of sites within the State at which hazardous wastes have at any time been stored

or disposed of and such inventory shall contain, besides the location and description, information relating to the amount, nature and toxicity of hazardous wastes at each such site as may be associated with such site.

Wildlife Protection Act, 1972

The **Wildlife Protection Act, 1972** is an Act of the Parliament of India enacted for protection of plants and animal species. Before 1972, India only had five designated national parks. Among other reforms, the Act established schedules of protected plant and animal species; hunting or harvesting these species was largely outlawed.

The Act provides for the protection of wild animals, birds and plants; and for matters connected therewith or ancillary or incidental thereto. It extends to the whole of India, except the State of Jammu and Kashmir which has its own wildlife act. It has six schedules which give varying degrees of protection. Schedule I and part II of Schedule II provide absolute protection - offences under these are prescribed the highest penalties. Species listed in Schedule III and Schedule IV are also protected, but the penalties are much lower. Schedule V includes the animals which may be hunted. The plants in Schedule VI are prohibited from cultivation and planting. The hunting to the Enforcement authorities have the power to compound offences under this Schedule (i.e. they impose fines on the offenders). Up to April 2010 there have been 16 convictions under this act relating to the death of tigers.

Definitions under the Act (Section 2)

- **"animal"** includes amphibians, birds, mammals, and reptiles, and their young ones, and also includes, in the cases of birds and reptiles, their eggs.
- **"animal article"** means an article made from any captive or wild animal, other than vermin, and includes an article or object in which the whole or any part of such animal has been used and an article made therefrom.
- **"hunting"** includes
 - (a) capturing, killing, poisoning, snaring, or trapping any wild animal, and every attempt to do so
 - (b) driving any wild animal for any of the purposes specified in sub clause
 - (c) injuring, destroying or taking any body part of any such animal, or in the case of wild birds or reptiles, disturbing or damaging the eggs or nests of such birds or reptiles.
- **"taxidermy"** means the curing, preparation or preservation of trophies.
- **"trophy"** means the whole or any part of any captive or wild animal (other than vermin) which has been kept or preserved by any means, whether artificial or natural. This includes:
 - (a) rugs, skins, and specimens of such animals mounted in whole or in part through a process of taxidermy
 - (b) antler, horn, rhinoceros horn, feather, nail, tooth, musk, eggs, and nests.
- **"uncured trophy"** means the whole or any part of any captive animal (other than vermin) which has not undergone a process of taxidermy. This includes a freshly killed wild animal, ambergris, musk and other animal products.
- **"vermin"** means any wild animal specified in Schedule V.
- **"wildlife"** includes any animal, bees, butterflies, crustacean, fish and moths; and aquatic or land vegetation which forms part of any habitat

2002 Amendment

The 2002 Amendment Act which came into force in January, 2003 have made punishment and penalty for offences under the Act more stringent.

Biological Diversity Act, 2002

The **Biological Diversity Act, 2002** is an Act of the Parliament of India for preservation of biological diversity in India, and provides mechanism for equitable sharing of benefits arising out of the use of traditional biological resources and knowledge. The Act was enacted to meet the obligations under Convention on Biological Diversity (CBD), to which India is a party.

Biodiversity and biological resource

Biodiversity has been defined under Section 2(b) of the Act as "the variability among living organisms from all sources and the ecological complexes of which they are part, and includes diversity within species or between species and of eco-systems". The Act also defines, Biological resources as "plants, animals and micro-organisms or parts thereof, their genetic material and by products (excluding value added products) with actual or potential use or value, but does not include human genetic material."

National Biodiversity Authority and State Biodiversity Boards

The National Biodiversity Authority (NBA) is a statutory autonomous body, headquartered in Chennai, under the Ministry of Environment and Forests, Government of India established in 2003 to implement the provisions under the Act. State Biodiversity Boards (SBB) has been created in 28 States along with 31,574 Biological management committees (for each local body) across India.

Regulations

A foreigner, non-resident Indian as defined in clause (30) of section 2 of The Income-tax Act, 1961 or a foreign company or body corporate need to take permission from the NBA before obtaining any biological resources or associated knowledge from India for research, survey, commercial utilisation. Indian citizens or body corporates need to take permission from the concerned State Biodiversity Board.

Result of research using biological resources from India cannot be transferred to a non-citizen or a foreign company without the permission of NBA. However, no such permission is needed for publication of the research in a journal or seminar, or in case of a collaborative research made by institutions approved by Central Government.

No person should apply for patent or other form of intellectual property protection based on the research arising out of biological resources with out the permission of the NBA. The NBA while granting such permission may make an order for benefit sharing or royalty based on utilisation of such protection.

Penalties

If a person, violates the regulatory provisions he will be "punishable with imprisonment for a term which may extend to five years, or with fine which may extend to ten lakh rupees and where the damage caused exceeds ten lakh rupees such fine may commensurate with the damage caused, or with both."

Any offence under this Act is non-bailable and cognizable.

Communal forests of India

An "Important Common Forest" in India is a specific term which refers to forests governed by local communities in a way compatible with sustainable development, and can be of various types. Such forests are typically called **village forests** or **panchayat forests**, reflecting the fact that the administration and resource utilization of the forest occurs at the village and panchayat (an elected rural body) levels. Hamlets, villages and communities of villages may actually administer such a forest. Such community forests are usually administered by a locally elected body, usually called the Forest Protection Committee, Village Forest Committee or the Village Forest Institution. Such committees are known as Van Panchayats in the Kumaon Division of Uttarakhand, Forest Co operative Societies in Himachal Pradesh and Van Samrakshan Samitis in Andhra Pradesh. Legislation pertaining to communal forests vary from state to state, but typically the state government retains some administrative control over matters like staff appointment, and penalization of offenders. Such forests typically conform to the IUCN Category VI Protected Areas, but protection may be enforced by the local communities or the government depending on local legislation. Maharashtra is the state with the most forest land while Haryana has the least.

Air Pollution Control Act

The **Air Pollution Control Act of 1955** (Pub.L. 84-159, ch. 360, 69 Stat. 322) was the first Clean Air Act (United States) enacted by Congress to address the national environmental problem of air pollution on July 14, 1955. This was "an act to provide research and technical assistance relating to air pollution control". The act "left states principally in charge of prevention and control of air pollution at the source". The act declared that air pollution was a danger to public health and welfare, but preserved the "primary responsibilities and rights of the states and local government in controlling air pollution".

The act put the federal government in a purely informational role, authorizing the United States Surgeon General to conduct research, investigate, and pass out information "relating to air pollution and the prevention and abatement thereof". Therefore, The Air Pollution Control Act contained no provisions for the federal government to actively combat air pollution by punishing polluters. The next Congressional statement on air pollution would come with the Clean Air Act of 1963.

The Air Pollution Control Act was the culmination of much research done on fuel emissions by the federal government in the 1930s and 1940s. Additional legislation was passed in 1963 to better fully define air quality criteria and give more power in defining what air quality was to the secretary of Health, Education, and Labor. This additional legislation would provide grants to both local and state agencies. A replacement, the United States Clean Air Act (CAA), was enacted to substitute the Air Pollution Control Act of 1955. A decade later the Motor Vehicle Air Pollution Control Act was enacted to focus more specifically on automotive emission standards. A mere two years later, the Federal Air Quality Act was established to define "air quality control regions" scientifically based on topographical and meteorological facets of air pollution.

California was the first state to act against air pollution when the metropolis of Los Angeles began to notice deteriorating air quality. The location of Los Angeles furthered the problem as several geographical and meteorological problems unique to the area exacerbated the air pollution problem.

Prior to 1955

Prior to the Air Pollution Control Act of 1955, little headway was made to initiate this air pollution reform. U.S. cities Chicago and Cincinnati first established smoke ordinances in 1881. In 1904, Philadelphia passed an ordinance limiting the amount of smoke in flues, chimneys, and open spaces. The ordinance imposed a penalty if not all smoke inspections were passed. It was not until 1947 that California authorized the creation of Air Pollution Control Districts in every county of the state.

Amendments to the Air Pollution Control Act of 1955

There have been several amendments made to The Air Pollution Act of 1955. The first amendment came in 1960, which extended research funding for four years. The next amendment came in 1962 and basically enforced the principle provisions of the original act. In addition, this amendment also called for research to be done by the Surgeon General. In 1967, the Air Quality Act of 1967 was passed. In 1967, the Air Quality Act was enacted in order to expand federal government activities. In accordance with this law, enforcement proceedings were initiated in areas subject to interstate air pollution transport. This amendment allowed states to enact federal automobile emissions standards. Senator Edmond Muskie (D-Maine) said that this was the "first comprehensive federal air pollution control." The National Air Pollution Control Administration then provided technical information to the states, which the states used to develop air quality standards. The NAPCA then had the power to veto any of the states' proposed emission standards. This amendment was not as effective as it was initially thought to be, with only 36 air regions designated, and as well as no states having fully developed pollution control programs. In 1969, another amendment was made to the act. This amendment further expanded the research on low emissions, fuels, and automobiles.

The 1970 amendments completely rewrote the 1967 act. In particular, the 1970 amendments required the newly created The United States Environmental Protection Agency to set the National Ambient Air Quality Standards to protect public health and welfare. In addition, the 1970 amendments required various states to submit state implementation plans for attaining and maintaining the National Ambient Air Quality Standards. This amendment also allowed citizens the ability to sue polluters or government agencies for failure to abide by the act. Finally, the amendment required that by 1975, the entire United States would attain clean air status.

1990 was the most recent amendments to the act under President George H.W. Bush. The 1990 amendments granted significantly more authority to the federal government than any prior air quality legislation. Nine subjects were identified in this amendment, with smog, acid rain, motor vehicle emissions, and toxic air pollution among them. Five severity classifications were identified to measure smog. To better control acid rain, new regulatory programs were created. New and stricter emission standards were created for motor vehicles beginning with the 1995 model year. The National Emission Standards for Hazardous Air Pollutants program was created to expand much broader industries and activities.

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