

Greenfinch Call Environmental Degradation Accounting: Case of Cement & Steel Industries

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BACKGROUND

The main cause of environmental degradation, the world over, has been the relentless industrialization resulting in release of huge amount of effluents, emission of various chemicals and creation of hazardous wastes by industrial units. They have endangered quality of life, unmindful of the future social and economic consequences of their managerial decisions. This necessitated a global movement for environmental protection, the beginnings of which can be traced to the Stockholm Declaration in 1972, followed by Vienna Convention for the Protection of Zone Layers in 1985 and the signing of Montreal Protocol in 1987 to reduce the layer of Ozone Depleting Substances (ODS) from atmosphere.

The movement truly gathered momentum after the hugely successful First International Earth Summit in 1992 in Rio de Janeiro, with more than hundred heads of nations attending and signing the United Nations Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity (CBD). The aim was to stabilize the density of greenhouse gases, especially carbon dioxide, whose increase triggered Global Warming and the attendant climate change issues.

Sustainable development since then has become an ubiquitous theme of discussions the world over. Down the line, we have had the Kyoto Protocol of 1997, the Bali Climate Change Conference of 2007, and in December 2009, the United Nations Climate Change Conference at Copenhagen.

Under the Kyoto Protocol, the signatory countries agreed to accept Environmental Degradation Accounting (EDA) as a mandate for action. Nearly 200 countries including Brazil, China and India have ratified the Kyoto Protocol, signifying that EDA has now become an essential feature of environmental policies of most governments of the world.

ACCOUNTABILITY

Currently, the phrase Corporate Environmental Responsibility (CER), like Corporate Social Responsibility (CSR), has attained ethical overtones in the pronouncements of industry leaders. Corporate releases often make it a point to express their allegiance to the CER concept out of a sense of duty, if not a sense of guilt. It is agreed by all that economic growth is accompanied with increase in industrial production, rise in income levels and greater exploitation of natural resources as raw matter; but unhappily it also brings with it the curse of environmental degradation irrespective of whether the country is developed or developing. It is the industrial organizations which are both the 'users' and 'polluters' of environment and they spoil the quality of air, water and land disfiguring landscapes, distorting skylines and debasing water bodies in the process. Obviously they have to be held answerable for their sins of commission and omission.

The damage to environment has serious implications for human life. For instance,

- ⊗ Air pollution can cause serious health problems affecting work efficiency of people, increasing medical care expenses and causing loss of earnings.
- ⊗ Water pollution – both surface and ground – due to discharge of unprocessed effluents may pose health hazards.
- ⊗ River and sea water contamination due to oil spill can affect fish yield and production of other sea foods.
- ⊗ Deforestation and stone quarrying can lead to soil erosion and destruction of ecological balance.

Degradation issues like green house effect, destruction of rain forest, acid rain, floods and hurricanes, irreversible depletion of natural resources and high levels of all kinds of pollution therefore need to be accounted for in terms of their social and economic costs. It is also incumbent to fix the moral responsibility for ecological damage control and mitigation.

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METHODOLOGY OF ENVIRONMENTAL ACCOUNTING

The concept of environmental accounting grew out of dissatisfaction with the conventional accounting method which includes income accounts and asset accounts for a given period and consists of money payments made for the use of economic resources which are in short supply and have a price tag. But it fails to reflect the profit and loss position from the standpoint of environment and natural resources.

Environmental accounting therefore goes a step further and includes in its calculations the costs of such resources which are given free by nature and therefore do not have a market price but which get depleted in the process of production. In short, environmental accounting has a wider import than conventional accounting. A rational and realistic costing procedure therefore should include the costs of damage mitigation of air, water and soil pollution along with the usual money costs of economic resources like labour, capital and raw materials.

Actually, due to degradation of environment the cost to the society in real terms is much higher than the cost in terms of economic resources consumed. The inclusion of non market or social costs in terms of pollution, emissions, soil erosion, climate change etc. in the aggregate costs of production, thus constitutes the essence of environmental accounting. Of course, it requires a comprehensive reporting by management of environmental damage or degradation incidental to production activity and involves the preparation of a statement of financial accounts with adjustment for costs of environmental degradation. Each company or enterprise has to estimate the environmental expenditure as distinguished from normal business expenditure. It has to review activities which affect the environment by continuously gathering relevant data and information about the company's environment related assets and liabilities.

Difficulty arises in imputing monetary values to loss of welfare associated with pollution of air, water, soil or sunlight. Specialized valuation techniques have been evolved for this purpose, although they have their own limitations. Most cost benefit analyses follow the method of shadow pricing under which values are assigned for items having no market price. Shadow price techniques certainly need to be adopted to fix monetary denominations for items of environmental degradation.

Environmental accounting is done in three stages (i) a comprehension of the business environment (ii) identification of impact of industrial activities on environment and (iii) the determination of environmental costs and expenditure for inclusion in financial accounts.

ENVIRONMENTAL REPORTING

One of the important tools of environmental management is the Annual Report of a company incorporating and disclosing all activities having environmental implications. The Report has to be published and circulated by the company to all its stake holders with in order to communicate and furnish to them details of pollution effects of the company's activities along with various measures adopted by it to mitigate the adverse effects. The Report

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has also to delineate company's policy regarding environment protection and the specific areas where it may have failed to make amends. It has to provide information on compliance with government legislation on the use of clean technologies, trademark and discharge of effluents, disposal of waste material, ventilation for light and air, noise reduction - in short, all measures relating to safety and health of the workers and the welfare of local community.

The report has to carry quantitative information about the total expenditure incurred by it, item wise, for the protection or improvement of environment both within the company premises and the surrounding area, as also an assessment of the costs and benefits of having an environmental budget. In fine, the company should disclose in its report both the positive and negative impact of its activities on environment,

REGULATORY FRAMEWORK

In India, due to increased public outcry and also judicial intervention, the attitude towards compliance of environmental, health and safety regulations by companies has undergone a favourable change in recent times. The regulatory provisions laid down under various Acts like Factories Act (1948), Water (Prevention and Control of Pollution) Act (1974), Air (Prevention and Control of Pollution) Act (1981), Environment (Protection) Act (1986), Hazardous Wastes (Management and Handling) Rules (1989/2000), Manufacture, Storage and Import of Hazardous Chemicals Rules (1989), Public Liability Insurance Act (1991), Bio-medical Wastes (Management and Handling) Rules (1998), Noise (Regulation and Control) Rules (2000), Ozone Depleting Substance (Regulation and Control) Rules (2000), Chemical Accidents (Emergency Planning, Preparedness and Response) Rules (1996), and such other Rules relating to explosives, petroleum, electricity, boilers, diesel engine emissions etc have all been updated from time to time in conformity with world standards.

The government has specified the obligations and responsibilities of companies in regard to limit of discharge of pollutants, furnishing of information to prescribed agencies, permission of entry by officials for inspection and collection of samples, submission of Environmental Statements and obtaining of prior clearances for new projects or modernization and expansion of projects. The government is also encouraging the integration of environmental issues at the planning stage of a plant as also the use of pro-active compliance related tools like voluntary agreements and charter on corporate environmental responsibilities

In 1994, the Government of India had issued a notification requiring industries to undertake Environment Impact Assessment (EIA). It had also issued a list of 29 categories of polluting industries needing special attention. For purpose of illustration, an effort has been made here to throw light on the environmental performance of two industries viz. steel and cement which are included in the polluting category.

These will be taken up in Part 2 of this article.

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