



ISSUES AND EFFORTS IN ENVIRONMENT PROTECTION IN INDIA: AN ANALYSIS

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Abstract

Environmental protection has become a major issue in contemporary academic debates on development. This is an outcome of the much delayed realisation of human beings that protection of natural environment is necessary for the very existence and survival of living organisms, including human beings. Environment protection is vital in the context of increased industrialization as it results in over exploitation of natural resources, pollution of air, water, destruction of flora and fauna etc. The severe issues of global warming, acid rain, climate change, and grave diseases urge people to reflect on conservation of environment and mitigation of degradation. The environmental conservation activities are undertaken globally by Environmental Non Governmental Organisations, international organisations and nation states through different institutions and programmes. Such efforts have crucial impact in India also as many such initiatives are going on in India. The prime victims of environmental degradation and disasters are children, adivasis and women, the most underprivileged in the society, which compel them to take active participation in environmental protection. The article looks into various environmental issues and protection efforts in India.

Key Words: Environment, Gender, Environmental Degradation, Environmental Protection, Non Governmental Organi -- sations, Biodiversity, Conservation, Environmental Movements.

Introduction

Environment is the milieu that moulds the organism in its lifetime. It is the source of all forms and support system of life (UNESCO & ICSU, 1999). Basic survival needs like food, water, air to breathe required for the entire life and life based activities have their roots in environment which includes nature and its resources. Living organism cannot prolong without proper protection of environment. Section 2 (a) of the Environment (Protection) Act of India 1986 defines environment as follows: "Environment includes water, air and land and the interrelationship which exists among and between water, air and land and human beings, other living creatures, plants, micro-organism and property" (1986:2). According to Koshoo & John (2009: 20) "environment is the sum total of all conditions and influences that affect the development and life of organisms". This reveals that there are different types of environment comprises different types of forces such as physical, intellectual, economic, political, cultural, social, moral and emotional (Pachauri, 2012). All definitions on environment explain the close relation between human beings and environment.

This paper focuses on natural environment which consists of four interlinking systems; the atmosphere, the hydrosphere, the lithosphere and the biosphere¹. They are in constant change and these changes are by and large the products of human activities. On the other-side, these changes affect human life significantly. The reliance of human life on environment is so as that environment can stand without human but human cannot survive without appropriate environment. Hence for the survival of humans, protection of environment is the basic necessity.

With the deepening understanding of the importance of environmental protection on a global scale, various efforts have been taking place both at the national and international levels. International organisations like UNO, regional organisations like EU and individual countries have taken major initiatives for reaching to multilateral agreements on environment protection (Mitchell, 2003). Non Governmental Organisations (NGOs) are also actively participating in environment protection efforts at local, regional and international levels. Through various means like promoting environmental education, training and capacity building among the people, all of them are playing a crucial role in environmental protection, conservation and development (Dildeep & Pooja, 2012; Hunter, 1999).

Degradation and Protection of Environment

Environmental Degradation is the process by which our environment i.e., air, water and land, progressively contaminated, over-exploited and destroyed (Gosh, 2015). It can be defined as the deterioration of the environment through depletion of resources such as air, water and soil; the destruction of ecosystems and the extinction of wildlife. The main grounds of environment degradation are environmentally harmful activities of human beings like deforestation, pollution, soil erosion, loss of biodiversity and land degradation (Anand, 2013). The economic factors like globalization, the market failure and changes in price system of environment production along with lack of property rights and the problems in dominant economic development model are also resulting in environmental degradation in India (Ministry of Finance, 1998-99). Many argue that the process of globalization along with consumerism put ever increasing stress on the limited resources of the



earth, which results in the destruction of wildlife habitat and the disposal of toxic waste in turn leads to environment degradation (Graham, 2000).

Environment protection is the sum total of all actions that reduce the impact of human activities on nature, the biosphere, as well as various measures to avoid or minimise these impacts through technical, political and other means (Baltic University, 2009). Environment protection can be defined as “a set of activities which aim to prevent or mitigate threats, damages and pollution of the environment, reduce the consequences of existing damage, attempt to recreate a pre pollution state of affairs” (BME, 2013:1). According to U.S Department of Health and Human Services (2007) Environment protection include actions taken to prevent or minimize adverse effects to the natural environment. The severe consequences of environment degradation include climate change, famine, drought, loss of biodiversity, conflicts, human rights abuse, extreme poverty and migration have attracted global attention on the need for environment protection.

The problem of environmental degradation compels people to take active participation in environmental protection movements in India. The origin of the environment protection movement in India dates back to *Kejari* movement and gained momentum through *Chipko* movement, *Appiko* movement, *Save Silent Valley* movement and *Narmada Bachao Andolan*. The major trend in the environmental protection movements in India reflects that most participants in such movements are women, Adivasis, and poor people (Shiva, 1988; Baviskar, 1995).

Environmental Protection Efforts: The Global Scenario

United Nations Environment Programme (UNEP) is the first concrete effort of international community to address environmental issues in a global scale. The UNEP was established in 1972 as a consequence of increasing concerns on global environmental issues to coordinate environmental protection activities globally. United Nations Conference on the Human Environment, held in Stockholm in 1972 comprised of important 26 principles concerning environment and development (UNEP, 1972). Some of the major initiatives of UNEP are the Vienna Convention for the protection of Ozone Layer in 1985 (a multilateral agreement to protect Ozone layer) (UNEP Ozone Secretariat, 2011) and the Rio Declaration on Environment and Development in 1992 (consist of principles to protect ecosystem) (UNEP, 1992). Kyoto Protocol was signed in 1997 to reduce greenhouse gas emission (Hunter, 1999). The United Nations Climate Change Conference to reach global agreement on climate change, commonly known as the Copenhagen Summit, was held in 2009 (UNCCC, 2009). Earth Summit 2012, which was held in Rio de Janeiro, is another international conference on reconciling the economic and environmental goals of the global community (Endl, Berger and Umberto, 2012). All these international level efforts are helped in creating a new environmental consciousness and intensifying the efforts for the prevention of environment degradation.

The activities of Non Governmental Organisations have also changed the nature of international environmental discourses and policymaking. With the involvement of environment NGOs, international community has begun to recognize the need for effective and meaningful agencies for involvement in international policymaking and implementation in the matters of environment (Wapner, 2000). A number of environmental NGOs which addressing international environmental issues gathers and analyze technical information on environmental issues, gained the attention of key policymakers to act upon environmental issues (Hunter, 1999). NGOs are involving in global environmental governance through expert advice and analysis, intellectual competition with governments, mobilization of public opinion, representation of the voiceless, service provision, monitoring and assessment, and legitimization of global-scale decision making mechanisms (Gemmill & Bamidele, 2013).

One of the most important roles that NGOs plays in global environmental governance is the supply of up to date information on critical environmental issues. These groups are providing the accurate, up-to-date data on the most pressing environmental issues. Environmental Non Governmental Organisations (ENGOS) are also crucial actors in compliance monitoring of international agreements. At times, they provide more accurate data than governments which intended to. Besides, NGOs in many countries have been highlighting disparities in who bears environmental burdens and who gets the benefits of environmental investments, thus creating environmental consciousness. They have also brought public interest litigation to defend environmental rights as well as to clarify and enforce laws, thus plays a prominent role in environment protection (Gemmill & Bamidele, 2013). In short, ENGOS role is crucial in environment protection policies, programmes and implementation at local, regional, national and global levels.

Environment Protection in India: Major issues

The Constitution of India has certain provisions to ensure environment protection as the Directive Principles of State Policy and the clauses on Fundamental Rights and Duties have provisions to prevent environmental degradation (Vardhan, 2015; Ussain et al., 2012). However, the country has failed to formulate adequate policies and programmes in tune with such



provisions for long time. Many studies reveal that the socio-economic development of India is hampered by environmental degradation. A report released by the World Bank (2013) estimates that environmental degradation is costing India around 5.7% of its GDP every year. Social factors such as population growth, poverty, and urbanisation contribute to environment degradation in India. The uncontrolled population growth which led to massive poverty compels people for over exploitation of natural resources. The unplanned urbanisation process also led to the destruction of natural resources. Apart from these, many economic and institutional factors also speed up the process of environment degradation (Kaurh, 2012).

Lack of economic development is considered as a major reason for environmental degradation in India on the one hand as it leads to inadequate sanitation and clean drinking water. But on the other hand the growth of economic activity is also considered as one of the reasons for environmental degradation as problems of air and water pollution are arising out of it (Pacharuri, 2003). With the adoption of new manufacturing technology through intensive and reckless use of resource and energy use (fossil fuel, minerals, timber) the natural resources depletion such as water, air and land contamination, health hazards along with degradation of natural ecosystems is increasing day by day (Economic Survey, 1998-99).

Institutional factors market failure or nonexistence of proper functioning markets for environmental goods and services are major reasons for environmental degradation. The lack of close coordination with environmental policy making institutions such as Ministries in State Governments, Pollution Control Boards, and number of scientific and technical institutions, universities and non-Governmental organisations creates lag in proper planning and implementation of environment policies by the Ministry of Environment & Forests in India. Similarly, lack of trained personnel and comprehensive database delay many projects to address the issues which also hampers the proper implementation of environmental policies (Economic Survey, 1998-99).

The major environmental problems in India are: (1) Land and Soil Degradation, (2) Pollution, (3) Deforestation, (4) Loss of Biodiversity, (5) Problem regarding Waste Disposal, and (6) Coastal Pollution.

Major Environmental Protection Efforts in India

Indian Constitution ensures environment protection through Directive Principles of State Policy as well as Fundamental Rights and Duties. Article 51 a (g) of the Constitution ensures protection and improvement of the natural environment including forests, lakes, rivers and wild life, and to have compassion for living creatures. Similarly, Article 48 ensures organisation of agriculture and animal husbandry, and Article 48(a) deals with protection and improvement of environment safeguarding of forests and wildlife. Article 21 of the constitution ensures right to life and personal liberty which can also be linked to environment security (Vardhan, 2015).

Efforts by Central Government

Government of India has adopted various international and national strategies to mitigate environmental problems and passed several laws relating to environmental protection. The important laws for prevention of environment degradation in India are Water (Prevention and Control of Pollution) Act of 1974, (amended in 1988), Air (Prevention and Control of Pollution) Act of 1981, (amended in 1987), Environment (Protection) Act of 1986 (EPA), Public Liability Insurance Act of 1991, National Environmental Tribunal Act of 1995, and National Environmental Appellate Authority Act of 1997. The Government also enacted the National Environment Policy in 2006 for environmental conservation with the help of state governments (Parikh, 2014). Ministry of Environment and Forests (MOEF), the Central Pollution Control Board (CPCB), State Department of Environment, State Pollution Control Board and municipal corporations are liable to enactment of environment laws in India (Ussain Saheb et al., 2012).

Environmental protection efforts by the State (Provincial) Governments

The state governments in India also have taken several steps for environmental protection. It is constitutionally asserted under Article 48-A of our Constitution, that 'The State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country'. The 42nd amendment of the Constitution 1974 reasserts the responsibility of State Governments to protect and improve the environment and to safeguard the forests and wildlife of the country (Vardhan, 2015). States in India took initiative in the field of environmental protection. Orissa River Pollution Prevention Act, 1953, and Maharashtra Prevention of Water Pollution Act, 1969 are examples of states initiatives in river protection. It is extended to rivers, watercourses, inland water both natural and artificial, and subterranean streams (Singh, 2013).

The government of Delhi is undertaking various schemes on environment protection by addressing the problem of air, noise and water pollution, disposal of wastes including solid waste, e-waste, bio medical waste, protecting greenery by planting trees, protecting parks and measures in response to climate change. The department has fourteen schemes for undertaking various programmes which facilitates environment awareness among citizen of NCT (National Capital Territory) of Delhi.



The programmes are multidimensional in nature which include research projects, actual field oriented activities and specific campaigns aim at educating the general public through plans including public environmental awareness activities, eco clubs in schools and colleges, pollution control and government management, environment data generation, survey, and research projects, and assistance from NGO (Government of NCT of Delhi, 2015). Similarly, the state government of Tamil Nadu, under Ministry of Environment and Forests, undertook initiatives for biodiversity conservation by creation of major protected areas include 3 Biosphere reserves, 5 National Parks, 8 Wildlife Sanctuaries 4 elephant reserves, 3 Tiger Reserves, and 13 Bird sanctuaries (Tamil Nadu Forest Department, 2007). These protected areas of the state contain populations of threatened wildlife; rare species and ecosystem include habitats, landscapes and wildlife corridors. They are undertaking projects and research programmes for better conservation of natural resources in the area.

Government of Karnataka took preventive measures against mining through the Department of Mines and Geology (DMG) under Mineral Exploration and Administration. It includes Survey & investigation and exploratory mining, Administration of Major Minerals (Granting mining leases and administering mining activity), Administration of Minor Minerals (Sanction of quarry leases for building materials and other minerals), collection of royalty and dead rents for both major and minor minerals, Laboratory investigation of minerals and Publication of Mineral investigation maps and library services.

The Government of Gujarat also involves in environmental protection through taking initiative to prevent pollution of air, water and noise pollution, hazardous waste and biomedical waste through Pollution Control Board. Cleaner production, cleaner technology assessment, eco industrial development, emission reduction, energy efficiency enhancement and conversion of wastes to value added products to optimize life cycle benefits, promoting the concept of green buildings, all are initiated by Gujarat with a view to environment protection (Gujarat Pollution Control Board, 2011). State of Rajasthan has its rules on prevention of pollution such as Water (prevention and control of Pollution) Amendment rules, 1995, Air (prevention and control of Pollution) Amendment rules, 1995, and Municipal Solid Waste Management & Handling Rule, 2000. The Rajasthan government took initiative towards developing Non-conventional sources of energy through windmills and solar energy based power plants. For protection of wildlife, A Wildlife & Protected Area Network has been created within the State with two national parks and 25 wildlife sanctuaries (State of Environment Report for Rajasthan, 2007).

The North Eastern States of India has its own forest polices and environment protection Acts like Assam Forest Policies 2004 and Meghalaya Forest Regulation, 1980 (Department of Environment & Forest, Government of Assam, 2004). Recently, Sikkim is declared as the first organic state in the country in 2016. The Government of Sikkim launched a unique and innovative programme called 'State Green Mission', which is expected to generate awareness on environment & forests among the public and bringing in effect of participation and ownership among people in the whole process of environment protection. 'Solid Waste Management' was implemented in the state for garbage free clean Sikkim. Eco-Clubs have been established in the schools of Sikkim under National Green Corps Programme. The state government banned the use of non biodegradable materials like plastics, poly-bags, Bio-medical / chemical waste in 1997. In 2000 all agencies in the State of Sikkim were directed to use the alternatives of wood in building construction to conserve the forests and ecology. A State Medicinal Plants Board (SMPB) was also established in June 2002 for conservation and development of medicinal plants sector. It has created conservation zones for protection of biodiversity (State of Sikkim, 2007).

The government of Himachal Pradesh under the initiative of Forest Department involves peoples in Joint forest Managements. It also adopted National Wild Life Plan for conservation of Biodiversity. The Department of Horticulture took initiatives in protection and production of varieties of fruits. Department of Agriculture is implementing various schemes related to soil and water conservation. It has waste management laws and pollution control laws. Himachal Pradesh is the first Indian state to sell carbon credits under the UNO -mandated Clean Development Mechanism to the World Bank from new forests to be developed largely on waste ground (State Environment Report on Himachal Pradesh, 2009).

West Bengal has established Pollution Control Boards to deal with air, water and noise pollution. It has framed rules to protect biodiversity and wetland conservation such as West Bengal Inland Fisheries (Amendment) Act, 1993 & 2008, West Bengal Ground Water Resources (Management, Control and Regulation) Act, 2005, The West Bengal Land Reforms (Amendment) Act, 2005, and West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006 (Department of Environment Government of West Bengal, 2012).

The Government of Kerala has initiated several environmental protection measures. With a view to environmental protection and conservation, the State Government, has passed many acts such as The Wildlife (Protection) Act 1972, The Water (prevention and Control of Pollution) Act, 1984 (amended in 1998), The Water (Prevention and Control of Pollution) Cess Act, 1977 (amended in 1991 & 2003), The Forest (Conservation) Act, 1980 (amended in 1988, 1992 & 2003), The air



(prevention and Control Pollution) Act, 1981 (amended in 1987), The Coastal Regulation Zone Notification 1991, The Municipal Solid Wastes (Management & Handling) Rules 2000, The Biological Diversity Act 2002 and the Biological Diversity Rules 2004, Kerala River Bank Protection and Sand Mining Regulation Act (2001). The state of Kerala banned thin plastic carry bags below 30 microns in 2013 as it is dangerous to environment and animals (Info Change, 2015).

Role of NGOs in Environmental protection in India

In India the NGOs are actively participating in environment protection programmes including creating awareness among people on environmental issues, creation of awareness on human rights for a clean environment, conduct rural participation in environment programmes, disseminate information with means of newsletter, brochures, articles, and audiovisuals. They also help the village administrative officials in the preparation, application and execution of projects on environmental protection (Ramesh, 2014). Important environmental NGOs working in India are Greenpeace India, Awaz Foundation, Centre for Science and Environment, Goa Foundation, Centre for Environmental Research and Education India, Foundation for Ecological Security, Exnora International, and Winrock International India (Dildeep & Pooja, 2012). The environmental NGOs like Greenpeace conducted a campaign against coal mining in Tigar lands of Madhya Pradesh, Chhattisgarh, Jharkhand and Odisha, against Mercury plant of Unilever in Tamil Nadu, protest against Dharma Port Project in Odisha which destroyed the habitat of sea turtles, and protest against Union Carbide Corporation (Human Rights Documentation, 2007; Glanz & Bishop, 2010). The people who are aware of the need for conservation of environment become members of environmental NGOs and work to ensure a deterioration free environment.

Environment Protection Movements and activism in India: An Overview

Democratic system in India provides opportunities for growth of environmental movements. It allows environmental protection movements to provides adequate opportunities to people to participate in the process of decision-making and the environment also involves the issues on which everyone has some right to be consulted (Lafferty, 1996). The environmental movement in India is kaleidoscopic in nature, representing various points of view (Krishna, 1996). The mainstream environmental movements are predominantly against construction of big dams for power generation and irrigation, mining, conservation of coastal areas, and destruction of forests (Shiva, 1991).

Narmada Bachao Andolan (1985)

India's Narmada Bachao Andolan (NBA) is an environment movement against the building of a number of dams along the Narmada River funded by World Bank. The NBA spread to three states of Gujarat, Maharashtra, and Madhya Pradesh as the construction of Sardar Sarovar Dam affect the environment and settlement of people of these areas. NBA, which led by the Medha Patkar, Baba Amte, and Arundhati Roy had turned into the International protest, gaining support from NGO'S all around the globe. Protesters agitated against the issue through the mass media, jal satyagraha, hunger strikes, massive marches, rallies and with the on screen of several documentary films (James, 2014). They employed Gandhian methods for protest (Hardiman, 2003). Women played active role in the campaign (Narula, 2008). The NBA struggle in Madhya Pradesh was led by the Narmada Shakti Dal, a separate women's organization within NBA, comprised of female villagers (Narula, 2008). With strong protest from NBA World Bank withdraw project in 1993 (Roy, 1999; Nakhoda, 2010; Narula, 2008). But the case continued in the Supreme Court. Even though with the verdict of Supreme Court to raise the height of dam which become the hurdle in the way of NBA to fulfil its aim, the strong struggle for the rehabilitation of victims and other environmental protection effort of NBA is continuing and inspiring other environment protection and anti- dam movements in India as well as world (Parsai, 2014).

The Chilka Bachao Andolan in Odisha, was a movement by fisherman against Integrated Shrimp Project for intensive prawn cultivation, which was a threat to livelihood of fisherman living around the lake. This movement was a resistance against the commercial use of natural resource in the area without considering the livelihood of local people by Tata Iron and Steel Company and Government of Odisha (Sahana, n.d). Miti Bachao Abiyan (Save Soil Movement) was launched in 1977 against the water logging and salinity caused by the Tawa dam in Madhya Pradesh (Rathore, 2012). Bedthi Campaign is a movement against hydro power project in Bedthi river in Karnataka district which caused the displacement of population and destruction of natural environment (Gadgil & Malhotra, 1983). Kaiga Campaign is a movement against nuclear plant in Karnataka, which hampered the livelihood through radiation in the surrounding area. Save Western Ghats Movement is to protect Western Ghats, one of the main bio diversity hot spot by conservation of wildlife flora fauna and biodiversity from destruction. These are important environment protection movements left its mark in India.

Conclusion

The issue of environment degradation become centre of attention of international organizations, sovereign nations as well as Non Governmental Organizations which in turn result in enactment of laws, agreements and creation of monitoring institutions in this regard. Such global developments have a clear influence on environmental protection methods and



movements in India. The analysis of the activities of state governments, central government and nongovernmental organisations in the field of environmental protection in India reveals that to prevent environmental degradation has become the focal point in such efforts. Environment is the base of survival of life system which compels people individually as well as collectively to take part in active environmental protection efforts. It is interesting to note that most of the active participants in environmental protection movements are women, adivasis and other marginalised sections of the society. This is because they are the major victims of any damage to environment.

Environment protection is vital in a country like India as increased industrialization leads to over exploitation of natural resources, pollution of air, water, flora and fauna. A balanced industrialization and development policy is to be framed for the protection of environmental resources for existence and survival of human beings. Protection of natural resources is the basis of survival of human being, thus environment protection becomes the question of human right, since for humans, the rewards of economic security, social security, and health security that emanate from a pollution free environment. Thus the urge for a vigorous and quality/healthy life and brighter future for next generation impel for environment protection.

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