



IJRASET

International Journal For Research in
Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 6

Issue: II

Month of publication: February 2018

DOI:

www.ijraset.com

Call:  08813907089

E-mail ID: ijraset@gmail.com

Environmental Accounting Reporting Practices in India- Issues and Challenges

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Abstract: *Accounting and disclosure of environmental matters have been increasingly manifesting as an important dimension of corporate accounting and reporting practices. As the entire world continues its rapid move towards industrialization, it has seriously threatened human ability to maintain the ecological balance. Industrialization is the foundation stone of the development of any economy, while the unplanned industrialization and discharge of waste by industries is one of the major cause of environmental pollution. As corporate sectors in the global market, especially in India are becoming anxious about environmental degradation, depletion of resources etc, naturally more and more emphasis will be ascribed to how environment-friendly the outcomes. Maintaining accounts of such environmental and natural resources in the country has become more urgent. Moreover, international awareness and acceptance of the importance of environmental issues has motivated the development of a branch of accounting called “Green Accounting” or “Environmental Accounting”. But, as conventional accounting deals with mainly non-living things, the formulation of valuation, and measurement and accounting techniques for incorporating environment-related matters in the corporate financial statement sometimes creates problems for the accountant. In the light of this situation, the conceptual analysis of the study is concerned with the rationale of environmental accounting on the economy and society as a whole, and focuses the failures of the traditional accounting system. The present research paper concentrates on exploring the concept of Environmental/Green accounting, its practices and reporting in India. A modest attempt has been made to throw light on the environmental awareness in developing nations like India and discuss the problems associated with the implementation of environmental accounting.*

Keywords: *Environmental Degradation, Environmental Accounting, Social Responsibility, Environmental Reporting.*

I. INTRODUCTION

Environmental Accounting is an important tool for understanding the role played by the business enterprises in the economy towards the environmental safety and welfare of the society. It provides data highlighting both the contribution of business enterprises to economic wellbeing and the costs imposed in the form of pollution or resource degradation. Every business has an overriding responsibility to make the fullest possible use of its resources - both human and material. An enterprise is a corporate citizen. Like a citizen, it is judged by its actions in relation to the environment and society of which it is a member as well as by its economic performance. As far as Indian corporate sector is concerned, it is sad but true that it has not been performing as a good citizen. There are many laws that have been enacted and amended from time to time to make the corporate sector to fulfil its social responsibility for better development of Indian environment and economy. Therefore, recent years have witnessed rising concern for environmental degradation which is taking place due to increasing industrial activities. It may be noted here that the environmental degradation and pollution spoil human health, reduce economic productivity and lead to loss of amenities. The mitigation of energy resource use without impairing the quality and functions of the organization rendered the multi-national companies to stay competitive.

The energy conservation in the firms brought cost reduction, cost leadership and market leadership. The western developed countries including USA, UK, France, Germany, Australia, Japan and New Zealand have recognized the concept of calculated energy consumption in their manufacturing and service sectors.

The International Accounting Standards Board (IASB) identified and recognized the measurement of energy conservation under the name and style of Green Accounting. The developing countries like India is facing twin problems of protecting the environment and promoting economic development.

A trade-off between environmental protection and development is required hence a careful assessment of the benefits and costs of environmental damages is necessary to find the safe limits of environmental degradation and the required level of development. It is known that there are limited resources available for the use of all species on the earth and the enormous damage is done to the

environment due to the activities of the business enterprises. In fact, the industrial and business activities are directly and indirectly responsible for birth of incidences like the Bhopal Chemical Leak (1984), Chernobyl disaster(1986),Tsunami in India(2004), Huddudh cyclone(2014)etc. The issue of corporate social responsibility and the sustainable industrial development has given birth to a new branch of accounting viz., Environmental Accounting, it is relatively a recent entrant in the domains of Accounting.

Thus, the Green accounting is a type of accounting that attempts to factor environmental costs into the financial results of operations. It has been argued that gross domestic product ignores the environment and therefore policymakers need a revised model that incorporates green accounting.

The major purpose of Green accounting is to help businesses understand and manage the potential quid pro quo between traditional economics goals and environmental goals. It also increases the important information available for analyzing policy issues, especially when those vital pieces of information are often overlooked. Green accounting is said to only ensure weak sustainability, which should be considered as a step toward ultimately a strong sustainability.

II. OBJECTIVES OF THE STUDY

- A. To know the process of the corporate environmental accounting and reporting.
- B. To study the corporate accounting and reporting practices on green accounting.
- C. To find out the major obstacles in the sound development of these practices.

III. REVIEW OF LITERATURE

Over the past decades companies have recognized the benefits of environmental reporting, as a result, there was dramatic increase in the number of companies reporting in numerous ways. Early reporters are quick to realize that environmental disclosure is more of a governance and strategic issue than a simple reporting tool (Roome, 1992; Parker, 1997; Parker, 2000a). Regardless of the medium of reporting, companies are bound to satisfy country specific international reporting standards and requirements. It is important to understand as to how far standard setting improves credibility in reporting through major surveys.

Environmental accounting and reporting is an essential component of business strategy, describes the environmental component of the business strategy, producing the required performance reports and recognizing the multiple skills required to measure, compile and analyze the requisite data (Qureshi et al., 2012).

Special emphasis of the research is on generation of reports and their standards, for the range of business and regulatory purposes. It was identified in the study that the major obstacles for environmental accounting and reporting and concluded that for sustainable development of country, a well-defined environmental policy as well as proper follow up and proper accounting procedure is a must. Unless common people of India are not made aware about environmental damages and safety, development of accounting in this regard is really becomes difficult (Qureshi et al., 2012).

project on green accounting methodology for India and its states, done by (Gundimeda et.al., 2005). argue the case for Green Accounting for India (i.e. a framework of national accounts and state accounts showing genuine net additions to wealth) and to presented a preferred methodology and models to reflect natural capital and human capital externalities in India's national accounts, measuring as depreciation the depletion of natural resources and the future costs of pollution, and rewarding education as an addition to human capital stock.

In the study it was revealed that Green Accounting is desirable, feasible, realistic, practicable and that a start can be made with available primary data already being collected by various official sources of the Government of India. It was pointed out in the study that there is a dearth of focused sustainability analysis and information provided to policy makers at the National and State levels in India.

As a result, the processes of public debate, government planning, budgetary allocation, and the measurement of economic results are in effect being conducted without a sustainability framework. High GDP growth usually accompanies investment in physical infrastructure, which places mounting pressure on the country's environment and natural resources. However, there is an asymmetry between manmade and natural capital in that depreciation in the former reflects in GDP accounts but the latter does not.

(Chauhan2005), discussed the various forms of environmental accounting, its scope, limitations and legal framework in Indian context, concluded that it is the call of the time that corporate prepare a firm environmental policy, take steps for pollution control, comply with the related rules and regulations, mention adequate details of environmental aspects in the annual statements. For sustainable development of country, a well-defined environmental policy as well as proper follow up and proper accounting procedure is a must.

IV. NEED OF THE STUDY

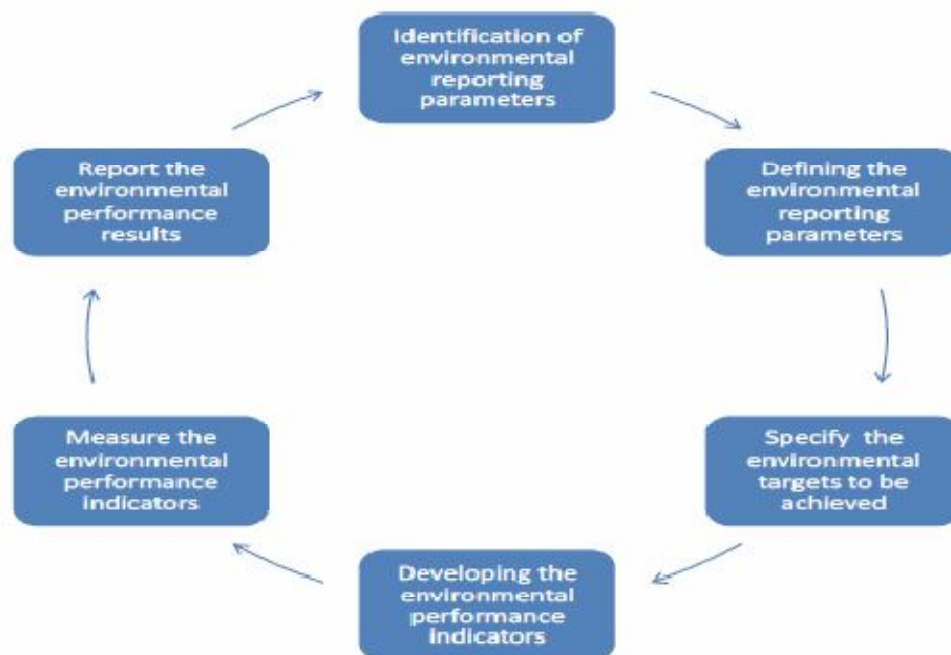
More recently, the environmental crisis has become a global issue. The concept of sustainable development is gradually becoming popular in many countries of the world, including India, where society feels the prevalent role of ecological requirements for economical development. Accounting is no longer confined to the historical description of financial performances; rather, it is now regarded as one of the most important services of society. The ecological role of corporate sectors responsible for their business activities on the environment is becoming particularly explicit. Along with the finance and production results of business activities, their environmental and social effects are also important. Environmental or natural resources are invaluable and hence there is an urgent need to maintain accounts of such resources, a new area of accounting under the heading “Environmental Accounting” has emerged.

The Environmental Management Accounting system, being designed for effective internal management of environmental and economic performances may be existing in organizations but may not be formally documented and/ or reported, as it is not mandatory or felt necessary by organizations. The industries should focus and set aside a part of their funds for environmental protection and ecological balance. Thus business organizations are expected to account for the use of substances which may damage the Environment. Green accounting is in preliminary stage in India, Indian Corporate is now introducing a separate a firm environmental policy such as taking steps for pollution control, comply with the related rules and regulations, mention adequate details of environmental aspects in the annual statements.

A. Stages of Environmental Accounting:

The study developed a model which specifies six aspects to be covered in environmental accounting in order to measure the ultimate environmental performance of the organization. The aim of this model is to present a novel view of the different activities to be undertaken by organizations to facilitate environmental accounting and reporting.

- 1) *Identification:* Identification of Environmental Reporting parameters is the first stage in environmental accounting process where in organizations identify their respective environmental reporting parameters such as environmental policy, health safety and environment, energy conservation, corporate sustainability environmental initiatives, sustainability reporting, waste management, water management, wind renewable energy sources, environmental information system, environmental disclosure practices, environmental targets, environmental reporting indicators, environmental cost and benefits, environmental liabilities and environmental assets.
- 2) *Describe:* Defining the Environmental Reporting Parameters, the second stage in the environmental accounting process requires the organization to clearly spell out the operational meaning of each parameter they identified and on the basis of which they wanted to measure the environmental performance in the long run.
- 3) *Specification:* Specify the Environmental Targets to be achieved is the next stage, here the organization tries to formulate the environmental targets to be achieved both in short run and long run, say the short term environmental policy of the organization as well as the long term environmental policy.
- 4) *Development:* Developing the Environmental Performance Indicators is an important step in the Environmental accounting, organisations need to think about the indicators of their environmental performance such as environmental policy framework, health and safety standards to be followed, energy conservation practices to be followed, waste management programmed to be undertaken, water management policies etc.
- 5) *Measurement:* Here, organizations try to measure the actual environmental performance in terms of the predetermined standard performance indicators. Measurement may be either qualitative or quantitative in nature. For instance, indicators such as environmental policy framework need to be qualitatively measured while; waste management programmes are to be measured quantitatively.
- 6) *Report Generation:* To generate report of the Environmental Performance Results is the last stage in the Environmental accounting, organizations integrate their environmental performance with that of financial performance, so as to give the environmental impact on the financial performance.



B. Legal Framework for Environmental Accounting in India

Although industrial licensing has been abolished for all practical purposes, environmental clearance from various Government authorities has now taken the centre stage. With increasing global concern over the protection of the environment, India too has set up a Union Ministry of Environment with the object of coordinating among the states and the various ministries about the environmental protection and anti-pollution mechanisms.

C. The various laws Relevant to Environmental Protection are as Under

1) Directly related to Environment Protection:

- a) Water (Prevention and Control of Pollution) Act, 1974.
- b) Water (Prevention and Control of Pollution) Cess Act, 1977.
- c) The Air (Prevention and Control of Pollution) Act, 1981.
- d) Forest (Conservation) Act, 1980.
- e) The Environment (Protection) Act, 1986.

2) Indirectly related to Environment Protection:

- a) Constitutional Provision (Article 51A).
- b) The Factories Act, 1948.
- c) Hazardous Waste (Management & Handling) Rules, 1989.
- d) Public Liability Insurance Act, 1991.
- e) Motor Vehicle Act, 1991.
- f) Indian Fisheries Act, 1987.
- g) Merchant of shipping Act, 1958.
- h) Indian Port Act.
- i) Indian Penal Code.
- j) The National Environment Tribunal Act, 1995.

It is important to note that all new projects require environment clearance. This clearance concerns both the Union Ministry of Environment and Forests and the corresponding State Govt. department of environment. Guidelines have been issued and all such projects are expected to obtain environmental and antipollution clearance before they are actually set up. A Central Pollution Control

Board (CPCB) has also been set up. Wherever cases of violating of standards of water or air pollution have been detected, show cause notices have been issued to industrial units and all such units are being kept under regular inspection.

D. Environmental Accounting Practices in India

Environmental Green accounting is at inception stage in India. In the context of requiring environmental related disclosures from business units on a periodic basis, the first public announcement was made by the Government of India in 1991, immediately after adopting the financial reforms that liberalized the economic policies of the country. The Ministry of Environment and Forests has proposed that “every company shall, in the Report of its Board of Directors, disclose briefly the particulars of steps taken or proposed to be taken towards the adoption of clean technologies for prevention of pollution, waste minimization, waste recycling and utilization, pollution control measures, investment on environmental protection and impact of these measures on waste reduction, water and other resources conservation.”

2011, the Securities and Exchange Board of India mandates listed companies to report on Environmental, Social and Governance (ESG) initiatives undertaken by them, according to the key principles enunciated in the 'National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of Business. 'Companies act 2013 emphasizes on corporate social responsibility that makes it mandatory for certain class of profitable enterprises to spend money on social welfare activities. It is mandatory for companies with net worth of more than Rs 500 crore, or turnover of Rs 1,000 crore to adopt a CSR policy. Also it provides that the companies are required to give more disclosures besides Company's general state of affair and financial performance regarding conservation of energy and environmental protection. The Union Ministry of Environment and Forests has issued various instructions in to prepare environment statements, it is mandatory in the country to get an environmental clearance for all new projects that concerns both the Union Ministry of Environment and Forests and the corresponding State Government department of environment. There are various guidelines in this regard and all such projects are expected to obtain environmental and antipollution clearance before they are actually set up. It can be observed through their accounts that mainly the following set of information is disclosed.

- 1) The type of devices is installed to control pollution
- 2) The steps taken for energy conservation
- 3) Steps taken for optimum utilization of resource
- 4) Steps taken for decompose the waste water and production process waste
- 5) Steps taken for improving the quality of product and services, production process etc.

A gazette notification on environmental audit has been issued by ministry of environment and forests on 3-3-1992 which was amended through a notification on 22-4-1993(India: Environment Statement, as a part of Environment Audit, Govt. of India, 1993) requires the submission of an environment statement to the Central Pollution Control Board. This notification is applicable to any person carrying out an industrial operation or process requiring consent to operate by under section 25 of the Water (Prevention and Control of Pollution) Act 1974, under section 211 of the Air (Prevention and Control of Pollution) Act, 1981 or both, or authorization under the Hazardous Waste (Management and Handling) Rules, 198, issued under the Environment (Protection) Act, 1986. In this environment statement, the concerned industry is required to provide information on:

- 6) Water and raw material consumption
- 7) pollution generated
- 8) Impact of pollution control measures on conservation of natural resources
- 9) Nature of hazardous and solid wastes produced and disposal practices adopted
- 10) Measures taken for environmental protection, and
- 11) Steps taken to popularize the benefits of environmental accounting and reporting among the corporate sector

E. Challenges in Environmental Accounting And Reporting

The Environmental Accounting is very important issue, as economic development as well as environmental protection is equally important but contradictory issue therefore a careful assessment of the benefits and costs of environmental damages is necessary to find the tolerance limit of environmental degradation and the required level of development. For that there is need for proper framework which can provide guidelines on the issue of environmental cost, environmental liability, environmental assets, capitalisation of such cost and liability.

The study of corporate reporting practices reflects that there is an increasing tendency among the corporate managers to disclose some information in their annual report to inform about their efforts to shareholders and public in general. It is also clear that most

of such environmental information reported by the companies is found to be non-financial. Such information is mere description of the efforts made by the company. The information on amount of money spent for such initiatives and its material effect on financial results is grossly missing in such information. Again there is wide variation noticed in the style of reporting and theme the companies selected to report. This can add to other dimension of the problem of lack of comparability and verifiability. So it is felt that such information should be integrated with financial accounting information to have reliability. For integration it is necessary for monetary measurement of environmental cost and benefits. But, all cost and benefit to the environment cannot be suitably measured in monetary unit, at least at micro level. Internal cost, like investment made by the corporate sector for minimization of losses to environment by product development, process development can be possible for monetary measurement but cost of externalities like degradation and destruction like soil erosion, loss of bio diversity, air pollution, water pollution, noise pollution, problem of solid waste, depletion of non-renewable natural resources i.e. loss emerged due to over exploitation of non-renewable natural resources like minerals, water, gas, deforestation, etc. and the environmental assets created by business, like afforestation, bio-diversity conservation, water preservation etc cannot be suitably measured in monetary terms. Further, it is very hard to decide that how much loss has occurred to the environment due to establishment of a specific business unit. This makes obstacles in the total integration of environmental accounting within the framework of existing GAAP. However, it is possible to disclose internal cost and benefit of environmental measures that is undertaken by a business unit and its material effects in reported profit by disclosing the way of recognition.

Table-I: Extent to which Indian Corporate Practice Voluntary Environmental Reporting

Sl. No.	Parameters	Manufacturing (12)		Non-manufacturing (13)		Total (25)	
		Yes(%)	No(%)	Yes(%)	No(%)	Yes(%)	No(%)
1.	Environmental Policy	75.00	25.00	76.92	23.08	76.00	24.00
2.	Health Safety and Environment	91.67	8.33	69.23	30.77	80.00	20.00
3.	Energy conservation	75.00	25.00	61.54	38.46	68.00	32.00
4.	Corporate Sustainability /Environmental Initiatives	83.33	16.67	84.62	15.38	84.00	16.00
5.	Sustainability Reporting	41.67	58.33	30.77	69.23	36.00	64.00
6.	Waste Management	83.33	16.67	38.46	61.54	60.00	40.00
7.	Water Management	75.00	25.00	46.15	53.85	60.00	40.00
8.	Wind/renewable Energy sources	58.33	41.67	15.38	84.62	36.00	64.00
9.	Environmental information system	91.67	8.33	30.77	69.23	60.00	40.00
10.	Environmental disclosure practices	41.67	58.33	46.15	53.85	44.00	56.00
11.	Environmental targets	-	100.00	69.23	30.77	40.00	60.00
12.	Environmental reporting indicators	75.00	25.00	76.92	23.08	76.00	24.00
13.	Environmental costs and benefits	-	100.00	0.00	100.00	0.00	100.00
14.	Environmental liabilities	-	100.00	0.00	100.00	0.00	100.00
15.	Environmental assets	-	100.00	0.00	100.00	0.00	100.00

Source: Asia Pacific Journal of Research February 2014

In case of externalities, like level of emission, waste generation, afforestation etc. though monetary assessment is not possible but business can make some sort of quantitative measurement like for water management cubic kilometres, for emission level concentration of specified particles in terms of ppm, area of land afforested, quantitative facts on expenditures incurred of such activities, and targets set and achieved. This kind of information can enhance authenticity and reliability of environmental

information. However, for such kind of assessment involvement of some technicalities is necessary. On the other hand for such recognition of inter cost and other externalities a specific set of regulatory pronouncement is pre-requisite to have uniformity of accounting information. As in the present state environmental accounting and reporting is a voluntary rather than mandatory, in such situation everyone have tendency to depict the strength rather than the weakness.

II. CONCLUSION

Environmental Accounting is an important measure for understanding the role played by natural environment in the development of an economy. It provides data that contains the contribution of natural resources to economic well being as well as the costs imposed by environmental pollution and resource degradation Environmental accounting and reporting practices are in the nascent stage in India. Even though Indian corporates comply with the rules and regulations with regard to environmental protection, till now no clear cut policies are framed and formulated at the National, State or even at the company level, for ensuring the level of compliance to environmental norms. Business, houses have to prepare a concrete environmental policy, take steps for pollution control, comply with the related rules and regulations, and mention sufficient details of environmental aspects in the annual reports. For sustainable development, a definite environmental policy as well as proper implementation and appropriate accounting procedure is a must.

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