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# Environmental Accounting in India: A Conceptual Study

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***ABSTRACT***
*Environmental accounting is defined under different perspectives. It includes identification, measurement and allocation of environmental costs. It integrates environmental costs into business decisions and communicates the same to the stakeholders of the company. The impact of environmental aspects is identified and measured in order to develop reporting systems to decision makers. An important function of environmental accounting is to bring environmental costs to the attention of corporate stakeholders who may be able and motivated to identify ways of reducing or avoiding those costs while at the same time improving environmental quality.*

*The objectives of this study are to examine the various parameters which are adopted by corporate houses for environment accounting and reporting practices. This study will provide a broad view on the developments taken place in corporate environmental accounting practices in India and the major limitations of such practice.*

**Keywords:** Environmental accounting and reporting, environment cost, environmental management.

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## INTRODUCTION

A native American Proverb States that, "only when the last tree is cut, only when the last river is polluted, only when the last fish is caught only when they will realize that you cannot eat money." The economic development without environmental considerations can cause serious environmental damage, which is in turn dangers the life of present as well as future generations. It is a matter of common knowledge that there are limited resources available for the use of all spices on the earth, and the immense damage is caused to the environmental due to the activities of the business enterprises.

Environmental accounting is a dynamic emerging concept. It is concerned with the accounting treatment of environment activities in a business. It identifies and highlights the resources used and the cost incurred related to the environment events planned and executed by the business. It attempts to measure the best possible method of assessing the cost and benefits of an enterprise which are particularly directed into environmental preservation. It brings together all the forces functioning in nature including man and other inanimate organism.

Even though, environment accounting is corporate focused, it is understood that it can be done at national and regional level as well. It emphasizes the practice of considering indirect costs and benefits of an activity or product or service along with the direct cost during decision making process. The indirect costs and benefits include the environmental effects on health and the economy of an activity [2].

In general, environmental accounting provides treatment of various environmental issues faced by corporates in their financial statements. It includes forecasting of environmental expenditures, its actual determination and recognizing environmental liabilities. It also includes disclosure of all liabilities in a separate section of the annual reports of the company. The recent development in the business approaches like activity-based costing, TQM, life cycle costing and designing, etc. provides an opportunity in integrating environmental information into business decisions.

## NEED FOR ENVIRONMENT ACCOUNTING

Focusing on the environment is the need of the hour for sustainable development. The corporates need to focus on strategies in improving the business environment. An environment friendly firm can build a better future and contribute positively to the future generation of the society. Its emphasis the importance of identifying and measuring environmental costs. Accounting Information system is significant component of MIS. It plays a vital role in protecting the environment and makes polluting manufacturing companies to take responsibility for the environmental protection. It provides details of how to handle their accounts and to expose issues. Even though, to protect the environment, necessary rules and regulations are required. There is an immediate requirement for clear and well-defined accounting guidelines for the organizations. The public need awareness about the importance of environment and the corporates should take accountability in protecting the environment in which they operate.

### Various forms of Environmental Accounting

***1. Environmental Management Accounting:*** This kind of bookkeeping centres around material and vitality stream data and natural cost data. It very well may be additionally grouped into three sub-frameworks as specified beneath.

*a. Portion environmental accounting*: This is an inward situation bookkeeping device to choose a speculation movement or undertaking identified with ecological impacts for a specific period [1].

*b. Eco-balance environmental accounting:* This is additionally an interior environmental accounting device to help reasonable natural administration exercises.

*c. Corporate environmental accounting:* This is a device to educate general society of important data gathered as per the environmental accounting. It is otherwise called corporate environmental reporting. This technique utilizes the expense and impact (in amount and financial esteem) of its ecological preservation exercises [3].

***2. Environmental Financial Accounting:*** Financial accounting centres around announcing natural risk costs and other critical ecological expenses.

***3. Environmental National Accounting:*** National level accounting centres around characteristic assets, stocks and streams, natural expense and externality cost, and so on.

## OBJECTIVES OF THE STUDY

[1] To review the accounting regulations and government rules relating to environment accounting.
[2] To examine the various benefits to corporate houses due to environment accounting and reporting practices.
[3] To understand the effect of corporate environmental accounting and reporting in the financial statements.
[4] To find out the major challenges in the sound development of that practice.

## LEGAL FRAMEWORK FOR ENVIRONMENTAL ACCOUNTING IN INDIA

The Constitution of India (Article 51A) emphasize that one of fundamental duties of every citizen is to protect and improve the natural environment. Hence, this statement imposes environmental responsibility of corporate citizen also. Apart from the article 51A, various laws have been enacted for environmental protection such as Water (Prevention and Control of Pollution) Act. 1974, Forest Conservation Act 1980, Air (Prevention and Control of Pollution) Act 1981, Environment Protection Act 1986, Hazardous Waste (Management and Handling) Rules 1989, etc. However, Rule 14 of EPA 1986 requires an industry to submit Annual Environment Statement (ES) by 30th September every year from 1993 onward to relevant State Pollution Control Board. It is applicable to any industry which possesses or requires consent under Water (Prevention and Control of Pollution) Act 1974, Air (Prevention and Control of Pollution) Act, 1981, Hazardous Waste (Management and Handling) Rules 1989, (Oza, 2004, p.809). Indian Companies Act, 1956, requires including in the Director's Report all environmental related issues and policies. Further, in 1996 ISO: 14000 and in 1999 ISO: 14001 series were introduced. These two standards lay out the environmental norms which the industrial units must follow.

## BENEFITS OF ENVIRONMENT ACCOUNTING

Environmental accounting plays a vital role in supporting the companies in rational decision-making. The benefits of investment and costs related to environmental activities help the companies in improving its efficiency. Hence, environmental accounting helps companies and other organizations boost their public trust and confidence and are associated with receiving a fair assessment. The following are the benefits of environmental accounting:

- Environmental accounting encourages corporates to produce environmentally friendly products, (green products) which help the consumers to purchase eco-friendly items. It helps both consumers and corporate with mutual benefit.
- Corporates can show their commitments towards introduction and change, and thus seem to be responsive to new factors. Western countries give more importance to the ecological aspect of activities and thereby gaining popularity among public [4].
- This accounting system reveals that the environmental natural resources takes place in the production as inputs. Shadow prices of environmental resources are usually defined as the value added attributable to them in the activities.
- Pollution control, which is the challenging task for Indian companies, is addressed in the environmental accounting reports showing the extent to which pollution has been controlled by the corporate sectors.
- Environmental accounting is of the utmost importance in answering certain queries, such as the extent of natural resources available in countries, the incomes arising out of them, the expenses incurred to protect the resources, importance from the view of the nation, and at the values to be shown in the nation's balance sheet, etc.
- Another benefit of environmental accounting is that it offers an idea about industrial development, a nation's economic progress and social welfare and the fulfilment of responsibility towards society.
- This type of accounting helps in building organizational accountability and increasing environmental transparency in the organisations. Sustainable development for firms would be possible with the help of environmental accounting as it helps include ecological ability of enterprise.

- In the global economy there is an existence of a strong environmental lobby which is against environmentally unfriendly industries. Green reporting can be used to combat effectively all negative public opinions.
- A corporate sector uses the enlightenment approach and thus raises its image of awareness to the outside world. Environment accounting expressing the concept of sustainable development is very often used as an efficient tool for improving the management of enterprise.
- Environmental accounting minimizes the risk stemming from the management of product liabilities. A business cannot fully include the necessary environmental changes until and unless accounting and finance do so.
- This approach improves environmental performance through efficient management of environmental cost and thereby, benefits the natural and human environments.
- Environmental accounting detects that part of the gross domestic product which exhibits the requisite cost to compensate for the negative impact of economic growth.
- Environmental accounting forecasts the total expenses on production or enhancement of the environment. Companies seeking long-term profits are possible only when the ecological aspect in its business strategy and policy is considered.
- Multinational bodies like the IMF, World Bank, UNO, etc., are ready to support environmental projects and looking for countries seeking their assistance to meet their environmental requirements.
- Government can initiate to optimize the allocation of scarce resources in the economy of a country with the help of data available and make necessary changes in the financial budget.
- This type of accounting discloses and highlights the areas of soil and vegetarian deterioration through building construction in open areas due to increasing population pressures.
- This method also compares with the conventional accounting which discloses the main reasons for the change in net capital formation and the extent of substantiality of conventional accounting.

## PROCEDURE FOR ENVIRONMENTAL ACCOUNTING

### Profit and Loss Account

All revenue expenditures incurred for the protection of the environment should be debited to this account.

### Balance Sheet

All environmental and natural resources consumed by the business should be regarded as environmental assets and it should be the liability of the organization towards society to utilize such assets at maximum possible capacity and at minimum cost without adversely affecting society’s interest. Any capital expenditure incurred by the organization should be shown in the balance sheet.

### Budgets

The environmental budget should be prepared by the organization to ascertain the amount required for environmental activities. The responsible person should check and verify the actual amount of expenditure spent on environmental activities.

### Reporting

The organization should report for environmental activities, the cost imposed by the organization on the environmental benefits served by the business organizations, benefits received from the environment and the costs imposed by the environment. In short, social responsibility of business will be satisfied by the reporting system. The major burning issues and challenges about environmental accounting include: (a) identification of environmental costs; (b) capitalization of costs; (c) identification of environmental liabilities; and (d) measurement of liabilities.

## CHALLENGES IN ENVIRONMENTAL ACCOUNTING AND REPORTING

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. Costs of environmental damages are 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, capitalization of such cost and liability and reporting framework. Again, environmental costs have impact on reported profit in the financial statement as well as product pricing. 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 [5]. 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, and process development can be possible for monetary measurement. But cost of externalities, such as degradation and destruction, e.g. soil erosion, loss of biodiversity, air pollution, water pollution, noise pollution, problem of solid waste, depletion of non-renewable natural resources, loss emerged due to over exploitation of non-renewable natural resources (minerals, water, gas, deforestation) and the environmental assets created by business like a forestation, 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. At present, environmental accounting and reporting is a voluntary requirement rather than mandatory; in such situation everyone has tendency to depict the strength rather than the weakness.

## LIMITATIONS OF THE STUDY

Being the implementation of environment accounting is quite challenging. This study is subject to certain limitations. There are no generally accepted accounting standards, regulations, rules, etc., against which the performance of organizations can be compared and evaluated. Further, comparison of two firms or countries is difficult as the method of accounting differs. Even the very quantification process is diverse among companies and countries. Further, cost and benefits relevant to the environment are not easily measurable. Environmental accounting is a long-term process, and therefore, to draw a conclusion with help of it is not easy. Inputs for environmental accounting are not easily available as costs and benefits relevant to the environment are not easily measurable.

## CONCLUSION

The existence for several paradigms from which environmental research has been developed has resulted in a lack of cohesion in the expectations and desired outcomes of environmental accounting. Further, lack of cohesion seeking explanation about the motivation behind corporate environmental accounting adds fuel to this. It can also be said that, even if the environmental goods and services can be quantified in monetary terms, then also certain questions arise as to how far society will benefit from the effects of environmental accounting? The social values placed on environmental goods and services are changing so fast that estimates are likely to be obsolete before they are available for use. Planning for sustainable development requires an estimate of environmentally adjusted GNP. Most of the application of environmental accounting requires shadow pricing because we cannot establish market values, since the economic goods and services concerned are never traded or because we do not want them to be traded, but we do not want to know what they are worth. However, despite these theoretical irregularities, the slogan for environmental accounting has won perpetual benefit inherent in it. The international awareness and acceptance of the importance of natural and environmental resources has laid to the development of environmental accounting. Valuation of environmental goods and services and incorporation of environmental data into the national and corporate levels suggests different techniques. There is high degree of confusion among accountants about how to fit environmental data into financial statements and the techniques available for valuation are also not free from uncertainty. In different countries, the accounting and disclosure practices in respect of environmental issues have become mandatory. But in many countries, no such mandates have been issued. There is now an urgent need to take steps globally and particularly to formulate the accounting and valuation techniques regarding environmental issues. Mandatory guidelines can be issued in each country to incorporate these in the company’s annual report, including environment related legislations, as in developed countries. The dedication with which work for the development of environmental accounting is going on will surely lead to environmental accounting occupying a more stable and effective position in the coming future, as it could greatly improve the value of economics as a decision-making tool, particularly in determining national policy. The implementation of environmental accounting is expected to bring about a change in the managerial attitudes and thinking. Despite difficulties associated with environmental accounting, there is much evidence to show that many countries around the world have honestly attempted to pick-up the new challenges and threats. Economic activity should not be guided by “profit motive” alone but should also include “quality of life” and “ecological balance”. The key to sustainable growth, therefore, is not to produce less but to produce efficiently, with the help of adopting a proper environmental accounting system.

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