

## **ENVIRONMENTAL ACCOUNTING FOR SUSTAINABLE DEVELOPMENT**

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### **ABSTRACT**

Accounting and disclosure of environmental matters are increasingly manifesting as a big dimension of corporate accounting and reporting practices. because the entire world continues its rapid move towards industrialization, it's seriously threatened human ability to maintain the ecological balance. Industrialization is the foundation stone of the event of any economy, while the unplanned industrialization and discharge of waste by industries is one altogether the foremost important reason for environmental pollution. This method records both the cost and the benefits of a business. Green Accounting and reporting in India is in developing stage both at the company level and at the national level. Environmental accounting is described because the identification, recording and reporting of costs incurred during the course of business operation in an environment. environmental accounting relates to all liability costs, social responsibility costs and waste disposal costs. It involves the alternative costs that arises from meeting challenges that sometimes ensued to a firm during the strategy of manufacturing its products or services which invariably finishes up in crises due to utilization of environmental resources. Environmental accounting is additionally a major issue for sustainable development especially to contemplate environmental taxes, environmental costs, valuing ecosystem services, costing of acid gas, and value of pollution and ensure income sustainability of green products within the way of sustainable development. This method records cost and benefits of a enterprise.

### **INTRODUCTION**

Green accounting which is also called as environmental environment was introduced by an economist and Professor PETER WOOD in the year 1980.It plays a vital role in today's CORPORATE SOCIAL RESPONSIBILITY. It incorporates environmental sources and assets into company`s accounts. It measures social, economic and environmental impact of business. It is one the system emerged for sustainable development. It is a new kind of accounting which aims at accounting for environment and its well-being (Anil kumar. N et al.,)

Green accounting is an important tool for understanding the economic role of the natural environment. Environmental accounting has different goals as well as viewpoints that only include the protection of natural assets as well as the change in wellbeing due to environmental impacts (Dr Ashima Saxena, 2018)

Environmental accounting emerged in the 1970s as a result of an increase in environmental awareness and concerns about social and environmental wellbeing. It has three distinct applications: national income accounting, examining macroeconomic measures in a national economic context; financial accounting, including companies' estimation and reporting of environmental concerns to the public; and management accounting, where the context is the use of environmental data in companies' decisions and

operations. The financial accounting part of environmental accounting is readily available through annual reports, sustainability reports and other reporting media, and in contrast, management accounting information related to operations is usually considered to be internal and confidential. (Mohammad Delwar Hussain et al., 2016)

Environmental accounting is that field which deals with the resource use, communicates and measures cost of national economic effect or company effect on the environment. The costs have included cleanup costs or remediate of clean polluted sites, environmental penalties and taxes, buy of techniques that prevent pollution and costs of waste management. The system of environmental accounting includes two types of accounting, the first one is environmentally differentiated conventional accounting and the second one is ecological accounting. (Amer Shakkour et al., 2018)

Environment Accounting provides information that helps to management of organization in matters of evaluation, performance, control and decision making and reporting. In the beginning of creating the enterprises were not inclined to reveal the environment damages in their financial statements but by laps of time and increase in detorments the enterprises became perforce to observe these issues. Environmental expenses identification relevant to products of an enterprise or organization for management correct decision making is very important. Making use of environment accounting has been more aspect in issues such as costing, investment analysis, and strategic management decisions. Many enterprises today are faced with environmental problems and they are looking for a suitable method for information disclosure and reporting for all people so the necessity of using of environment ac-counting is as effort for environment protection. (Hamid saremi and Behrad Moein Nezhad, 2014)

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. (vijaya lakshmi. V, K. Syamala Devi, 2018)

## **ENVIRONMENT DEFINITION**

Now days the term of environment is talk of everyone, what is the real meaning of this word? Environment is one of the very complicated and lesser-known words. It means all surrounded objects around us. This term as have been mentioned in ecology's books is of a complex and intertwined phenomenon which includes the social environment, biological and physical properties. (Hamid saremi and Behrad Moein Nezhad, 2014)

## **CONCEPT OF ENVIRONMENTAL ACCOUNTING**

The common definition of "environmental accounting" is "the identification, measurement, and allocation of environmental costs, the integration of these environmental costs into business decisions, and

the subsequent communication of the information to a company's stakeholders" (AICPA). Environmental Accounting is the practice of including the indirect costs and benefits of a product or activity, for example, its environmental effects on health and the economy, along with its direct costs when making business decision Environmental accounting is the collection, recording, classification, extraction and summary of information relating to the natural environment. Environmental Accounting is the practice of including the indirect costs and benefits of a product or activity, for example, its environmental effects on health and the economy, along with its direct costs when making business decisions-also called Green Accounting.(bnet dictionary) 'Environmental accounting is the collection, analysis and assessment of environmental and financial performance data obtained from business management information systems, environmental management and financial accounting systems. The taking of corrective management action to reduce environmental impacts and costs plus, where appropriate, the external reporting of the environmental and financial benefits in verified corporate environmental reports or published annual reports and accounts. (Md Mohobbot et al., 2010)

### **ENVIRONMENTAL ACCOUNTING OBJECTIVES**

To enable member States to gain a better understanding of accounting and reporting issues related to the environment; and to contribute to the harmonization of the approaches that member States are taking on environmental accounting and reporting. The purpose of environmental accounting is to monitor and evaluate the status of environmental activities in a quantitative manner as much as possible. In accordance with this purpose, continuous review of item classifications and scope of data collection, etc. will be conducted for further refinement in methodologies of environmental accounting, including the following. Verification and clarification of the criteria for determining what investment and expenses are to be increased or decreased.

1. Identify environmental opportunities and straiten additional costs that are without value adding.
2. To estimate and calculate estimated environmental of enterprises expenses and including them in factory overhead costs generally.
3. To identify environmental opportunities for net profit creation.
4. Creation and maintenance of an environmental information system to improve operational management.
5. Determine future cost and yield arising from the implementation of Environmental Management Information System.
6. To help design a manufacturing process of goods and services compatible to Environment.
7. To provide accurate quantitative information on volumes and economic effects to interested parties within and outside the Group.
8. To provide numerical environment-related information useful for decision making by management and supervisors at the working level. (Hamid saremi and Behrad Moein Nezhad, 2014)

## TYPES OF EMA



**Figure 1:** Types of EMA

1. Environmental management accounting
2. Environmental financial accounting
3. Environmental national accounting

1. Environmental management accounting: the identification analysis and use of two types of information

A. physical information: which focuses on physical use of scarce resources and how much waste occurs?

B. monetary information: information on environment-related costs, earnings and saving

2. Environmental financial accounting: EFA is applicable for accounting of transactions which have an impact on financial performance of the company.

3. Environmental national accounting: It is national accounting done for natural resources and green cost. (Anil kumar. N et al.,)

## STAGES OF ENVIRONMENTAL ACCOUNTING:

To assess the organization's ultimate environmental efficiency, the study established a model which defines six aspects to be covered in environmental accounting. The aim of this model is to offer a novel view of the numerous practices organizations should conduct to promote environmental accounting and reporting.

- Identification: The first step in the environmental accounting process is the identification of environmental reporting criteria. Each organization defines its respective environmental criteria such as "environmental policy, health and environmental protection, energy conservation, environmental sustainability programs, sustainability monitoring", etc.
- Describe: When defining environmental reporting parameters, the second stage of the environmental accounting process requires organizations to clearly state the operational meaning of each parameter they determine, and based on this they want to measure longterm environmental performance.

- **Specification:** The next target is to identify the environmental targets. The organization is ought to formulate the environmental targets, both short term targets as well as long term targets.
- **Development:** An important step in environmental accounting is the creation of the Environmental Performance Indicators. Organizations need to find metrics of their environmental success, such as the structure for environmental policy, health and safety standards to be adopted, energy conservation strategies to be implemented, waste management to be designed, water management policies etc.
- **Measurement:** Organizations are trying to measure real environmental performance in terms of the traditional performance indicators that are set. Measuring can be of a qualitative or quantitative in nature.
- **Report Generation:** The last step of environmental accounting is to produce Environmental Performance Results documentation. (Dr Ashima Saxena, 2018)

### **ENVIRONMENTAL ACCOUNTING PRACTICE IN INDIA:**

1. The first announcement regarding this green accounting was made in the year 1991.
2. 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.”
3. The Union Ministry of Environment and Forests has issued various instructions in to prepare environment statements.
4. 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.
  - A. Type of devices installed to control pollution
  - B. Steps taken for energy conservation.
  - C. Optimum utilization of resources.
  - D. Steps for decomposition of waste.
  - E. Steps taken for improving quality of the product.

In this environment statement, the concerned industry is required to provide information on:

- A. Water and raw material consumption.
- B. Pollution generated
- C. Impact of pollution control measures on conservation of natural resources.
- D. Nature of hazardous and solid wastes produced and disposal practices adopted
- E. Measures taken for environmental protection
- F. Steps taken to popularize the benefits of environmental accounting and reporting among the corporate sector. (Anil kumar. N et al.,)

**VARIETY OF ENVIRONMENTAL ACCOUNTING:**

According to the U.S. Environmental Protection Agency (EPA) that provided in 1995 a broad term of environment accounting is divided into three distinct parts that centralization of each part and their users also are different:

For multiple users who require environmental information relating to the Company there are various ways and means to accounting environment in order to fulfill these informational needs. However, there is wide agreement on the two main groups of environmental impacts related to the company:

1. Environmental effects of enterprises on cooperatives economical systems.
2. The effects related to environment system. (Hamid saremi and Behrad Moein Nezhad, 2014)

**THE ADVANTAGES OF ENVIRONMENTAL ACCOUNTING**

The main advantages of environmental accounting can be briefly stated as follows:

- Adequate environment accounting system is supportive to achieve sustainable development
- that to be measure of the of the main tools extent for measurement, control and decision making.
- The environmental costs either of current costs or capital costs will increase salient from day to day.
- Management is needed to financial information about environmental costs.
- Fundamental cost planning requires basic financial information.
- Environmental costs may be hidden in overhead accounts or otherwise overlooked.
- Beneficiaries' need (governments, investors, lenders, banks, NGOs, etc.) to financial information on the environmental is increasing organizations.
- Many environmental activities are quantity, have financial nature and therefore have multitude impact on costs, assets and liabilities of organizations.
- It is obvious that each business unit has a main output and secondary that environmental pollution is amongst them. If the business do not pay expense to modulate or prevent it so third parties of society must then bear the incurred cost.
- Authentic Resource management in a friendly attitude towards environment leads to direct
- benefits such as creating a higher goodwill or better image of the organization.
- The existence of an environmental friendly attitude will create a competitive advantage for organizations.
- For environmental costs and performance Accounting can support the development and implementation of environmental management system (EMS) and the credentials of 14000 ISO. (Hamid saremi and Behrad Moein Nezhad, 2014)

**CONCLUSION**

In India, environmental accounting is in initial stage. To order to know the role played by natural environments to economic development, the environmental accounting system is a vital element. This provides information reflecting the importance of natural resources to the economic well-being of the planet, and also the expense of environmental pollution and loss of wealth. Improved environmental performance is because of the willingness of companies to befits government policies and regulations and consumer demands to induce a product-oriented environment. Implementation of green accounting even have a positive impact on the financial performance of the corporate, which is increasing the positive perception of the consumers who find yourself in increased sales and profits. Improved management of environmental

costs is commonly good for industry and society, and accountants are accustomed recognize opportunities for the reduction of environmental costs or to support environmental initiatives that make revenue streams. the correct practice of environmental accounting may be a vital issue for sustainable development especially to think about environmental taxes, environmental costs, valuing ecosystem services, costing of CO<sub>2</sub>, cost of pollution and ensure income sustainability of leading within the way of sustainable development.

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