

## **ENVIRONMENTAL ACCOUNTING EVOLUTIONARY ISSUES**

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### **ABSTRACT**

*All over the world efforts are being made to incorporate environmental data into company's financial account. There are two aspects involved in corporate environmental financial Accounting which includes, Accounting for the cost of impacts of organisation's activities, products and service on natural environmental resources and society, for which the organisation is not financially responsible known as societal costs.*

*Accounting for the costs which the organisation has incurred to prevent the degradation and deterioration in the quality and quantity of environmental resources from its activities, services and products, known as private costs. The research projects which were carried out in various countries of the world have concluded that if environmental aspects are to be incorporated in the accounting system then existing accounting system is required to be modified at two levels i.e. Macro Level and Micro Level. In this paper attempts has been made to analyse evolutionary issues like environment valuation techniques and types of costs which can be considered for environmental accounting purpose.*

**Keywords:** Environmental Accounting

### **INTRODUCTION**

In the era of globalisation rapid industrialisation is taking place creating an increasing pressure on environment world over which requires an effective management for tackling the same. Unplanned industrialisation and the release of huge amount of effluents, hazardous wastes and emission of various chemicals by the industrial units in environment are the main causes of environmental damage. In fact industrial organisations are the main consumers of the resources provided by the environment. At the same time they are considered one of the main polluters of environment. So each corporate citizen should bear the moral responsibility towards the protection of environment from damages and pollution.

### **Modification in the existing Accounting system**

During the last one decade many research projects dealing with the field of environment accounting have been organized. These projects were carried out by well established

accounting associations, association established specifically for environment protection and individuals. The research projects which were carried out in various countries of the world have concluded that if environmental aspects are to be incorporated in the accounting system then existing accounting system is required to be modified at two levels which are given below:-

- Macro Level and
- Micro Level.

## **Macro level**

At Macro level, the national income accounts are needed to add the value of natural resources and environment and changes therein. Some countries showing very high rate of growth may show negative growth rate, if environmental aspects such as degradation and depletion in environmental resources are incorporated into their national income measurement system.

At present, the national income accounts incorporate only the depreciation in the value of man-made capital but no account is taken of the increase or decrease in the value of natural and environmental resources both renewable and non-renewable. The arising need of addition of environmental data UNSO in collaboration with Mr. Carsten Stahmer has developed the system of SEEA( system of integrated environmental and Economic Accounting) with the following objectives (Gupta, 1989)

1. Calculation of exploitation of environment in terms of costs.
2. Creating relation of physical resource accounting with monetary accounting.
3. Segregation and elaboration of all environmental- related flows and stocks of assets.
4. Measurement of indicators of environmentally adjusted domestic income and product (EDP)

The system of SEEA has some limitation. It will lower the growth rate because it will consider environmental factors in national income accounts but it will show the real growth and decisions can be taken by governments and planners on the basis of environmentally adjusted national income data will be more realistic and will be more in favour of the country as a whole.

## **Benefits of this system**

1. True growth rate of the country can be known
2. Natural resources will be better utilised.
3. Environmental costs can be shown and measured.
4. Government and planners can take proper decision on basis of sustainable growth .
5. It will create awareness among countries toward our environment.

## Micro level

At micro level, industrial undertakings should introduce a process of accounting which will show that whether a particular industrial unit is complying with the polluting industrial regulation or not. At micro level it is called corporate environmental accounting, which includes two types of environmental accounting.

- Environmental Financial Accounting
- Environmental Management Accounting

Financial accounting is concerned with the preparation of financial statements, i.e. balance sheet and profit and loss account. Balance sheet indicates the financial health of the business concerned whereas profit and loss account tells the results of operations of the business. These are used by various users like creditors, shareholders, lenders, government, etc. these financial statements are prepared on the basis of Generally Accepted Accounting Principles(GAAP) and on the basis of various standards issued by the concerned accounting authorities of the concerned countries.

As industrial organisations are the “users” and “polluters” of environment, indicated earlier on, they should account for the use of environmental resources and their pollution of the environment in the form of the effect on air, water and land. But question may arise:

1. How accounting can quantify some natural resources like fresh air, sunlight and measure their monetary value?
2. What are the financial effects of environmental loss and loss of welfare associated with pollution? These are just a few among many quarries arising complexity of accounting for environment.

All over the world efforts are being made to incorporate environmental data into company’s financial account. There are two aspects involved in corporate environmental financial Accounting which are given below

1. Accounting for the cost of impacts of organisation’s activities, products and service on natural environmental resources and society, for which the organisation is not financially responsible known as societal costs.
2. Accounting for the costs which the organisation has incurred to prevent the degradation and deterioration in the quality and quantity of environmental resources from its activities, services and products, known as private costs.

## Environmental Financial Accounting

Environmental financial accounting includes measurement, presentation of societal costs and private costs, and reporting of these costs in the financial statement.

Societal costs concerned with identifying the adverse impact of corporate activities, products and services on the environment and natural resources. There are several techniques available for measuring worth of natural resources damaged by the industrial activities in money terms. These techniques are described in brief below.

**Environment valuation techniques**

There are various techniques available for measuring in money terms worth of environmental and natural resources damaged by the organisation. Some of such techniques are being discussed here briefly.

**Cost of air pollution**

Air pollution generated from industry will cause serious health effect leading to the service potentiality of people. The cost of such pollution may be estimated by the loss of earnings due to their loss of service potentiality, direct expenses for medical care and cost of premature death( in terms of present value of their future earnings).

Cost of sound pollution may also be calculated in the same way.

**Cost of water pollution**

Surface and ground water may be polluted from the discharge of effluents and may pose serious health hazard. If this polluted water causes health damage reverting the individuals concerned from working then its cost is equal to the opportunity cost, medical cost and cost of premature death of effected people.

**Travel related cost**

This method is designed to value recreational sites, especially those with open access variety. It is mainly used for the valuation of recreation sites, historic sites .

**Repair and replacements**

This approach uses increased expenditure on the replacement, maintenance or repair of physical assets as the measurement of environmental damage. The cost must be the result of some kind of environmental impact, as distinct from replacement and repair cost that are normally required.

The second aspect of Environmental financial accounting is of private costs or the costs which affect bottom line of business cost. These are the costs which the organisation has incurred to prevent environment pollution. The various private costs which are associated with organisations activities, products and services include the following:

**Regulatory costs**

These are those costs which are incurred to comply with state or local environmental laws also known as compliance costs.

**Operational costs**

costs incurred during the operating lines of processes, products, system and facilities as opposed to upfront costs and back end costs.

**Conventional costs/ usual costs**

costs typically recognised in capital budgeting excercises, such as capital equipment, raw materials, supplies and equipment. These are referred to as usual costs in EPA pollution prevention benefits manual.

## Hidden costs

current environmental costs which are pooled in the existing overhead accounts or overlooking future and contingent costs.

## General and administration costs

These are overhead or indirect costs that are not allowed to the costs of goods and services sold.

## Environmental liabilities

It is a wide term used to refer to different types of environmental costs including costs for remediating existing contamination, costs of complying with new regulations, future environmental costs of current operations or contingent costs.

## Environmental management Accounting

In management Accounting information is presented to managers in such a way that it will enable the business managers to achieve the objective of financial success of business. Environmental management accounting leads to improved decisions by identifying hidden or misallocated internal and external environmental costs and allocating them to particular product process, facilities etc. it will help the firm in the following ways

1. Reduce environmental costs and pollution
2. Design of environmentally preferable products, processes and facilities.
3. Increase revenue
4. Capital budgeting decisions: investment appraisals if considers environmental factors associated with the proposal, will lead to better capital budgeting decision.
5. It will support overall management system and will enable the firm in complying with environmental laws.

## CONCLUSION

Most of the companies in India are not still aware of environmental issues and found proper place in the directors' report for providing environmental information to their stakeholders as there is no compulsion for it. The international awareness and acceptance of the importance of Natural and Environmental Resources has led to the development of a new concept in accounting called Environmental Accounting. A number of techniques for valuation of environmental goods and services have been designed but there is high degree of confusion among the accountants about how to fit environmental data into financial statements. A lot of research work is going on for the development of this concept and will surely lead environmental accounting to occupy more stable and effective position in the coming future.

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## **ABHINAV**

**NATIONAL MONTHLY REFEREED JOURNAL OF RESEARCH IN COMMERCE & MANAGEMENT**

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