

## Industrialisation and Environmental Pollution

**Himadri Barman**

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Since the advent of industrial and technological revolutions, economic indicators have been considered as the principal criteria for measuring progress. The industrial and technological progress however, has been accompanied by a growing negative impact on the environment in terms of its pollution and degradation. Industrialisation carries with it the seeds of environmental damage, assisted and abetted by both needs and greed of man. Activities such as manufacturing, processing, transportation and consumption not only deplete the stock of natural resources but also add stress to the environmental system by accumulating the stock of wastes. The productivity of the industries, however, depends on the supply and quality of natural and environmental resources. While water, soil, air, forest and fishery resources are productive assets, the pollution of water, air, atmosphere and noise are the by-products of economic development, particularly industrialisation and urbanisation. "Green house effects", "global warming" and "acid precipitation" are cases in point. Pollution is an "external cost" (sometimes called a "spill-over cost" or a "neighbourhood cost"). Untreated or improperly treated waste becomes pollution, increasing not only private costs but also social costs. Environmental degradation often tends to become irreversible and imposes damaging costs on the economy resulting in output and human losses, loss of labour productivity from ill-health and loss of crop output. The ecological and social costs of such unrestrained pollution and degradation have put a big question mark on the perceived notion of industrialisation as a way of economic development. Industrialisation is on the increase, which of course is necessary for the progress of human civilization but so is the environmental pollution due to emissions and waste generated from these industries. The industrial pollution due to its nature has the potential to cause irreversible reactions in the environment and hence is posing a major threat to our very existence. Since the carrying capacity of the environment is not unlimited and some areas or ecosystems are more susceptible to adverse environmental impacts than others, unplanned and haphazard industrialisation has substantially increased the risk to the environment.

A number of studies have shown that air and water pollution are taking a heavy toll of human life, particularly, in the developing countries through ill-health and premature mortality. Pollution control, thus, assumes greater significance in the context of ensuring sustainable development through planned industrialisation. The environmental pollution and ecological degradation because of unplanned industrialisation first became issues of international concerns in the 1970s when it was recognised that mass production by industry and mass consumption by society are depleting the resources and are generating huge amounts of solid waste and hazardous substances. The environmental challenges and the natural resources management were first focused in 1972 at the United Nations Human Environment Conference at Stockholm. Since then, a much greater awareness has been created not only amongst the developed countries but also the developing ones with regard to the environmental issues. A number of international committees were formed at different levels to address the environmental issues and cope up with the fast development.

The World Commission on Environment & Development issued a report titled "Our Common Future" and appealed for the application of principles of sustainable development in 1987, the Inter Governmental Panel on Climate Change, (IPPC) was organised jointly by the United Nations Environmental Programme (UNEP) and World Meteorological Organisation (WMO) with support from the G-7 nations in 1989.

The catastrophic social and economic consequences of global climate change by the end of 21<sup>st</sup> century were described in the first report of IPCC in 1990. As a result, the United Nations Conference on Earth & Development (Earth Summit) was held in Rio de Janeiro in 1992 where more than 180 nations participated. The Rio Declaration, Agenda 21, Framework Convention on Climate Change, Biodiversity Convention, and Forest Declaration were signed in a historic effort to cope with the global problem of the 21<sup>st</sup> century.

In the central Agenda 21, the concept of "Green Productivity" is a holistic evolutionary outcome of traditional principles and practices of productivity during the past half a century. It is seen as a key to achieving sustainable development at local, national and international levels. "Green Productivity" signifies a new paradigm of socio-economic development aimed at the pursuit of economic and productivity growth while protecting the environment.

To combat the adverse effect of Industrialisation on the environment, India has initiated some major activities, a few of which are:

- Policy initiatives to improve environment like the National Conservation Strategy and Policy Statement for Environment & Development, 1992, Policy Statement for Abatement of Pollution, 1992 and National Forest Policy, 1988
- Notification and implementation of emission and effluent standards for air, water and noise levels. Standards are formulated by a multidisciplinary group keeping in view the international standards, existing technologies and impact on health and environment
- Identification and Action Plans for 17 categories of major polluting industries
- Identification of 24 critically polluted areas for pollution abatement and improving environment
- Use of beneficiated coal with an ash content not exceeding 34% irrespective of their distance from pit head
- Action Plans for 141 polluted river stretches to improve quality of river water
- Identification of clean technologies for large industries and clean technologies/processes for small scale industries
- Setting up of Common Effluent Treatment Plants (CETPs) for clusters of SSI units
- Implementation of an Eco-mark scheme to encourage production/consumption of environment – friendly products
- Preparation of a Zoning Atlas, indicating status of the environment at district levels to guide environmentally sound location/siting of industries.
- Mandatory submission of annual Environmental Statement which could be extended into Environmental Audit
- Initiation of environmental epidemiological studies in seven critically polluted areas to study the impact of the polluted environment on health
- Setting up of authorities like the Environment Pollution (Prevention & Control) Authority for the National Capital Region for protecting and improving the quality of environment and preventing, controlling and abating environmental pollution.
- Provision of fiscal incentives for installation of Pollution control equipment and also for shifting of industries from congested areas

It is common knowledge that increased industrial activity worldwide requires the use of natural resources which are depleting day-by-day. It is also true that the need for resource conservation, efficient use of resources and environment friendly corporate policies and behaviour has now been recognised worldwide. In the industrial and business society, it is observed that many people are still half heartedly subscribing to the concept of sustainable development. They consider that sustainable development is a kind of compromise between industrial development and environmental protection. This perception must change. The ultimate objective of

industrialisation is to achieve a better quality of life for everyone. A degraded environment means a direct threat to the quality of life and therefore poses a challenge to industrialisation. Industrialisation has to be there but not at the cost of the environment or for that matter our existence. For this, there has to be greater awareness about the need for protecting the environment, effective planning and the ability to strike a fine balance between industrialisation and environmental protection.

**Reference:**

1. *Documents released by the Government of India and available over the Internet*