

Chapter-3

Water Pollution

While availability of drinkable water is constant, human requirement of water is constantly increasing due to constantly increasing population, rapid urbanisation and the increase in standard of living. It has been projected that by 2025, half of India's population would be residing in urban areas whose water needs would be enormous. Fresh water requirements of industries are also increasing due to growing industrialisation. Besides, the untreated or inadequately treated industrial effluents pollute water bodies and contaminate the ground water. All this seriously imbalanced the world water budget.

This calls for judicious utilisation of water and its effective management. Even though there has been an increasing realisation about the impending water crisis and some efforts have also been made to strengthen water infrastructure as also towards its better management, the efforts undertaken are far too few. In some parts of the country, there is already a water crisis situation and the problem will compound in near future. Effective steps must be taken right now, lest the situation should become disastrous.

Water is a precious natural resource which is freely available across the globe, though in varying quantities. Also, it is essential for the survival of human beings and for the maintenance of ecosystem. Thus public is the trustee of water and all individuals have equal and democratic rights over it. The United Nations has recognized access to water as a basic human right, stating that water is a social and cultural good, not merely an economic commodity. But fair and equitable distribution of water is an uphill task as it involves different stakeholders; besides international cooperation, it involves efforts by the national, regional/ state and local governments as also initiatives at community and individual levels.

3.1 Water Scenario: Global and National

Earth is a water planet; about two-thirds of its mass is water. However, more than 97% of this water is stored in oceans and is thus saline and not drinkable. Of the remaining less than 3% of the world's water, which is usable, 2.5% is frozen in Antarctica, Arctic and glaciers and is thus not available to us, which means only about 0.5% of the total available on this planet is usable. While the availability of water is constant, per capita demand for water is increasing in

view of the increasing population, industrialisation, urbanisation and increase in standard of living.

Definitely, the world is not going to run out of water but it is not always available when and where people need it. In terms of geographical spread of water, there are wide variations between countries; for instance, according to one report,¹ less than 10 countries – Brazil, Russia, China, Canada, Indonesia, U.S., India, Columbia and the Democratic Republic of Congo – possess 60% of the world's fresh water supply. These regional and geographical variations in terms of availability of fresh water give rise to conflicts between countries and with the increase in demand for fresh water, these are likely to escalate.

As against 2.4% of the world's total area, the total availability of fresh water in the country is to the tune of 4 per cent. Further, the water resources potential of the country has been assessed by different agencies² from time-to-time. Except for the estimates given by the First Irrigation Commission (1902-03) and Dr. Khosla (1949), the estimates are within the proximity of 1869 billion cubic meters (BCM) – the estimate given by the Central Water Commission of 1993 which has been currently widely accepted. However, according to Central Water Commission (1993), given the physiographic conditions, politico-legal and constitutional constraints and the technology available, the utilisable water resources of the country at present are limited to 1123 BCM, of which 690 BCM³ is from surface water and 433 BCM from ground water sources.

On the other hand, according to the Standing Sub-Committee of the Ministry of Water Resources, current total demand for fresh water in the country has been calculated at 813 BCM, which is estimated to rise to 1093 BCM in 2025, which presents a comfortable scenario.⁴ From the above it may be concluded that at a macro level India is not short of fresh water and the problems and challenges are manageable rather than insurmountable.

¹Report on 'Water: Facts and Trends' of the World Business Council for Sustainable Development, August 2005 available at http://www.unwater.org/downloads/Water_facts_and_trends.pdf

² Prominent among them being the First Irrigation Commission (1902-03), Dr. A.N. Khosla (1949), Central Water and Power Commission (1954-56), National Commission on Agriculture (1976), Central Water Commission (1988), Central Water Commission (1993).

³ Harnessing of this 690 BCM of utilizable surface water potential is subject to the condition that adequate storages are built. Further, the utilizable quantity of surface water would further increase by about 220 BCM if the full potential of trans-basin transfer of water is exploited.

⁴Mid-Term appraisal of the Eleventh Five Year Plan, Planning Commission, Government of India, p. 427

3.2 Causes of Water Pollution

There are many factors that lead to water pollution. Main sources that contribute to this problem are harmful chemicals from factories, industries, pesticides used in agriculture or the hazardous smoke released by the vehicles etc. Some causes that makes the water polluted are described here.

Industrial Activities

Industrial activities generate a variety of waste products which are discharged into water courses. “Water is an essential raw material in almost all manufacturing plants, though only a small part of it may appear in the final product. The remainder becomes a waste material contaminant, to a smaller or larger degree, depending on its usage in the plant.”⁵ “The waste broadly categorized as heavy metals or synthetic organic compounds reach body of water either through direct discharge or by reaching from waste pumps.”⁶ This industrial discharge, which is relatively largely controlled in developed countries while in developing countries it is largely uncontrolled, is the main cause of water pollution.

All the Indian rivers have been polluted by industrial effluents. The holy river Ganga has become highly polluted due to various types of industrial discharges. Along almost the entire course of the river Ganga, several textiles, chemical, pulp and paper, fertilizer and other heavy industries are located and their waste is directly or indirectly discharged into the river, resulting in the water pollution. This has been the case with almost all other Indian rivers. For instance, from Delhi industrial area alone more than 8 lakh tons of industrial waste is discharged into the river Yamuna.

Religious and Social Activities

India is a country of festivals. We worship the holy rivers and on the occasion of several festivals, people throng the rivers and take bath in them. Moreover, after performing religious rites, it is a common practice to immerse the remnants of these rites such as ashes of yajna and flowers etc. into the rivers. At several places, the dead bodies are cremated on the river banks, while in several cases the ashes are immersed into the rivers. Further, it is also a practice to immerse the

⁵Pandey, G. N, *Environmental Management*, Vikas Publishing House, Noida, p.63

⁶Saxena, H. M, *Environmental Geography*, Rawat Publication, Jaipur, 1999 p.123

bodies of infants directly into the rivers. All these practices pollute the river water to the extent that let alone drinkable the water of most of the rivers in India is not fit for taking bath.⁷

Agricultural Practices

Present agricultural practices also contribute to water pollution. Water pollution is caused by the extreme use of chemical fertilizers, insecticides, and pesticide which we use to increase the productivity of agriculture. When the fields are irrigated or when the fields are irrigated, the chemicals from the cropland get washed into surface water, or ground water thereby causing pollution of water and water bodies.

Contamination of Marine Water

Marine water is an easy source of water that can easily get contaminated. It is easily available to dump industrial wastes and local wastes. The water bodies that are already contaminated ultimately flow into the ocean bringing in all the harmful and dirty waste with it. This eventually spoils the water which becomes highly polluted and is harmful for the marine life.

Mining

Mining operation produces toxic material. Effluents are discharged in the lakes, rivers, and streams thereby polluting the water bodies. “An outstanding example of this stream pollution which is today one of our major unsolved problems, is the acid drainage from coal mines.”⁸

Domestic Sewage and Effluents

Our daily activities require usage of water such as for washing clothes and utensils, bathing, watering plants or washing hands. These activities result into polluting water as soaps, detergents, shampoos etc. used in the process gets mixed with water. These are all harmful chemicals and cannot get completely filtered when they get mixed up water.⁹ The villagers wash their animals, clothes and take bath in the same pond. This is also a major cause of water pollution. These organic elements deplete the oxygen from water and upset the natural balance of the ecosystem.

Radio-Active Substances

⁷Shyam, and Armin, *Environmental Law and Policy in India*, Oxford Press, New Delhi, 2001, p.173

⁸Pandey, G. N, *Environmental Management*, Vikas Publishing House, Noida, P.63

⁹ Pauchri, Suresh & Pradeep Kumar, *Environment Education*, APH Publication, New Delhi, 2010, p.56

Radio-active elements emits high energy radiation at the time of decay, “isotopes of those elements that emit such radiations are known as radioactive isotopes. These mixed up frequently into the atmosphere. Waste from nuclear comes down to the earth as rain. Some of the radioactive material such as Strontium 90, percolates down through the soil into ground water reservoirs is carried out into streams and rivers. Thus, it makes the water polluted.”¹⁰

Oil Leakage

The spread of oil in the ocean has become a common phenomenon during some time past. Oil is transported through seas by tankers, ships, pipelines etc. Sometimes the oil spills into the sea water and cause the degradation of marine environment. “Oil spillages affect water quality in a number of ways. It makes drinking water unsafe to drink. A substantial amount of oil released into ocean and seas will destroy wild life and ecosystem that sustain them. Oil spills also reduce oxygen supplies with the water environment.”¹¹

Dumping of Plastic

Plastic is an inevitable material which is used and produced on a large scale. Many products are manufactured from plastic which are greatly consumed around the world. The plastic products on several occasions get mixed with water and deteriorate the quality of waters. It takes around 400 years to degrade and pose threat to the marine and aquatic animals as they consume the plastic products thereby becomes the cause of their killing. Though the body of the dead animal decomposes faster, the plastic will remain and pose a threat to other sea animals. The water gets contaminated with plastics due to dumping it straight into the water or if it is thrown on the road it gets washed away by the rain, eventually landing into the fresh water bodies.

Air Pollutant

Air pollutant is also cause of water pollution. The largest heavy metal pollution in lake or rivers (i.e., from cadmium, mercury, lead etc.) comes from the air borne pollutants. Air pollutants from the water supply of drinking water, from lakes and coastal water reach the food chain.

3.3 Impact of Water Pollution

¹⁰ Saxena, H. M, *Environmental Geography*, Rawat Publication, Jaipur, 1999, p.127

¹¹ <http://www.environmental law org.uk/rte-asp? id-90>

Water is very necessary for all living organisms. Now a days, the surface as well as ground water has become polluted due to the reasons mentioned above. So, we can see its adverse effects. The adverse effects of water pollution can be classified into the following three categories:

Effects on Human Beings

Sewage and polluted water are responsible for several water diseases. If human beings drink polluted water they are more likely to develop several diseases like cholera, typhoid, dysentery, deformities, diarrhea, jaundice, skin diseases etc. In developing countries, death by cholera, are still common. Guinea worm is another disease caused by polluted drinking water. There are certain chemicals present in polluted water which may cause diseases like wrist drop, foot drop etc. The developing countries of Africa, Asia, and Latin America where waste water is not adequately treated, a large part of population is suffering from water borne diseases.

Effects on Plants, Animals and Marine Life

Polluted water has adverse effect on plants also. If the plants and trees are irrigated by the polluted water, then the plants become polluted and diseased and consequently their growth is inhibited. If animals or human beings eat the fruits that the diseased plants bear, the harmful effects are passed on to the former. Polluted water adversely affects the marine life also. In polluted water, the content of oxygen becomes less as a result of this fishes and other organism will die.

Other Effects

The effects of water pollution are multidimensional in nature, i.e., water pollution causes several other challenges. In fact, polluted water becomes the cause of environment degradation in several other forms. Water pollution has now become a threat to the ecosystem and an important cause of environmental degradation.

Impact of water pollution is visible in some forms as well. For instance, besides changing the chemical composition of water, industrial effluents also change its taste. The pollutants also reduce the transparency of water. Polluted water is also responsible for the loss of soil fertility.

3.4 Laws, Policy and Efforts to Control Water Pollution

The earth is unique in the solar system in the sense that it is the only place that sustains life in the universe. Life on earth has passed many stages of dynamic evolution. In our eagerness to develop, grow, progress and compete, we humans have threatened the sustainability of this planet.

Of all the natural resources, water is most unique because without water life cannot be sustained. It is fixed in amount which circulates from the land to the oceans to the atmosphere and back again.

Until quite recently, the pollution of natural water was not a big problem; but with increasing population, rapid urbanization and industrialization, the problem has acquired serious proportions. Water pollution may be defined as the 'undesirable adverse change' in the composition of water to such extent that it becomes unfit for the uses it is otherwise put to. These changes may be physical, chemical and biological. Thus the problem of water pollution is not merely an issue of public health, but it is a problem of sanctity of composition of water.

In India the purity of water has always been emphasized from the times immemorial. In the *Rig Veda*, *Atharva Veda* and the *Yajur Veda*, we find many verses in the praise of Lord *Varuna* (God of Water) and Lord *Indra*. *Bhagwad Gita* also mentions about the worshipping of Lord *Varuna*. This shows that during *Vedic* times water was regarded as a component of life and thus was regarded sacred, not to be polluted. In *Manu Smriti*, water was regarded as a creator and source of life on the earth. Kautilya's *Arthshashtra* also declares that it was the *dharma* of every citizen to protect the nature. The Holy *Koran* says that everything is created from water. Thus, there is a significance of purity of water. The protection of water tanks or dams was regarded equivalent to the protection of highways from robbery or villages from plundering. It was the duty of all to keep the water pure and pollution or destruction of water was recognized as an offence.

In modern times, preservation of sanctity of water has been recognized as the duty of all citizens under the Constitution of India and legal provisions have been made for this purpose. The pollution of water is a tortious act, in common law in India under Article 372 of the Constitution. It is covered by the tort of nuisance as it causes injury to person and property, comfort or health.

Constitutional and Legal Provisions for Environmental Protection

The United Nations Conference on Human Environment held in June 1972 at Stockholm placed the issue of the protection of biosphere on the official agenda of international policy and law. The agenda of the conference consisted of the following:

- (a) Planning and management of human settlements by environmental quality.
- (b) Environmental aspects of natural resources management.
- (c) Identifications and control of pollutants and nuisances of broad international significance.

- (d) Educational, Information, Social and cultural aspects of environmental issues.
- (e) Development and environment.
- (f) International Organisational implications of action proposals.

The Stockholm Conference agendas, proclamations, principles and subsequent global, environment protection efforts shows the words realization of the need to preserve and protect the natural environment. To comply with the principles of the Stockholm declaration the Indian Parliament incorporated Articles 51-A and 48-A in the Constitution in 1976.¹²

Fundamental Right

Indian Constitution contains some specific provisions relating to environment protection. Article 21 of the Constitution guarantees the right to life, a life of dignity to be lived in a proper environment, free of danger of disease and infection. Any activity which pollutes the environment and makes it unhealthy is a violation of right to have 'living environment' which is implicit in Article 21 of the Constitution. The Supreme Court through its wisdom and activism has expanded this right. The right to live in healthy environment is one more golden feather of Article 21.

Directive Principles of State Policy

Article 48-A of the Constitution states "The State shall endeavour to protect and improve the environment and to safeguard the forests and wild life of the country."¹³ The word 'environment' covers all factors affecting life— air, water, dust, sound, gas and temperature. It becomes the duty of every state to protect the environment from all those activities which are hazardous to health.

Fundamental Duty of Citizens

Article 51-A (g) refers 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

¹² Articles were introduced by 42nd amendment.

¹³ Section 10 (w.e.f.3.1.1977)

compassion for living creatures.”¹⁴ Thus it is the constitutional obligation of the State and the citizens to protect and improve the environment.

Article 253 and Environmental Legislation

Article 253 of the Constitution gives power to Parliament to make laws implementing international obligation of the country as well as any decision taken at an international conference, association or other body. The provision reads “Notwithstanding anything in the foregoing provision of this chapter, parliament has power to make any law for the whole and or any treaty, agreement or convention with any other country or any decision made at any international conference, association or other body.” Under the provision the Environment Act (1986) and Air Act 1981 were enacted.

Constitutional Remedies

Articles 32 and 226 of the Constitution empower the Supreme Court and the high courts to issue (writs in the nature of *habeas corpus*, *mandamus*, *certiorari* and prohibition) directions or orders on environmental matters.

Statutory Provisions

Legal provisions relating to control of water pollution were made even during the British period. The British wanted India to keep away from pollution. The first Act concerning control of water pollution in India is shore Nuisance (Bombay and Kolaba) Act of 1853. This statute was operative in Bombay and Kolaba only. It authorized the Collector of Land Revenue to issue notice to the concerned party requiring him to remove the nuisance anywhere below high water mark or get it abated or removed himself.

Another statute dealing with water pollution is the Orient Gas Company Act of 1857. This Act authorized the company to punish for pollution of water. In 1867 the Series Act came into existence to keep water fit for humans and animals.

Indian Penal Code of 1860 also have some provisions relating to water pollution. Section 268 of the Indian Penal Code defines ‘Public Nuisance’ and section 290 provides punishment for

¹⁴ Section 11 (w.e.f.3.1.1977)

public nuisance. Section 277 is related to prevention of water pollution. Another relevant provision is section 426 which punishes mischief. Section 425 defines mischief as thus: “whoever, with intent to cause, or knowing that he is likely to cause wrongful loss or damage to the public or to any person, causes the destruction of any property, or in the situation thereof as destroys or diminishes its value or utility, affects it injuriously, commits mischief.” In *Babulal v. GhanshamBilla*¹⁵ the directors and manager of the Gwalior Silk Mill were prosecuted under sections 268, 269, 277, 288 and 290 of Indian Penal Code 1860.

The Criminal Procedure Code 1973 also has some provisions to cover pollution activities. Sections 133 to 144 provide speedy remedy for preventing and controlling public nuisance causing air, water and noise pollution. The power is given to the District Magistrate and Executive Magistrate to prevent and control water pollution. The example of provisions is *Municipal Council, Ratlam v ShriVardichand* case¹⁶ the petitioner filed a complaint under sec 133 of Cr. P.C to prevent the discharge trade effluent from the Alchohal plant into the public street(nala) and provide sanitary facilities on the roads.

Another case is related to *Tata Tea Ltd. v. State of Kerala*,¹⁷ the Tata Tea was discharging effluent into the river which was used for drinking water by the people. Under Sec 133 of Cr. P. C. the order was given to the owner of the factory to prevent same from passing into the river.

Whereas decisions were taken at the United Nations Conference on the Human Environment held at Stockholm in June 1972 in which India participated, to take appropriate steps for the protection and improvement of human environment;

And whereas it is considered necessary further to implement the decisions aforesaid in so far as they relate to the protection and improvement of environment and prevention of hazards to human beings, other living creatures, plants and property.

3.5 Water (Prevention and Control) Act, 1974

¹⁵ Cr. Provision No. 328/74 of 1974

¹⁶ AIR 1980 SC 162

¹⁷ 1984 K.L.T.645

The first statute of India that relating to the control of water pollution is Water Act that was passed by Indian Parliament in 1974. Water is a state subject under the Constitution.¹⁸ The Water Act, a central law, was enacted under Article 252(1) of the Indian Constitution. The Act was amended twice – in 1978 and 1988. The objective to enactment of this Act was to prevent and control of water pollution and maintaining or restoring of wholesomeness of water and for the aforesaid purpose to provide for the establishment of water, and for the prevention and control of water pollution establishes Central and state pollution control boards and give the adequate powers. The Central board may advise the Central government on water pollution issues, co-ordinate the activities of state pollution control boards and develop a comprehensive plan for the control and prevention of water pollution.¹⁹ Consent administration is the crux of the control of pollution envisaged under the water Act.²⁰ There are separate agencies for every state to exercise their power for the control and prevention of water pollution.

The state board or any authorized officers have the power to take samples of water from any stream or well or samples of any sewage or trade effluent for the purpose of analysis.²¹ In *Delhi Bottling Co. Pvt. Ltd. v. Central Board for the Prevention and Control of Pollution*²² a sample of the trade effluents from a bottling company was taken by the Board. The Board analyzed the trade and found that it did not confirm the requirement of the consent order granted to the company. The court filed a suit under section 33²³ of the Act, and accordingly the court issued an injunction requiring the company to establish a treatment plant..

In *Abdul Hamid v. Gwalior Rayon Company*²⁴ the Madhya Pradesh High Court pointed out that section 21 of the Water Act and section 26 of the Air Act were meant for the protection of the industries and industrialists ensuring a proper balance between the conflicting claims of the nation's industrial progress and the hazards to the citizens. Section 24 of the Water Act states that “no person shall knowingly cause or permit any poisonous, noxious or polluting matter determined

¹⁸ Entry 17, List II, Seventh Schedule

¹⁹ Section 16 of the Water Act 1974

²⁰ Leelakrishnan, P. *Environmental Law Case Book*, Lexis Nexis Butterworth, New Delhi, 2004 p. 176

²¹ Section 21

²² AIR 1986 Delhi p. 152

²³ Sect. 33 is related to power of boards to make application to courts for restraining apprehended pollution of water in streams or wells.

²⁴ (1989) Cr. L. J. 2013

in accordance with such standards as may be laid down by the state board to enter into any stream, well, sewer or on land; or no person shall knowingly 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.”

A new or altered outlet of trade effluent into stream is also prohibited.²⁵ It means any person wants to establish any industry, treatment or disposal system or any extension in the discharge of sewage will take permission from the state board. The state board may condition its consent by orders that specify the location, construction and use of the outlet as well as the nature and composition of new discharges. The state board must maintain and make public a register containing the particulars of the consent orders. The Act empowers the state board, upon thirty days notice to a polluter, to execute any work required under a consent order which has not been executed. The board may recover the expenses for such work from the polluters. Under Section 28, any aggrieved person who is not satisfied with the State Board may prefer an appeal to such authorities within 30 days from date of the order passed by the State Board.

The water in any stream or well is likely to be polluted by reason of the disposal of any matter in such stream or well or in any sewer or any land, it is apprehended by a Board. The Board under section 33 makes an application to courts for restraining apprehended pollution of water in streams or wells. The court may direct such person to remove the pollution matter. If such a person fails to do so, the court may authorize the Board to remove it and recover the expenses from the concerned person.

The 1988 amendment introduced a new section 33A. Under this the board exercises of its power and issue directions to any person, officer or authority, including those for-

- (a) The closure, prohibition or regulation of any industry, operation or process; or
- (b) The stoppage or regulation of supply of electricity, water or any other service.

Under the Act different penalties have been given for violating different provisions of the Act.

²⁵ Ibid Section 26

- (a) “Whoever fails to comply with any direction given under sub-section (2) or sub-section (3) of section 20, the punishment is imprisonment which may be extended to three months or fine may be extended to 10,000 rupees or both.
- (b) Whoever fails to comply with any order issued under section 32 or any directions issued under section 33A, the punishment is imprisonment from one year six months to six years and fine.
- (c) If the failure continues beyond a period of one year after the date of conviction the imprisonment shall not be less than two year but which may extend to seven years.”²⁶

Section 45 of the Act provides penalty after previous conviction which shall be imprisonment for a term of two years to seven years and with fine. For violating any other provisions of the Act, the penalty prescribed is imprisonment which may extend to three months or with fine which may extend to ten thousand rupees or both. In the case of a continuing contravention or failure an additional fine may extend to five thousand rupees for everyday. Thus, the government implemented this Act for the purpose of control of water pollution but it did not effectively succeed in its objective.

3.6 The Water Cess (Prevention and Control of Pollution) Act of 1977

Parliament adopted the Water cess (Prevention and Control of Pollution) Act of 1977. The object behind enactment of this Act was to generate revenue so that expenses of Central and State Boards can be met. The Act creates a differential tax structure for defaulting units and mandates certain industries to pay cess so that Water Act can be implemented. It is the Union Government which collect Tax and after deducting collection expenses it distribute fund between central and state Boards to that provisions of the Act can be effectively implement.

3.7 The Environment Protection Act (1986) EPA

In pursuance to the United Nations Conference on the Human Environment held at Stockholm in June 1972, the Government of India adopted and enacted the Environment Protection

²⁶ Section 41

Act, on 23 May, 1986. The Environment Act of 1986 clearly extends to water quality and the control of water pollution.

Though land belongs to the state government, no industrial venture could be initiated without the prior approval of the central government. As a matter of fact, land planning and development for various socio- economic purposes is subject to environmental clearance to be given by the Central Ministry. In this regard, it may further be mentioned that under the provisions of this Act the central government may appoint regulatory authority with powers to issue directions, compliance to which is mandatory so far as the provincial governments are concerned. But if such a direction is to be issued against a person or any public sector undertakings or authorities, the central government may delegate power to issue direction to the state government. “The power of summary closure etc. conferred on the Central Government is inclusive in nature and not exclusive.”²⁷ Section 5 gives the Central Government to sweeping power to remedy the environmental problems in India.

Section 5 of the Act writes that:

“Notwithstanding anything contained in any other law but subject to the provisions of this Act, the Central Government may, in the exercise of its powers and performance of its functions under this Act, issue directions in writing to any person, officer or any authority and such person, officer or authority shall be bound to comply with such directions.

Explanation- For the avoidance of doubts, it is hereby declared that the power to issue directions under this section includes the power to direct-

- (a) The closure, prohibition or regulation of any industry, operation or process; or
- (b) Stoppage or regulation of the supply of electricity or water or any other service.

Other significant feature of this Act is that persons carrying on industry, operation etc. not to allow emission or discharge of environmental pollutant in excess of the standards.²⁸

Section 8 of the Act writes that-

²⁷ Desai, Bharat, *Water Pollution in India*, Lancer Books, New Delhi, 1990, p. 61.

²⁸ Section 7 of the Environment Act, 1986

“No person shall handle or cause to be handled any hazardous substance except in accordance with such procedure and after complying with such safeguards as may be prescribed.”

To prevention and control of environmental pollution the Act provide powers to Central Government or delegated powers of its, any officer have the powers of entry and inspection under Section 10, or have the power to take sample under Section 11. The Act lays down penalty for contravention of the provisions of the Act or rules, order or direction issued under it.

Section 15 of the Act writes

(1) Whoever fails to comply with or contravention any of the provisions of this Act or the rules made or order or direction issued there under shall in respect of each such failure or contravention ,be punishable with imprisonment for a term which may extended to five years or with fine which may extend to one lacs rupees or both and in case the failure or contravention continues with additional fine which may extend for every day during which such failure or contravention continues after the conviction for the first such failure or contravention.

(2) If the failure or contravention referred to in sub-section (1) continues beyond a period of one year after the date of conviction, the offender shall be punishable with imprisonment for a term which may extend to seven years.”

In spite of the penalties the Act subsequently almost negates its effects under section 24 (2). Section 24 (2) says that:

“where any act or omission constitutes an offence punishable under this Act and also under other Act then the offender found guilty of such offence shall be liable to be punished under the other Act and not under this Act.” Other significant feature of this Act is cognizance of offences by the court on a complaint.

Section 19 of the Act writes that

“(a) the Central Government or any authority or officer authorized in this behalf by that Government; or

- (c) any person who has given notice of not less than sixty days, in the manner prescribed, of the alleged offence and of his intention to make a complaint, to the Central Government or the authority or officer authorized as aforesaid.” Under this Act citizen can a complaint.

Thus, the Environment Protection Act, 1986, is an effective legislation for the protection and improvement of the environment of India.

3.8 Ganga Action Plan

The Ganga Action Plan was launched by Shree Rajiv Gandhi in April 1985 with the main objective of pollution abatement, to improve the water quality by interception, diversion and treatment of domestic sewage and prevent toxic and industrial chemical wastes from identified grossly polluting units entering into the river. “The Ganga Action Plan is based on a comprehensive survey of the Ganga Basin carried out by the Central Board. About 80% of the pollution in the river is caused by raw sewage discharged directly into the river. The first phase of the Ganga Action Plan was launched in June 1985 and declared closed on March 31, 2000 focuses on construction of an extensive network of self –sustaining sewage treatment plants in the cities along the Ganga River as the first measure to reduce pollution. Most of the physical infrastructure for intercepting, diverting and treating municipal sewage has been created, though the efficacy of these schemes remains uncertain.”²⁹ The Plan was renamed the National River Conservation Plan (NRCP) in the year 1995 and was broad-based to tackle pollution levels in other identified polluted stretches of major rivers, for improving their water quality to the bathing quality standards.

“The second phase of GAP was approved in April, 1993 for pollution abatement of remaining works on river Ganga with three other rivers Yamuna, Damodar and Gomati. River Mahananda included in 2005-06. In Dec.1996 GAP 2 was merged with NRCP. At present, NRCP covers 35 stretches of polluted rivers in 164 towns spread in 20 states. Action Plans for different rivers are being drawn up on the basis of surveys by Central Pollution Control Board and State Pollution Control Boards.”³⁰ The Approach of GAP was to create sewage treatment plants in the cities along

²⁹Shyam and Armin, *Environmental Law and Policy in India*, Oxford Press, New Delhi, 2001, p. 209

³⁰ <http://www.mppcb.nic.in/gap.htm>.

the Ganga so that no untreated sewage is discharged into the river. This was expected to bring the quality of the river water to a desired level.

3.9 National Water Policy

Water is a natural resource and is freely available by nature. The role of the welfare state was to protect the natural resources from over exploitation by other actor. After liberal economic order it was not possible the protection of natural resources. So the first National Water Policy was adopted by the National Water Resource Council in 1987. In the last few years a number of problems emerged in the development and management of water resources. “On the one hand after crisis (of its reduced it availability per head and deteriorating quality) has grown and on the other hand local initiatives in water conservation have started to respond to the challenge.” On April 1, 2002 the National Water Resources Council met under the chairmanship of the Prime-Minister and adopted the National Water Policy 2002. The main objectives of the policy are-

- (1) harnessing the untapped wealth of the country;
- (2) making available safe drinking water for all near their households;
- (3) safeguarding the existing water resources from pollution and over exploitation;
- (4) improve ecology by maintaining minimum water flows in rivers;
- (5) maximizing the hydropower the development;
- (6) drought proofing in drought prone areas;improving efficiency of irrigation water systems and its application , preserving natural land resources by controlling land erosion along the riverbanks and the sea costs and arresting the advancement of deserts; and
- (7) Mitigating miseries caused by water related natural disasters through flood and drought management.

National Water Policy calls for development and management of water resources in a holistic and integrated manner encompassing various sectoral needs through a participatory approach.³¹ In this

³¹ Singh, A. K. Environment and Water Resource Management, AdhyanPulishers, Delhi, 2006, p. 187-189

policy great emphasis has been laid on water quality aspects. This policy says that all visible or invisible sources of water are part of ecological system. The National Water policy also laid emphasis on the private sector partnership in the policy. Water pollution has to be tackled in an effective manner.

Protest for Cleaning

In June 2011, Swami Nigmanand died after a 73 day fast initiated to raise awareness of the illegal mining being done in Haridwar and polluting the river.³²

Role of NGOs

Non Government Organization have played important role for environmental conservation. Center for Science and Environment (CSE) has been active since 1992. It has actively worked for many environment and health issues. CSE has performed commendable works in the field of water conservation by rain water harvesting and watershed management. It has drawn attention from many parts of the world when it exposed the pesticides contents in the cola products, as well as bottled mineral water. It also raised issue of arsenic pollution in West Bengal, water pollution in Bichhri, Rajasthan, Bio- medical wastes. Many other NGOs have been stimulating to introduce stringent norms for industries and thus reduce pollution levels. They are playing important role in creating awareness among the common mass. Involvement of NGOs has led to public participation in decision making of a project during its conceptualization stage. Introduction of lead free petrol, low sulfur content in diesel fuels and Euro norms and so on in automobiles has resulted in significant changes. Use of polythene bags has been banned in many places. This is the result of active participant of NGOs.

³²Dube, Priyanka, 'Sadhu dies after a 73 days fast to save Ganga' June 14, 2011, ibnlive.in.com.CNN-IBN