Environmental Governance in India: A Systematic Review of the Initiatives

Er. Vikram Sandhu

Asst. Professor University Business School, Guru Nanak Dev University, Amritsar.

Dr. A.S. Sidhu

Asst. Professor University Business School, Guru Nanak Dev University, Amritsar.

Abstract

The human beings, directly and indirectly are influenced by the factors of environment. Among these factors, climate has direct effects on the human's economic activities. It has a major influence on the process of decision making regarding the use of resources. This influences the culture and life style of the different races of the people. Though with the help of advancement in science and technology, man is in the position of modifying the environment by creating artificial changes but that is to a very limited extent. India's environmental resources are limited. Further these resources are being exploited by unprecedented growth of population and unplanned economic development. The environmental resources are the foremost and mandatory requirement for sustainable development. These resources are depleted by environmental pollution and deterioration. India has enacted more than 200 laws for protecting the environment with significant provisions in the constitution. An attempt is made to systematically analyze the initiatives taken by the government of India in the broader framework. The study will provide greater insight into the efforts done by Government of India for the citizens of the country, NGOs, institutes, regulatory agencies, polluting sources as well as general public.

Keywords: Environmental issues, Environment protection act, Central pollution control board, Corporate social responsibility

Introduction

Environment, at a particular time is the sum of all the abiotic and biotic elements at a place. The basic components include habitat, biodiversity and energy. Environment at given place is not same always. It changes in space and time. There is a functional relationship between its biotic and abiotic components. The flow of energy in the environment determines the working of environment and its components. Environment tries to maintain an ecological balance. The human beings, directly and indirectly are influenced by the factors of environment. Among these factors, climate has direct effects on the human's economic activities. It has a major influence on the process of decision making regarding the use of resources. This influences the culture and life style of the different races of the people. Though with the help of advancement in science and technology, man is in the

position of modifying the environment by creating artificial changes but that is to a very limited extent.

India's environmental resources are limited. Further these resources are being exploited by unprecedented growth of population and unplanned economic development. The environmental resources are the foremost and mandatory requirement for sustainable development. These resources are depleted by environmental pollution and deterioration. India has population of over 1.2 billion which is 16% of world population living on just 2.4% of total land of world that causes serious concern about the penalty of resources that is required for the economic growth in the longer seen. Urban areas in India are at the stage of virtual collapse as they have turned into slums and sequestered camps due to large scale population shift from the rural areas seeking employment and livelihood. The cities are more vulnerable due to problems of transport congestions, atmospheric pollution and solid waste management problems. Furthermore, the unavailability of clean drinking water as well as sanitation escalates the problem of safer environment for living. The unplanned industrial development has resulted into undesirable effects for air, water and land pollution which is not proportional to their contribution for economic growth. For example, the iron and steel industries contributes to 55% of the particulate matter load which adding just 16% to the total industrial output. Similarly, chemical and food processing industries contribute 88% to environmental pollution by adding 25% to total industrial output (Pacharuri).

The condition of rural India is equally miserable. In agriculture, injudicious use of soil and water has resulted into the loss of their productive capabilities. Further the excessive use of fertilizers pesticides and insecticides has polluted the soil, land and water by run offs. The people living in rural India are facing extreme poverty which increases the burden in natural resources of the country. Natural resources in India are depleting more than the world average. According to world bank estimates, one third of goods and services utilized by the poor come directly from natural resources and they are directly affected by degradation of natural resources. The cost of environment damage is about 10 billion dollars per year. According to GREEN India 2047 report, the environment costs in India exceeds 10% of GDP which results loss of agriculture productivity, loss in timber value due to degradation of forest, depletion of water resources, and health costs due to polluted water and air. Soil degradation resulted in an annual loss of 11-26% of agriculture output.

Review of literature

White, M.A. (1995) in his study provided an outline of concerns facing development of an environmentally

responsible perspective. He reviewed major ways in which organizations respond to environmental threats and opportunities in the three major branches of financecorporate finance, investments and financial institutionshighlighting especially novel programs and Sankar, U. (1998) in his study highlighted that greater reliance should be placed on the use of economic instruments for environmental protection. The reason for this was that if the instruments were well designed, they can signal the users of environmental resources about the social scarcity values of these resources. Delmas, M. (2003) analyzed new institutional economics to develop hypotheses on the impact of the institutional environment on the cost of adopting the management standard. Heal, G. (2004) in their study proposed an economically coherent analysis of corporate social responsibility (CSR), and the way it was reflected in financial markets. Barnea, A. and Rubin, A. (2006) in their study concluded that an increase in CSR expenditure may be consistent with firm value maximization if it is a response to changes in stakeholders' preferences. Salehi, M. and Azary, Z. (2009) conducted a study to determine the actual level as well as expected level of CSR of various groups in Iran. The study concluded that almost in all the statements there was expectation gap between the actual level of CSR and the expected level among participants.

Research Methodology

Objectives of the study

- 1. To study the initiatives taken by Government of India for the protection of environment.
- 2. To analyze systematically the efforts done by India for the protection of environmental resources.
- 3. To examine critically the contribution of India for the protection of environmental resources.

Research Design

The study is exploratory in nature. The present study is based on qualitative data available from the various publications of the government of India as well as the websites of different institutes responsible for framing and executing policies for the protection of environment. An attempt is made to systematically analyze the initiatives taken by the government of India in the broader framework. The study attempts to critically examine the efforts done by the Government of India for the protection of environment.

Scope and importance of the study

The present study will be very useful to analyze the initiatives of the Government of India in a broader framework to develop the understanding on the issue that what has been done in the past, how much that was

successful and what is required in the future for the protection of environment of the country. The study will be very helpful for the policy makers of the country as well as for the executing agencies. The study will provide greater insight into the efforts done by Government of India for the citizens of the country, NGOs, institutes, regulatory agencies, polluting sources as well as general public. The present study is qualitative in nature so the attempt can be made by the future researchers to examine it in quantitative manner.

Limitations of the study

Although attempt has been made to cover all the existing rules, regulations and laws; still there may be some procedures which may have been left due to paucity of time and resources. The present study is prone to all the errors and limitations that can occur in qualitative study.

India's Initiatives regarding Environment

India has enacted more than 200 laws for protecting the environment with significant provisions in the constitution. The important laws are:

- 1. The Wild life (Protection) Act of 1972
- Water (Prevention and Control of Pollution) Act, 1974
- 3. Forest (Conservation) Act, 1980
- 4. Air (Prevention and Control of Pollution) Act, 1981
- 5. Environment Protection Act, 1986
- 6. Public Liability Insurance Act (PLIA), 1991
- 7. The National Environment Tribunal Act, 1995
- 8. The National Environment Appellate Authority Act, 1997
- 9. The Biomedical Waste (Management and Handling) Rules, 1998
- 10. The Environment (Sitting for Industrial Projects) Rules, 1999
- 11. The Ozone Depleting Substances (Regulation and Control) Rules, 2000
- 12. The Batteries (Management and Handling) Rules, 2001
- 13. The Biological Diversity Act 2002 and Biological Diversity Rules

14. National Environment Policy of 2006

- 15. NAPCC: National Action Plan on Climate Change
- 16. National Green Tribunal Act, 2010

- 17. The Noise Pollution (Regulation and Control) Amendment Rules, 2010
- 18. Plastic Waste (Management and handling) Amendment Rules, 2011

The brief description of these laws is as under-

The Wild life (Protection) Act of 1972

The Act has provisions regarding the

- (a) Protection of specified plants
- (b) Prohibition of hunting of animals
- (c) Declaration of sanctuaries, national parks, and closed areas
- (d) Management of sanctuaries, national parks, and closed areas
- (e) Constitution of Central Zoo Authority
- (f) Granting License for the purpose of education, scientific research, and scientific management
- (g) Granting of license (Permits) for picking, uprooting etc. of specified plants for the purpose of education and scientific research
- (h) Granting of license (Permits) for trade and commerce in wild animals, and animal products
- (i) Granting of license (Permits) for cultivation of specified but otherwise prohibited plants
- (j) Protecting the rights of scheduled tribal population
- (k) Penalties for violation of various provisions of the Act

Any violations of the provision of the act are subject to penalties which can vary according to degree and gravity of violation. Beside financial penalties, the violators are subjected to impressments as well as cancellation of their license and permits.

Water (Prevention and Control of Pollution) Act, 1974

The Act tries to make judicious use of water and to check pollution of water through different provisions and measures. Central Government drawn powers from this act to establish central water pollution control based. The act also empowers the state governments to establish their own water pollution control boards in the states. The act also provides regulatory authority to central pollution control board (CPCB) and state pollution control board (SPCB) to

frame and enforce the standards for effluents related to discharge into water bodies. The CPCB is responsible for coordinating the activities between the states. It also performs regulatory functions for the union territories. The SPCB is responsible for checking pollution in the states.

Forest (Conservation) Act, 1980

Under section 2 of this act, it is mandatory for the government to obtain permissions for the dereservation of forest and using forest land for non-forest purposes.

Air (Prevention and Control of Pollution) Act, 1981

The act is framed for the prevention, Control and abatement of air pollution. The act has similar type of framework as of water act for providing authority of central and state pollution control board for providing consents to industries for operating within designated air pollution standards. The Act was amended in 1987 and is applicable to whole of India.

Environment Protection Act, 1986

Protecting and improvement of environment is the main objective of this Act. The Act was framed after Bhopal Gas Tragedy in 1984. The Government enacted this Act under Article 253 of the constitution. The act provides a framework for air, water and land pollution and empowers the government for setting national ambient and emission standards, establishing procedures and regulations for inspection and checking pollution sources. It also empowers the government to appoint officers for performing various functions and for issuing various directions for the control and abatement of pollution. The Act is also concerned with safety standards. It empowers the central and state government for directing the concerned person to take samples of pollutants for examination in the duly certifies research laboratories. The main purpose of framing this Act is to implement the decisions of United Nations Conference on the Human Environment (UNCHE). Under this "Umbrella Law" the government is provided with a framework to coordinate the activities of already established institutions and law for effective control of pollution and improving the quality of environment.

Public Liability Insurance Act (PLIA), 1991

The Act makes it mandatory for the business owners who operate in hazardous substances to take out insurance policies for covering potential liabilities from an accident and establishing environment relief funds for dealing with accidents arising from the mishandling of hazardous substances.

The National Environment Tribunal Act, 1995

This Act was framed on the recommendations of United Nations sponsored second Earth Summit at Rio-de

Janeiro. The main objectives of this act is to provide effective and speedy relief as well as compensation for the damages made to human health, property and the environment due to accidents and disasters caused by the industries. According to this Act, the person is liable to claim the damage in case of death; permanent, temporary, total/partial disability or other injury/sickness; loss of ways due to disability; medical expenses injured; damage of property, flora, ecosystem etc. the amendment made in 2010 provides equal opportunities for any citizen of the country to approach National Green Tribunal (NGT) and it also ensures that tribunal considers the principles of Sustainable Development, Precautionary Principles, Polluter Pays Principle and Inter Generational Equity while hearing and giving judgment.

The National Environment Appellate Authority Act, 1997

According to this act, it is mandatory requirement for the central Government for establishing appropriate authority for hearing appeals on area restrictions where industrial operations are prohibited or will be carried out with certain safeguard measures. The National Environment Appellate Authority (NEAA) was set up by the Ministry of Environment and Forests to address cases in which environment clearances are required in certain restricted areas. It was established by the National Environment Appellate Authority Act 1997 to hear appeals with respect to restriction of areas in which any industries, operations or processes or class of industries, operations or processes shall or shall not be carried out, subject to certain safeguards under the Environment (Protection) Act, 1986. The Authority shall become defunct and the Act shall stand repealed upon the enactment of the National Green Tribunal Bill 2009 currently pending in Parliament. (http://envfor.nic.in/rules-regulations/national*environment-appellate-authority)*

The Biomedical Waste (Management and Handling) Rules, 1998

According to these rules, there is legal binding on the health care institutions for streamlining the process of proper handling of hospital waste such as segregation, packing, transportation, collection, and treatment. It is the duty of institutions generating waste to handle it properly without making any adverse effect to human health and environment.

The Environment (Sitting for Industrial Projects) Rules, 1999

These rules provide detailed provisions relating to area where siting of industries is prohibited or for siting industries precautionary measures has to be taken regarding environment protection. The rules say that no new unit of industries listed in Annexure-I shall be allowed to set up in

the areas within the municipal limits of all municipal corporations, municipal councils and nagar panchayats and a 25 km belt around the cities having population of more than 1 million; 7 km belt around periphery of wetlands; 25 km belt around periphery of national parks, sanctuaries and core zones of biosphere reserves; 0.5 km wide strip on either side of national highways and rail lines. The rules also provide certain guidelines after careful assessment of their adverse ecological and environmental impacts.

The Ozone Depleting Substances (Regulation and Control) Rules, 2000

These rules have been made for regulating the production and consumption of Ozone Depleting Substances (ODS). The rules say that "no person shall produce any ozone depleting substance". The rules also prohibit the export and import of ODS to or from any country. It prohibits person or enterprise to sell, stock or exhibit for sale or distribute ODS to any person or enterprise. The rules prohibit new investments on ODS.

The Batteries (Management and Handling) Rules, 2001

The rules are applicable to every type of manufacturer, importer, re-conditioner, assembler, cleaner, auctioneer, consumer and bulk consumers that are involved in the manufacture, processing, sale, purchase, and use of batteries or components so as to regulate and ensure the environmentally safe disposal of used batteries.

The Biological Diversity Act 2002 and Biological Diversity Rules

The Act provides rules for the conservation of biological diversity, sustainable use of its components, and fair and equitable sharing of benefits that arise out of the use of biological resources and knowledge associated with it. It prohibits on transfer of Indian genetic material and claiming IPR (Intellectual Property Right) such as patents over biodiversity or related knowledge without the permission of Indian Government. It also empowers the Government to take such measures which are essential to conserve and sustainably use biological resources. It provides provision for sharing of benefits arising from the use of biodiversity. It provides regulations of the use of genetically modified organisms and setting national, state and local biodiversity funds. These funds will be used for the support to conserve and protect biological resources. The Act empowers for setting Biodiversity Management Committee (BMC) at village level; State Biodiversity Boards (SBB) at state level; and a National Biodiversity Authority (NBA) at centre level.

National Environment Policy of 2006

Building on earlier policies, the National Environment Policy (NEP) of 2006 is the most recent pronouncement of the government's commitment to

improving environmental conditions while promoting economic prosperity nationwide. The NEP's key environmental objectives include conservation of critical environmental resources, intra-generational equity, and livelihood security for poor, integration of environment in economic and social development, efficiency in environment resource use, environmental governance, and enhancement of resources for environmental conservation. This policy promotes mainstreaming of environmental concerns into all development activities, advocating important environmental principles and identifying regulatory and substantive reforms.

With respect to regulatory reforms, the NEP recommends revisiting the policy and legislative framework to "develop synergies among relevant statutes and regulations, eliminate obsolescence, and amalgamate provisions with similar objectives." The NEP identifies a new framework for legal action that includes application of a mix of civil and criminal sanctions, adoption of innovative economic instruments, and public-private partnerships in strengthening environmental compliance and enforcement. The MOEF is responsible for implementing the NEP.

NAPCC: National Action Plan on Climate Change.

For achieving sustainable development, the Prime Minister's council launched NAPCC in 30 June 2008. It comprises of eight National Missions namely:

- 1. National Solar Mission (NSM)
- 2. National Mission for Enhanced Energy Efficiency (NMFEEE)
- 3. National Mission on Sustainable Habitat (NMSH)
- 4. National Water Mission (NWM)
- 5. National Mission for Sustaining The Himalayan Ecosystem (NMSHE)
- 6. National Mission for Green India (NMGI)
- 7. National Mission for Sustainable Agriculture (NMSA)
- 8. National Mission for Strategic Knowledge for Climate Change (NMSKCC)

India's first National Action Plan on Climate Change (NAPCC) outlining existing and future policies and programs addressing climate mitigation and adaptation. Emphasizing the overriding priority of maintaining high economic growth rates to raise living standards, the plan "identifies measures that promote our development objectives while also yielding co-benefits for addressing climate change effectively." It says these national measures would be more successful with assistance from developed

countries, and pledges that India's per capita greenhouse gas emissions "will at no point exceed that of developed countries even as we pursue our development objectives."

The brief description of National Missions is as below-

National Solar Mission The NAPCC aims to promote the development and use of solar energy for power generation and other uses with the ultimate objective of making solar competitive with fossil-based energy options. The plan includes specific goals for increasing use of solar thermal technologies in urban areas, industry, and commercial establishments; a goal of increasing production of photovoltaic to 1000 MW/year; and a goal of deploying at least 1000 MW of solar thermal power generation. Other objectives include the establishment of a solar research center, increased international collaboration on technology development, strengthening of domestic manufacturing capacity, and increased government funding and international support.

National Mission for Enhanced Energy Efficiency Current initiatives are expected to yield savings of 10,000 MW by 2012. Building on the Energy Conservation Act 2001, the plan recommends-mandating specific energy consumption decreases in large energy-consuming industries, with a system for companies to trade energy-savings certificates; Energy incentives, including reduced taxes on energy-efficient appliances; and Financing for public-private partnerships to reduce energy consumption through demand-side management programs in the municipal, buildings and agricultural sectors.

National Mission on Sustainable Habitat To promote energy efficiency as a core component of urban planning, the plan calls for extending the existing Energy Conservation Building Code; a greater emphasis on urban waste management and recycling, including power production from waste; strengthening the enforcement of automotive fuel economy standards and using pricing measures to encourage the purchase of efficient vehicles; and incentives for the use of public transportation.

National Water Mission With water scarcity projected to worsen as a result of climate change, the plan sets a goal of a 20% improvement in water use efficiency through pricing and other measures.

National Mission for Sustaining the Himalayan Ecosystem The plan aims to conserve biodiversity, forest cover, and other ecological values in the Himalayan region, where glaciers that are a major source of India's water supply are projected to recede as a result of global warming.

National Mission for a "Green India" Goals include the afforestation of 6 million hectares of degraded forest lands and expanding forest cover from 23% to 33% of India's

territory.

National Mission for Sustainable Agriculture The plan aims to support climate adaptation in agriculture through the development of climate-resilient crops, expansion of weather insurance mechanisms, and agricultural practices.

National Mission on Strategic Knowledge for Climate Change To gain a better understanding of climate science, impacts and challenges, the plan envisions a new Climate Science Research Fund, improved climate modeling, and increased international collaboration. It also encourage private sector initiatives to develop adaptation and mitigation technologies through venture capital funds.

The NAPCC also describes other ongoing initiatives, including:

- (1) Power Generation The government is mandating the retirement of inefficient coal-fired power plants and supporting the research and development of IGCC and supercritical technologies.
- (2) Renewable Energy Under the Electricity Act 2003 and the National Tariff Policy 2006, the central and the state electricity regulatory commissions must purchase a certain percentage of grid-based power from renewable sources.
- (3) Energy Efficiency: Under the Energy Conservation Act 2001, large energy-consuming industries are required to undertake energy audits and an energy labeling program for appliances has been introduced.

For the implementation of these missions, ministries with lead responsibility for each of the missions are directed to develop objectives, implementation strategies, timelines, and monitoring and evaluation criteria, to be submitted to the Prime Minister's Council on Climate Change. The Council will also be responsible for periodically reviewing and reporting on each mission's progress. To be able to quantify progress, appropriate indicators and methodologies will be developed to assess both avoided emissions and adaptation benefits.

National Green Tribunal Act, 2010

The National Green Tribunal Act was framed in 2010 for effective and expeditious disposal of cases that are related to environmental protection and conservation of forests and other natural resources. It is responsible for the enforcement of any legal right made for the protection and conservation of environment. It acts as a specialized body that will possess expertise to handle any kind of environmental disputes in multidisciplinary issues. The Act does not bind the tribunal by the procedure laid down under the code of Civil procedure, 1908. It empowers the tribunal

to be guided by principles of natural justice. The tribunal is subjected to possess dedicated jurisdiction in matters related to environment for providing speedy justice and hence reducing the burden of litigation in higher courts. It is mandatory for the tribunal to dispose cases or appeals within 6 months of filing the case. The NGT is proposed to set up at five places initially and after that the number will increase depending on the need. New Delhi is the Principal Place of sitting of Tribunal. Other Tribunals are at Bhopal, Pune, Kolkata and Chennai.

The Noise Pollution (Regulation and Control) Amendment Rules, 2010

The rules provides terms and conditions for reducing noise pollution, for permitting use of loud speakers or public address system from 10 pm to 12 midnight during any cultural or religious festive occasion. According to these rules, the noise level at the boundary of public place where loud speaker is used should not exceed 10 dB from the ambient noise standards of that area or 75 dB whichever is less. The rules also restrict the use of horns and sound emitting construction equipments in silence zones or residential areas at night. The state government is empowered to classify the areas in the categories of industrial, commercial, residential or silence area/zones so that noise standards can be effectively implemented. The state governments can also take steps to reduce noise generating from vehicular movements and blowing of horns. It also prohibits the use of fire crackers in silence zones in night.

Plastic Waste (Management and handling) Amendment Rules, 2011

MOEF has notified the rules in 2011. It replaces the Recycled Plastics Manufacture and Usage Rules of 1999 (amended in 2003). The Minister of Environment and Forests, Mr. Jai Ram Ramesh released the rules. He was of the opinion that there is need to improve solid waste management systems. The features include ban on use of plastic materials in sachets for storing, packaging or selling gutkha, tobacco and pan masala. It also include ban on use of recycled plastics or compostable plastics for packing food stuffs. It calls for recycled carry bags to have specific BIS (Bureau of Indian Standards) and thickness should not be less than 40 microns in carry bags. The rules provide explicit recognition of the waste pickers.

Major Institutions in India for the protection of environment

The main institutions in India responsible for the formulation and enforcement of environmental acts and rules are:-

(1) Ministry of Environment and Forests (MOEF)

- (2) Central Pollution Control Board (CPCB)
- (3) State Pollution Control Board (SPCB)
- (4) Municipal Corporations.

Ministry of Environment and Forest (MOEF)

The ministry was established in 1985 by the Central Government to act as a nodal agency that is responsible for planning, promotion and coordination of all the environmental activities. The main activities include formulation of national policies, standards and regulations. MOEF is an apex institution for the conservation of flora, fauna, forests and wildlife. MOEF is responsible for prevention and control of pollution as well as protection of environment. MOEF takes care of afforestation and regeneration of degraded areas. At also acts as a nodal agency for UNEP (United Nations Environment Programme), SACEP (South Asia Cooperative Environment Programme), ICIMOD (International Centre for Integrated Mountain Development) and for the followup of the UNCED (United Nations Conference on Environment and Development) and many more.

Central Pollution Control Board (CPCB)

The Water (Prevention and Control of Pollution) Act, 1974 constituted the statutory organizations known as Central Pollution Control Board (CPCB). The powers and function of CPCB was further enhanced by Air (Prevention and Control of Pollution) Act, 1981. CPCB provides technical services as well as field formation to the MOEF. The main task of CPCB is to reduce pollution of water and air. CPCB also started NAMP (National Air Monitoring Programme) for determining present air quality status and to control and regulate pollution from industries and other sources. India is home for 14 major rivers, 44 medium rivers and 55 minor rivers. It also consists number of lakes, ponds and wells. The waste water discharges from the industries and sewage are responsible for polluting these rivers. So CPCB is responsible for the collection, collating and disseminating technical and statistical data relating to water and air pollution. It also acts as an advisory body to government for the protection of environment. The CPCB empowers the officers to inspect, collect, compile and publish information about the samples collected from various sources. It also assists, guide and coordinate the activities of State Pollution Control Boards. The CPCB has central office at New Delhi. It also has zonal offices located in Calcutta, Shillong, Kanpur, Bangalore and Vadodara.

State Pollution Control Boards

The State Legislatures' established SPCBs by adopting Water Act of 1974 and Air Act of 1981. The SPCBs are either attached to Environment Department or to Forest and Wildlife Department at the state level. The major function of

the SPCB includes the enforcement of national standards of water and air pollution. SPCBs are responsible for planning and implementing state-level Pollution Control Programs for the protection and improvement of environment. It is an advisory body for the state governments. It also grants consents to Establish (CTE) and consent to operate (CTO) under the Air and Water Acts. It also authorizes hazardous waste disposal under the EPA (Environment Protection Act). The SPCBs also collect water cess from the users of water.

Municipal Corporations

It is a local government body that is responsible for roads, public transportation, water supply and sanitation. Sanitation includes waste management, sewage, drainage and flood control. Public safety services like fire and ambulance services etc. it is responsible for scavenging, removal and disposal of filth, rubbish and other obnoxious or polluted matters. Municipal Corporations are also responsible for reclamation of unhealthy localities, removal of noxious vegetation and abatement of all nuisances. It regulates the places for the disposal of dead bodies and maintaining these places in an effective manner. The municipal corporations are also responsible for maintaining and managing the slaughter houses and municipal markets. The construction, maintenance and cleaning of drains and drainage works and public toilets are undertaken by municipal corporations.

The role of judiciary for the protection of environment cannot be ignored. The Supreme Court of India and High Courts of the states have contributed a lot for the enforcement of environmental laws through PIL (Public Interest Litigations). PIL under Article 32 of constitution and SLP (Special Leave Petition) under the article 136 are the two important tools for enforcement of environmental laws by Supreme Court. In case of High Courts, PIL under article 226 and SLP under Article 227 can be used. Due to this judicial activism, the courts have directed the authorities for providing relief and compensation to the victims of environment pollution. Courts have been instrumental in implementing the environmental laws framed by the authorities from time to time. (OECD, 2006)

Conclusion

From the above discussion it is apparent that efforts done by India for the protection on environment are worth praising and there is no shortage of rules, regulations and laws regarding the environment in the country. Over the years India has framed the environmental laws in accordance with International requirements for the protection of environment. Keeping in view the geographical and cultural diversity of the country, the laws have been effectively framed and there seems to be comprehensive coverage of all the aspects and areas of

environment. There is no back footing on the part of India when the participation of India is needed at the international arena for the protection of environment. Whenever there was need of country's participation for framing laws or for making contribution at the international level India's stand has been always appreciable. But if we analyze the present condition of environment it seems that though the efforts have been there still the results are not so encouraging. There seems to be some lack in the execution as well as effective implementation of these laws. There is dire need of bringing all these laws under one umbrella and under one single institution which can be responsible as well as accountable for the implementation of these laws eliminating the confusion in the minds of the polluters and the regulators. It is highly recommended that the proposed single institution for regulation should be totally independent.

References

- Joshi, S. K. (undated), "Effective Environmental Governance at Local level: A Concept Paper", (available online at
- http://www.aponline.gov.in/.../Environmental_Governanc e-updated.pdf accessed on Jan 10, 2011)
- Kathuria, V. (2004) 'Informal Regulation of Pollution in a Developing Country: Empirical Evidence from India', SANDEE Working Paper No. 6-04, April, Kathmandu (online available from www.sandeeonline.org).
- Pachauri, R.K., "Environment-The concerns and strategies" accessed at
- planningcommission.nic.in/reports/sereport/ser/vision202 5/environ.doc
- Russell, C.S., and W.J. Vaughan. 2003. The Choice of Pollution Control Policy Instruments in Developing Countries: Arguments, Evidence and Suggestions. International Yearbook of Environmental and Resource Economics, Vol. VII.
- Barnea, A. and Rubin, A. (2006), "Corporate Social Responsibility and Shareholders Value: An event study Analysis", (Working Paper Series, Federal Reserve Bank of Atlanta) available at http://ssrn.com/asstract=928557
- Delmas, M. (2003), "In Search of ISO: An Institutional Perspective on the Adoption of International Management Standards" (Research paper No. 1784, Research paper series, Stanford Graduates School of Business), pp.1-51.
- Heal, G. (2004), "Corporate Social Responsibility An economic and Financial Framework", Available at SSRN: http://ssrn.com/abstract=642762

Salehi, M. and Azary, Z. (2009), "Stakeholders' Perceptions of Corporate Social Responsibility: Empirical evidences from Iran", International Business Research, Vol. 2, No. 1, pp 63-72

Sanker, U. (1998), "Laws and Institutions Relating to Environmental Protection in India", Revised version of the paper presented at the Conference on "The Role of Law and Legal Institutions in Asian Economic Development", held at the Erasmus University, Rotterdam, November 1-4, 1998. Also available at http://www.mse.ac.in/pub/op sankar.pdf

White, M.A. (1995) "Environmental Finance: Raising and using Funds in an Age of Ecology", paper presented at 4th International Conference of the Greening of Industry Network, Toronto, Canada.

BOOKS

Chary, S.N. and Vyasulu, V. (2001), *Environmental Management: An Indian Perspective*, Macmillan India Limited, New Delhi.

Hempel, L.C., *Environmental Governance: The Global Challenge*, Island Press, Washington, D.C.

Kumar, Arvind (2004), *Environmental management*, APH Publishing Corporation, New Delhi.

Krishnamoorthy Bala 2012, 'Environmental Management: Text and Cases'.PHI leaning Private Limited. New Delhi.

Shastri, S.C. 2005 'Environmental Law'. Lucknow: Eastern Book Company.

Links

http://www.c2es.org/international/key-country-policies/india/climate-plan-summary

http://envfor.nic.in/rules-regulations/national-environment-appellate-authority

OECD (2006) report on "Environmental Compliance and Enforcement in India: A Rapid Assessment" pp 1-31.

http://planningcommission.nic.in/reports/sereport/ser/vision2025/environ.pdf

http://www.crrid.res.in/keyurban.pdf

www.planningcommission.nic.in/plans/annualplan/ap02_0 3/ap23 ch9.pdf

www.envfor.nic.in/report/0607/chap04.pdf

www.cleantechindia.com/environment.html

Websites

www.india.gov.in

www.punjab.gov.in

www.cpcb.gov.in

www.ppcb.gov.in

www.jstor.org

www.emeraldinsight.com

www.wikipedia.org

www.google.com