
AN CASE STUDY ON ENVIRONMENTAL ISSUES IN INDIA

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ABSTRACT

The word "Environment" is most commonly used to describe "natural" environment and means the sum of all living and non-living things that surround an organism, or group of organisms. Environment includes all elements, factors, and conditions that have some impact on growth and development of certain organism.

The environmental issues in India become more serious every day and she is turning into a bit of a mess on this front but with a serious lack of education and over 1 Billion people, a huge amount of which are in dire poverty, it's hardly surprising. The recent boom in its industries, little or no environmental education, infrastructure nearly at bursting point not to mention the huge deforestation that's going on. In fact, there is no shortage at all of government legislation protecting the environment but unfortunately it is never enforced due to flagrant abuse of power, corruption and lack of resources. One of the critical ecological problems is the global warming that caused by large emissions of carbon dioxide in atmosphere by cars, airplanes, fabrics all over the world.

Keywords: Environment, Lack Of Education, Population, Poverty, Industries, Deforestation, Government Legislation, Corruption, Global Warming, Pollution.

I. INTRODUCTION

ENVIRONMENTAL CONCERNS AS A GLOBAL ISSUE

India is not the only country facing environmental issues. Definitely air and water pollution and climate change are more global issues that require a concerted effort by all nations to solve. A report by the Intergovernmental Panel on Climate Change (IPCC) in "Climate Change Science Compendium 2009", suggests that the world will be experiencing more of ocean acidification, ice-sheet melting, sea-level rise, and so-called tipping points in climate affects much sooner than ever thought off (Parks, 2009).

Although environmental issues are global in nature, each country is in control of its own environment with jurisdiction over its territory and, hence, should be controlling, monitoring, and enacting regulations in safeguarding its environment. This is true for India too. The Copenhagen Accord makes it clear that it is up to individual countries to devise and enforce the regulations necessary to achieve their national commitments to combat global warming by reducing greenhouse gas emissions. Because of the country specific role of controlling and monitoring the environment, it is difficult to enforce environmental standards on countries from a global perspective, each country should be willing to consider environmental issues as a probable contributor to the overall global degradation of the environment and participate in controlling it through its laws and participation by its industrial sector. In addition, each country could be part of a worldwide association/organization that uses the global network, technological know-how, and resources to be a contributing partner to this group in helping the environment (like the Kyoto Protocol of 1997 and Copenhagen Accord of 2009 on climate change). When international organizations and non-governmental organizations (NGOs) try to help individual countries on environmental issues, in some instances it creates problems. In a research paper funded and supported by the World Bank, researchers found that in India, the role of international institutions and NGO's often have difficulty matching their interest with that of the state, especially, when it comes to human rights standards (Randeria, 2003).

The Major Environmental Issues in India

Some of the major environmental concerns confronting India include:

- Air pollution from industrial effluents and vehicle emissions;
- Energy-related environmental problems such as, chemical & oil pollution and Greenhouse Gas (GHG) emissions (Greenstone and Hanna, 2014);
- Water pollution from raw sewage, the lack of adequate sanitation, and nonpotable water throughout the country;

- Municipal solid waste management (MSWM) remains a challenge for India due to the rising population and the resultant infrastructural needs (Dube, Nandan, and Dua, 2014);
- Over-population and its strain on natural resources; and * Agricultural factors such as, runoff of agricultural pesticides, overgrazing, short cultivation cycles, slash and burn practices, destructive logging practices, and deforestation of timber reserves for fuel, all contribute conjointly to the decimation of the subcontinent's environmental system (Greenstone and Hanna, 2014).

The rapid growing population and economic development is leading to a number of environmental issues in India. It is estimated that the country's population will increase to about 1.26 billion by the year 2016. Major Environmental issues are Forest and Agricultural land degradation. Resource depletion (water, mineral, forest, sand, rocks etc.) Environmental degradation. Public Health, Loss of Biodiversity, Livelihood Security for the Poor Population The four basic demographic factors of births, deaths, migration and immigration produce changes in population size, composition, distribution and these changes raise a number of important questions of cause and effect. Population growth and economic development are contributing too many serious environmental calamities in India. These include heavy pressure on land degradation, forests, habitat destruction and loss of biodiversity. Changing consumption pattern has led to rising demand for energy. The final outcomes of this are air pollution, global warming, climate change, water scarcity and water pollution.

II. ENVIRONMENTAL REGULATIONS IN INDIA

Indian government has shown some foresight in the area of environmental concerns by enacting legislations meant to protect the environment. India has about two hundred laws dealing with environmental protection (www.cpreec.org). India's environmental regulations date back to the 1970s. The first important regulation enacted was the Water Act of 1974 followed by the Air Act of 1981. These acts created the Central Pollution Control Board (CPCB) responsible for data collection and policy enforcement. It also developed detailed procedures for environmental compliance at the central government level. Simultaneously, a second control board at the state level called State Pollution Control Board (CPCB) was also established to collect data and for policy enforcement at the state level. These were followed by other regulations meant to protect the environment. India's key policies relating to environmental protection are governed by:

- 1) The national forest policy, 1988;
- 2) Policy statement for abatement of pollution, 1992; and
- 3) National conservation strategy and policy statement on environment and development, 1992. Hence, it is clear that the current environmental problems in India are not due to a lack of legislation, but there appears to be other factors that are contributing to the current situation.

The Effectiveness of the Environmental Regulations in India

According to the Kyoto Protocol of 1997 signed by 37 industrialized countries and the European Union, the goal for 2008-2012 was to reduce the GHGs emissions to 5.2% lower than the 1990 level. India, as the third largest producer of GHGs is facing tremendous pressures from the international community to meet these targets. India's extensive environmental laws seem to have very little effect in reducing the harmful effects of pollution, MSW, and GHG emissions. Researchers have concluded that there are many reasons for this, including:

- ✓ Government of India is reluctant to enforce its own laws on air and water pollution lest it stop developmental projects that help create jobs and improve the economy (Mejia, 2009);
- ✓ Although many of the environmental regulations in India on air and water pollution are similar to those of the existing standards of other industrialized countries, the lack of its enforcement has upset the global business community as it seems to provide Indian businesses an important cost advantage (Ord, 2009);
- ✓ In a similar vein, environmental activist Rama Kumar states that enforcement of current laws is patchy and uneven. Effective control has been inconsistent, especially among smaller companies. For example, in Rajasthan industrial effluent discharge into the Bandi river bed seems to be the main source of contamination of ground water in the area resulting in the degradation of other natural resources such as land, soil and vegetation creating problems of salinity and sodicity in soils that has resulted in declines in herbal biomass (Khan, 2001).

- ✓ Enrico Polastro, vice president and senior industry specialist at global management consultant Arthur D. Little feels that environmental control standards vary between large companies and the small to medium sized companies (SMEs).

III. CASE STUDY ON VIZAG GAS LEAK

On 7th May 2020, an incident of uncontrolled Styrene vapour Release occurred at LG Polymers, RR Venkatapuram, Visakhapatnam from one of the Styrene storage-tanks (M6 Tank). The uncontrolled Styrene vapour release from a storage tank into the atmosphere occurred for the first time in India. The accident took the life of 12 persons in the immediate subsequent period and 585 people had to undergo treatment in hospitals, besides causing loss of livestock and vegetation. This Styrene vapour release widely referred to as "Vizag Gas Leak", is one of the major Styrene vapour release incidents from a bulk storage tank anywhere in the world. It was decided that a team from CBRN (Chemical, Biological, Radiological and Nuclear) unit of NDRF from Pune, along with an expert team of National Environmental Engineering Research Institute (NEERI), Nagpur would be rushed to Vishakhapatnam immediately to support the State Government in the management of the crisis on the ground. The National Disaster Management Authority arranged a special aircraft for airlifting joint team of four response experts from 5th Battalion, NDRF Pune along with PPE, other equipment and five environmental experts from Nagpur. The aircraft reached Visakhapatnam on 7th May and the team immediately supported the local administration in controlling the situation. As per the Manufacture, Storage and Import of Hazardous Chemicals Rules, (MSIHC) 1989, - ,, "major accident" means an occurrence including any particular major emission, fire or explosion involving one or more hazardous chemicals and resulting from uncontrolled developments in the course of an industrial activity or due to natural events leading to serious effects both immediate or delayed, inside or outside the installation likely to cause substantial loss of life and property including adverse effects on the environments."

IV. CONCLUSION

The rapid economic growth experienced by India is resulting in adverse and harmful environmental conditions that are affecting the people of India as well the wider global population. In the case of India, this is further exacerbated by the high population density and growth rates. The existing environmental laws, although cover a wide spectrum of environmental concerns, they seem to be ineffective due to lack of enforcement, the lack of resources, and technical challenges faced by a large number of Indian companies, especially the SMEs. Under these conditions, India has to adopt some sustainable actions that need to address the myriad issues facing the country including environmental degradation in order to sustain its prospects for continued economic growth (Ranganath, 2015).

Sustainable development, that is, both a prosperous economy and a healthy environment that in many respects is the goal of diverse interest in the area of environmental issues, is the key for the future of India and the world. Sustainable development implies managing the diverse interests of a prosperous economy and simultaneously maintaining a healthy environment. Based on extensive literature search, we recommend that India undertake a new approach in the fight against environmental pollution. The key element of this new initiative is the shared and cooperative participation of the people, the government, the industrial sector, and NGO's. This type of approach seems to have worked for a few countries and it appears to be a doable solution for India too. A series of steps are recommended that could lead to an improved environment and at the same time prove to be helpful for the Indian population. Furthermore, to reduce the growing MSW problem, it is recommended that India undertake proven waste to energy conversion techniques that have been adopted by the European Union.

V. REFERENCES

- [1] Agrawal, Pradeep, (2015), "The role of exports in India's economic growth," Journal of International Trade & Economic Development, 24, no. 6: 835-859.
- [2] Agrawal, Pravin; Alok, Kumar; S.S. Hooda; N.R. Sudheendra; and A, Santhamani, (2010), "Anthropogenic carbon emissions in India: An econometric analysis," Vision, 14, no. 1/2: 79-83.
- [3] Agrawal, Arun, (2005), "Environmentality," Current Anthropology, 46, no. 2: 161-190.

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- [4] Bordigoni, Mathieu; Alain, Hita; and Gilles, Le Blanc, (2012), "Role of embodied energy in the European manufacturing industry: Application to short-term impacts of a carbon tax," *Energy Policy*, 43. (April): 335-350.
- [5] Chappin, Maryse M.H.; Marko P. Hekkert; Marius T.H. Meeus; and Walter J.V. Vermeulen, (2008), "The intermediary role of an industry association in policy-making processes: The case of the Dutch paper and board industry," *Journal of cleaner Production*, 16. No 14: 1462-1473.
- [6] Chatterjee, Deba Prashad, (2008), "Oriental disadvantage versus Occidental exuberance: Appraising environmental concerns in India - A case study in a local context," *International Sociology*, 23, no. 1: 5-33.
- [7] Chen, Yuyu, Avraham Ebenstein, Michael Green stone, and Hongbin Li, (2013), "Evidence on the Impact of Sustained Exposure to Air Pollution on Life Expectancy from China's Huai River Policy," *Proceedings of the National Academy of Sciences*, 110, no. 32: 12936-12941.