Industrial Pollution Law and Policy in India

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Abstract: Industrial pollution is a major reason for the degradation of the environment that successively could be a key consider turning extreme weather events into natural disasters. Degradation of the environment not solely intensifies disasters however additionally will increase the potential for secondary disasters. From the point of view of response to disruptive events, the society looks to stakeholders, institutions and the government. One such stakeholder interface in an exceedingly semi-urban/rural setting is that between the local community and also the neighbourhood industrial units. The community forms a part of the industrial unit's workforce and the industry, in turn, relies on this workforce during a crisis for the success of its business continuity plans. The community-industry interface includes of a human resource sensitized to the risk assessment of the industries, the extent of its polluting activities and more importantly to safety techniques and actions to be taken during an emergency. This community-industry interface is leveraged to reduce the vulnerability of the community. This paper examines, however, this may be achieved through the formation of positive community pressure on the polluting local industrial units created by the provision of appropriate information in the public domain being interpreted for community consumption by the elements of this interface. Secondly by using the knowledge and experience of this interface with regards to industrial safety and risk management to spur pre-disaster actions at the community level. The paper was submitted to International Conference on company Social Responsibility and Industrial Disasters organized by National Law Institute University, Bhopal, India on 5 -6 December 2009.

Keywords: Industrial pollution, disasters, environmental degradation, pre-disaster actions, civil defense

1. Introduction

The need for protection and conservation of the environment and sustainable use of natural resources is reflected within the constitutional framework of India and additionally within the international commitments of India. The Constitution under Part IVA (Art 51A-Fundamental Duties) casts a duty on every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wildlife, and to have compassion for living creatures. Further, the Constitution of India under part IV (Art 48A-Directive Principles of State Policies) stipulates that the State shall endeavour to safeguard and improve the environment and to safeguard the forests and wildlife of the country.

Several environment protection legislations existed even before the Independence of India. However, the true thrust for putting in force a well-developed framework came only after the UN Conference on the Human Environment (Stockholm, 1972). After the Stockholm Conference, the National Council for Environmental Policy and Planning was set up in 1972 within the Department of Science and Technology to establish a regulatory body to look after the environment-related issues. This Council later evolved into a full-fledged Ministry of Environment and Forests (MoEF).

MoEF was established in 1985, which today is the apex administrative body in the country for regulating and ensuring environmental protection and lays down the legal and regulatory framework for the same. Since the 1970s, a number of environment legislations have been put in place. The MoEF and the pollution control boards ("CPCB", ie, Central Pollution Control Board and "SPCBs", i.e., State Pollution Control Boards) together form the regulatory and administrative core of the sector.

Causes of Health Problems in the Study Areas:

The possible causes for some of the major diseases mentioned by respondents for all the study locations were analyzed together. Most of the respondents in all the study areas identified industrial pollution as the worst cause for local health problems. During the rainy season, this polluted water spreads over the low lying agricultural fields, small water bodies, canals etc. The local communities are exposed to this pollution in different pathways including working at the agricultural fields, spraying water at the vegetable garden, fishing, washing utensils and clothes, bathing in the rivers etc. Since agriculture is the main occupation of the studied villages, farmers remain the mostvictims.

Various other causes were also identified by the respondents:

These were improper sanitation, lack of quality food, smoking, seasonal changes etc. The "others" option includes unavailability of food, lack of safe water, poor living condition (too many people in one room), indoor pollution etc. In Majukhan village, 52 percent of respondents mentioned that industrial pollution is the main cause of their health problems followed by unhygienic behaviour or improper sanitation stated by 18 percent. About eight percent said seasonal changes would be one of the major causes for such health disorders. On the other hand, 14 percent of the respondents mentioned the other causes to be indoor pollution, lack of safe water etc. In Sholahati, industrial pollution became the main reason for health problems for the local communities

2. Review of Literature

Results from the IPPS database have been used in various studies where firm-level data on environmental parameters does not exist. *FrickmannYoung* (2000) [2] employed inputoutput techniques to estimate industrial emissions from export-oriented activities in Brazil during the period 1985-96. This was done to know the impact of shift towards export economy on the pollution level in the country. Water polluting parameters like BOD and heavy metals and air polluting parameters like particulate matter, SO_2 , NO_x and HC were measured using Industrial Pollution ProjectionSystem whereas, CO_2 emission data was taken from Brazilian Greenhouse Gases Inventory. Both groups of data indicate that export activities have been more pollution intensive than other economic activities thus, showing the negative impact of export liberalization on the environment in developing countries like Brazil.

Sunil K. Sinha [3] in his paper has made an effort to measure the magnitude of industrial pollution in the post-reform period. He has used the technique of industrial pollution projection system of the World Bank. This technique is designed for measuring industrial pollution load in developing countries where environmental data is not available. Share of highly polluting industries in terms of output and value added has increased in the post-reform period. Accordingly, air, water and land pollution from manufacturing industries have increased by a whopping 200 percent during 1990-91 to 2005-06. This is due to the fact that industrial policies so far have failed to take into consideration the rising problem of industrialpollution.

Rita Pandey (2005) in her study of 17 highly polluting or "red category" industries of India for the year 1994-95, has used Industrial Pollution Projection System of World Bank and related abatement cost coefficients to differentiate industries on pollution level and its abatement costs. She is of the view that for effective pollution control strategy there is a need for concentrating on industries which are highly polluting but has low abatement costs. She also favours the use of the market-based instrument in place of command and control type mechanism for the efficient pollution control mechanism.

(Nigeria). The calculation was done by using the Industrial Pollution Projection System to employment and total output, with conventionally analyzed effluent pollution loads. The data was validated statistically using t-test at 95% confidence interval (2- tailed) and analysis of variance (ANOVA) to ascertain if there is any significant difference between IPPS pollution loads with respect to employment & total output and pollution loads from the conventional effluent analysis. They found that there is no significant difference between the pollution loads estimated with respect to the two variables in all the industries except basic industrial gas manufacturing where the two means are significantly different. IPPS pollution loads also compared favourably with pollution loads from conventional effluent analysis at this limit. Seeing the result, they are of the view that the IPPS technique provides a cheap way of estimating pollution load in developing countries. It will enhance industrial pollution control in the developing countries where funding for environmental protection is inadequate. The effectiveness of the intervening measures would significantly reduce the overall industrial pollution.

Industrial Structure and Industrial Pollution in India

Structural composition of Indian industrial sector Industrial structural composition is one of the main determinants of pollution in any country. Liberalization has changed the structure of the Indian industrial sector. On the basis of this, we can analyze whether domestic manufacturing production has moved towards more pollution-intensive industries as compared to less polluting industries. The industrial structure is being analyzed on the basis of four parameters- types of industries, total employment, total output and net valueadded.

a) Red category (more pollutingindustries)

The share of red category industries has gone up on all the three indicators of industrial performance. In total persons engaged and value of the final output of this category of industries has increased. However, a slight decline of around 1 percent was seen in the percentage of red category industries between 2000-01 and 2010-11, on these two parameters. In terms of the total value of output and net value added, red category industries got past to orange category industries with a very slight margin to become the largest fragment among the manufacturing industries. Share of rubber, petroleum, plastic and coal has shown the highest increase intermsofthe valueofoutputandNVAduring1990-91to2010-11. While in terms of employment its share has declined. On this parameter, chemical and chemical products have shown the highest increase in the period concerned. A steep jump in net value addition in case of red category industries during 2000- 01 to 2010-11 is reflective of the fact that these industrieshave taken least care for the environmental issues and made modest expenses to control the pollution.

b) Orange category industries (somewhatpolluting)

This category is the largest employment provider which is not surprising considering the inclusion of textile industries which is highly labour intensive. Textiles industries showed the highest gain on all the parameters. On the other hand, the food & beverages group which is the highest provider of employment among all the categories saw a drop in its share from 19.4 percent in 1990-91 to 16 percent in 2010-11. This is true with respect to other parameters also.

3. Policy in India

The Hazardous Wastes (Management and Handling) Rules, 1989 & 2000. [4]

- Hazardous wastes have been categories in 18categories.
- Under this rule, project proponent handling hazardous waste must report to the concerned authorities regarding the handling of wastes, obtain authorization for handling wastes, maintain proper records, file annual returns, label all packages, consignments etc., report any accident immediately in for report import-export of hazardouswaste.
- MOEF notified the HW (M&H) Amendment Rules on January 6, 2000 (MOEF, 2000a). Under this rule, toxic chemicals, flammable chemicals and explosive have been redefined to be termed as 'hazardous chemical'. As per new criteria, 684 hazardouschemicals.

The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 & 2000

- Under these rules, project proponents of any kind of hazardous industry have to identify likely hazard and their anger potential. They also have to take adequate steps to prevent and limit the consequences of an accident atthe site.
- Material Safety Data Sheets (MSDS) for all the chemicals in handling has to be prepared. Workers on site are required to be provided with information, training and the necessary equipment to ensure theirsafety.

Public Liability Insurance Act, 1991

- This Act, unique to India, on the owner the liability to immediate relief in respect of death or to any person or damage to any property resulting from an accident while handling hazardous any of the notified hazardouschemicals.
- This relief has to be provided on 'no fault'basis.
- The owner handling hazardous chemical has to take an insurance policy to meet this liability of an amount equal to its "Paid up capital" or up to Rs. 500 million, whichever less. The policy has to be renewed everyyear.

The National Environment Tribunal Act, 1995

• The National Environment Tribunal Act, 1995 is enacted to provide for strict liability for damages arising out of indents occurring during handling of hazardous substances and for the establishment of National Environment Tribunal effective and expunction disposal of cases arising from such accidents, with a view to giving relief and compensation damages to a person, and theenvironment. [5]

The Chemical Accidents (Emergency Planning, Preparedness and Response Rules, 1996

- These rule provided a statutory backup for setting up of a Crisis Group in districts and states, which have Major Accident Hazard (MAH) installations for providing information to thepublic.
- The rules define the MAH installations, which include industrial activity, transport and isolated store at a site handling hazardous chemicals in quantitiesspecified.
- As per the rules, GOI has constituted a Central Crisis Group (CCG) for the management of chemical accidents a set up an alertsystem.

The Biomedical Wastes (Management and Handling) Rules, 1998

- The Biomedical Waste (Management and Handling) Rules, 1998 regulates the disposal of biomedical wastes including anatomical waste, blood, body fluids medicines, glass wares and animals wastes by the health care institution (i.e. nursing homes, clinics, dispensaries, veterinary institutions, animal houses pathological laboratories and banks etc. in the cities having population more than 30 Lakh or all the hospitals with bed strength more than500.
- They are required to install and commission requisite facilities like incinerators, autoclaves, microwave system etc. the treatment of biomedicalwaste.

Municipal Wastes (Process and Disposal) Draft Rules, 1999

- Under these rules, municipal authority is made responsible for the implementation of the provisions of these rules and for any in structural development for collection, storage, segregation transportation, processing and disposal of MSW and to comply with these rules.
- The annual report is to be submitted by Municipal authority in From-I to the District Magistrate/ Deputy Commissioner who shall have the power to enforce these rules. We shall be managed as perSchedule-II. [6]

The Recycled Plastic Manufacture and Usage Rules, 1999

- Under these rules, the use of carrying bags or containers made of recycled plastics for storing, carrying dispensing or packaging of foodstuffs isprohibited.
- Carry bags or containers made of plastics can be manufactured only when (i) virgin plastic in its natural shade or white is used and (ii) recycled plastic is used for purposes other than storing and packaging foodstuff using pigments and colourants as per IS 9833: 1981.

The Fly Ash Notification, 1999

- The notification to conserve topsoil and prevent the dumping and disposal of fly ash discharged from coal or lignite based thermal power plants have been issued on September 14,1999.
- Under these directives, it is mandatory for every brick manufacture within a radius of 50 km from coal or lignite based thermal power plant to mix at least 25% of ash (fly ash/bottom ash/pond ash) with soil on the weight-to-weight basis to manufacture clay bricks or tiles or blocks used in constructionactivities.

The Batteries (Management and Handling (Draft) Rules, 2000

- The MOEF issued the Batteries (M&H) (Draft) Rules, 2000 to control the hazard associated with backyard smelting and unauthorized reprocessing of lead acid batteries. The lead-acid batteries are widely used automobiles such as cars, trucks, buses, two-wheelers and inverters.
- As per the provision, battery manufacturers, importers, assemblers and re-conditioned have to collect old batteries on a one to one basis against the sale of newbatteries.

4. Conclusion

Industrialization is the cornerstone of the socio-economic progress of a nation, especially in developing countries. Environmental pollution is one of the negative results of industrial development strategy, which has assumed a dangerous proposition throughout the world. India is a principal third world country in global environmental politics both by choice and by its geographic and demographic circumstances. Wide territory and large population have given India a major role in determining the fate of the global environment. India acknowledged the need to protect the environment and formulated new environmental policies and the Indian Constitution imposed an ostensible duty on both the state and the citizens to protect and preserve the environment.

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