Green Accounting : A Desire, Desideratum and Demand of Todays' Current Scenario

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Abstract

Green accounting attempts to detect and focus the resources consumed and the costs rendered by an industrial unit to the environment. For the sustainable development of mankind, a healthy environment is indispensable. Gradually, therefore, in many countries including India, environment matters are being given top most priority. Accounting and disclosure of environmental matters have been increasingly manifesting as an important dimension of corporate accounting and reporting practices. 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. 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. The conceptual study also reflects that despite different anomalies, environmental accounting is becoming an increasing important aspect of the accounting agenda within the corporate sector in India. Lastly, a conclusion, along with recommendations, has been given to overcome the situation.

Keywords : *Market, Investment Decisions, Capital Market.*
Classification JEL : M41, M48, R41.

1. INTRODUCTION

As 21st century continues to be an age of progress and prosperity, more and more emphasis is being laid on nature and the environment that surrounds us. Humans have already caused damage that is beyond repair to the environment surrounds them. However, recognizing the importance that the environment plays in our survival and careful assessment of the damages and repercussions that the world would have to face in the long run, is leading more and more organizations, government and associations to recognize not just the need to protect the environment but also to create awareness among the masses about the importance of the environment.

Just as environment awareness today is growing at a pace like no other; so is the need to account for the well-being of the environment. Corporate and businesses alike are understanding and formulating steps to promote green and environmental friendly causes for the present and the future.

Among various other steps that are being taken in this regard is a new branch of accounting called, "Environmental accounting or Green accounting". It is also called resource accounting or integrated accounting.

The concept of green accounting was first time 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 financial statement. It measures social, economic and environmental impact of business. It is an important system emerged for sustainable development. It is a new kind of accounting which takes into consideration environmental cost for calculation of income of an enterprise. There is a need for calculating revised method of accounting which includes environmental cost.

Environmental accounting also known as green accounting, is to measure, record and disclose the impacts of corporate environmental activities on its financial status through a set of accounting systems. The definitions of green accounting in different countries are similar, as shown in following table.

Green Accounting is a new branch of accounting that aims at accounting for the environment and its well-being. Although it is a completely new field/branch of study and practices; it's soon gaining relevance because of its importance. In addition to merely checking a company's profit or loss or its revenue and expenses environmental or green accounting is a growing field that focuses or provides for accounting the environmental impact, certain factors may cause to a business or organization .

The adoption of green accounting depicts the commitment an enterprise/ organization has towards the environment. It deals with three most important factors people, profitability and the planet and also more or less deals with the costs and the advantages or benefits an environment brings to a business concern.

India's former, Environment Minister Mr. Jairam Ramesh when in power stressed the need and importance to bring green accounting practices to the forefront of accounting in India.

Table-1
Regulations or Definitions According to Different Countries

International Federation of Accountants, 2005	Environmental management accounting manages environmental and economic performance by development and execution of a proper environmental accounting system, including reports and auditing of corporate information and environmental management accounting. Generally speaking, it includes lifecycle accounting, total cost accounting, an effective process and strategic planning of environmental management.
Ministry of Japan, 2005	Green accounting is a quantitative assessment of the cost and effectiveness of enterprises in environmental protection activities. Enterprises are required to have systematic records and reports are guided to maintain a positive relationship with ecological environment to implement effective and efficient environmental activities. The final goal is to accomplish sustainable development.
Environmental Protection Administration, Taiwan, 2008	By measurement, records, analyses and explanation, enterprises resources invested in environmental improvement and protection and executive outcomes are completely and consistently reorganized, and the outcomes are provided to stakeholders of enterprises.

Source: International Conference on "Paradigm Shift in Taxation, Accounting, Finance and Insurance"

2. IMPORTANCE OF GREEN ACCOUNTING AND ITS RELEVANCE

Changes in the environment have a negative bearing or not just the environment but on the economy as a whole. And, it is a well known fact that changes in the economy have a direct bearing on the changes in any business. It is also important to note that the GDP of a country can be affected by the environmental and climatic change. In addition to this as people become more aware and conscious of environmental issues, the need for sufficient and appropriate corporate disclosures is growing all the more. It seems to be important that industrialization beside the improvement and development is get on to raising the environmental issues before the society. Therefore it is an immense requirement that green accounting at corporate should be focused to manage a balance between the growth of economy and maintaining the ecological balance.

Steps taken by the Indian Government: There are several laws formed under the constitution of India for the environmental Protection. As per Indian Constitution, Article 51A of the Directive Principles “It shall be the duty of every citizen of India, to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for living creatures. The constitutional provisions are backed by a number of laws – acts, rules, and notifications like Factories Act 1948; Prevention and Control of Pollution Act 1974; Forest (Conservation) Act 1980; Air (Prevention and Control of Pollution) Act 1981; Water Biomedical Waste (Management and Handling) Rules 1998; Municipal Solid Wastes (Management and Handling) Rules 2000; Ozone Depleting Substances (Regulation And Control) Rules 2000; Noise Pollution (Regulation And Control) (Amendment), Rules 2002; Biological Diversity Act 2002.

The department of Environment was established in India in 1980 to ensure a healthy environment for the country. This later became the Ministry of Environment and Forests (MOEF) in 1985. The EPA (Environment Protection Act), 1986 came into force soon after the Bhopal Gas Tragedy and is considered an umbrella legislation as it fills many gaps in the existing laws.

Understanding the need for companies to become morally and socially responsible, the Government of India through the new Companies Act of 2013 made Corporate Social Responsibility (CSR) mandatory for Companies who fall within any of the three categories mentioned below:

1. Companies having net worth of INR 500 crore.
2. Companies having turnover of INR 1000 crore or
3. Companies having net profit of INR 5 crore.

Each such company that falls in any of the category mentioned above has to spend at least 2% of its average net profits of the last three years on CSR activities and also has to disclose in its Board/ Directors' Report its list of CSR activities annually.

In addition to these companies in India also have to disclose particulars relating to conservation of energy, technology absorption and foreign exchange earnings and outgo.

Although these are few key steps that are being taken they are insufficient to meet the ever increasing needs of environmental conservation and protection of businesses.

3. STEPS BEING TAKEN IN OTHER COUNTRIES

Developed countries like Germany, USA, UK, Spain and France have recognized the need for conservation of energy. Recognizing that the path to a sustainable and healthy future lies in adopting green accounting practices, some of these developed countries took initiative in this respect. Few examples are as follows:

1. Australia has established the “Australian Institute of Environmental Accounting” that offers vocational courses in sustainability, Carbon & Energy and Environmental Management.
2. UK has passed number of regulations to complement a company's efforts with regard to CSR. The Companies Act compels directors' to provide information in their annual report on risks, the environment they work in etc.
3. France has strictly ordered to follow the laws and regulations affecting CSR by the companies. Also, the French Ministry of

Sustainable Development is in charge of publishing the environmental economic accounts every year.

4. OBJECTIVES OF GREEN ACCOUNTING

1. To assess environmental costs and benefits to a concern.
2. To segregate and categorize various environmental costs.
3. To link physical resources with environmental accounts with environmental accounts monetarily.

5. RATIONALE OF GREEN ACCOUNTING

Green Accounting plays a very vital role in supporting rational decision-making. It helps companies and other organizations boost their public trust and confidence and are associated with receiving a fair assessment. Through green accounting, an enterprise can enjoy the following benefits:

1. Green accounting encourages consumers and helps them purchase environmentally friendly products, i.e. green products produced by the corporate, and as such both consumers and corporate got benefitted.
2. Corporate sectors can show their commitments towards introduction and change, and thus seem to be responsive to new factors. Countries giving importance to the ecological aspect of activities are becoming more and more popular, particularly in western countries.
3. Green accounting, i.e. natural resources taking place in the production as inputs are revealed in this accounting system. Shadow prices of environmental resources are usually defined as the value added attributable to them in the activities.
4. Pollution control, as a burning topic of discussion, green accounting shows the extent to which pollution has been controlled by the corporate sectors.
5. Green accounting is of utmost importance in answering certain queries, such as the extent of natural resources available in countries, what are the incomes arising out of them, what are the expenses incurred to protect the resources, what is its importance from the view point of the nation, and at what values should they be shown in the nation's balance sheet, etc.?
6. Green Accounting is beneficial in another sense, which offers an idea about industrial development, a nation's economic progress and social welfare and the fulfillment of the responsibility towards society.
7. Green accounting helps in discharging organizational accountability and increasing environmental transparency. Sustainable development is possible with the help of green accounting as it help include ecological ability of enterprise.
8. Negotiation between the environment and the society is helpful to organizations which seek to strategically manage a new and emerging issue with different categories of users.
9. Corporate sector may be successful in attracting funds from green individuals and new groups with the help of sustaining an environmentally-friendly green image.
10. In the global economy there is an existence of a strong environmental lobby against environmentally unfriendly industries. Green reporting can be used to combat effectively all negative public opinions.
11. Green accounting improves environmental performance through better management of environmental cost and thus, benefits the natural and human environments.
12. Green accounting detects that part of the gross domestic product which exhibits the requisite cost to compensate for the negative impact of economic growth.
13. Green accounting estimates the total expenditure 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.
14. Multinational bodies like IMF, World Bank, UNO etc. are looking for countries seeking

their assistance to meet their environmental requirements.

15. Green accounting reveals true maximum income which accounting can actually consume without exhausting the stock of natural assets.
16. Government can use the data through the changes in financial budget and by other measures to achieve optimal allocation of scarce resources in the economy of a country.
17. Green accounting shows unsound production and consumption patterns, misuse and scanty use of resources and assets like water etc.
18. Optimal allocation of scarce resources in the economy is possible with the help of green accounting.
19. Green accounting discloses areas of soil and vegetarian deterioration through building construction in open areas due to increasing population pressures.
20. Through environmental disclosure practices, a company can show its commitment towards introduction and change, and thus appear to be responsive to new factors.

In the light of evolutionary wisdom it is considered prudent to make an endeavor to incorporate the effect of environmental resources in the entire business functions of a business house. Green accounting is an attempt to identify the resources exhausted and the costs imposed on the environment by the business.

In other words, we can say that green accounting is highly useful in planning, public resource management, pollution control and for policy analysis.

6. PROCEDURE FOR GREEN ACCOUNTING

Following steps are taken under green accounting:

1. Profit & Loss Account: All revenue expenditures incurred for the protection of the environment should be debited to this account.
2. 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 the 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.
3. 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.
4. 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. In brief, social responsibility of business will be satisfied by the reporting system.

7. ISSUES AND CHALLENGES FACED BY GREEN ACCOUNTING

Green Accounting shows the extent of pollution controlled by business entities. Although it has drawn the attention of many countries of the world, the concept of environmental accounting suffers from certain problems viz. poor valuation techniques, partial values, uncertainty in values, changing social values, non-economic values, individual and aggregate values, incremental and relative values, inapplicable assumptions, uncertainty and risk, lack of reliable industry data etc. The basic financial accounting is concerned with monetary transactions which yields price through the transfer of property rights. As property rights do not exist over environmental goods, financial accountant cannot account for the full cost of production, including cost of consuming essential natural resources. A mismatch is found between accounting information and its application to ecological issues by excluding the environmental aspects in financial accounting, the worst polluting company seems to be the most successful and attractive additional investments from an investing public.

Environmental goods can easily be valued with the help of any method viz. the replacement cost method, opportunity cost method, Delphi techniques, etc. Measuring the interrelationship between environment and development is a complicated issue mainly because the current national accounting does not duly consider the value of natural resources.

The problem of environmental protection is becoming more and more acute and the necessity for considering the value of services of environmental resources is also increasing day by day. Monetary values assigned to environmental goods and services under the shadow pricing process are uncertain and insufficiently quantified. Many conditions and assumptions underlying economic theory are not met. As International firms are inclined to disclose non-financial information including environmental information they have enhanced expectation from Indian companies to act responsibly towards the environment and be accountable to society beyond the traditional role of providing financial accounts to shareholders.

For improving the corporate image relating to socially responsible behavior, it is desirable that an increasing number of Indian companies report their environmental performances and social issues. However, most of the available literature in regard to environmental performance reporting has concentrated on developed countries and little attention has been given to the states of environmental reporting of developing countries. Of late, protection of environment and the potential involvement of accountants is a common subject of discussion among accountants around the world. Accountants are to take a proactive role in the environmental protection process. With the opening of liberalization, free trade makes it possible that the costs of environmental degradation due to industrial activities must be internationalized in corporate accounts to the best extent possible. So far, no accounting standards have been issued extensively for accounting treatment of the aforesaid problems. Some guidelines regarding these problems have been issued by many organizations internationally, but these are mostly advisory in nature. Although an increasing number of countries impose requirements to companies to report on their environmental performance, in India, companies are required to prepare a so-called “Green Account”. The absence of comprehensive and verifiable information and financial data on environmental performance of companies may induce them to pollute the environment and yet appear more efficient economically than others which incur costs to protect the environment. The economics approach to environmental issues as recorded in some countries, assumes that companies in unscrupulous pursuit of profits can do much social harm and the environment suffers. Hence, there is a need for a meeting point between the corporate objective of profit maximization and the need for environmental management. Discretionary environmental disclosures sometimes suggest that corporations strive to unimaginable control over the preparation and disclosure of social and environmental information. Audited financial statements should contain environmental information. Environmental aspects are so significant to a company that there is a risk for the occurrence of significant misrepresentations or inadequate or incomplete presentation of information within financial statements. In such cases, an auditor must pay due attention to environmental aspects during the course of audit of financial statements.

8. CONCLUSION

The existence for a number of 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 green 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 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 a 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 been mandatory. But in many countries, not 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 and every country to incorporate these in the company's annual report, including environment related legislations, as in developed countries. 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 a large number of 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.

Environmental accounting, as a part of social accounting, creates an environmentally consciousness atmosphere in corporate sectors and prepares and publishes environmental balance sheets which would pave the way for the increased earnestness among corporate. It is suggested that companies should fully recognize and control all environmental costs, including the aforesaid costs. A business should internalize these costs by anticipating and managing them. Environmental expenditures must be separated to improve decision making and accountability for environmental responsibilities. Every company should focus and set aside a part of their funds for environmental and ecological balances. Environmental accounting requires comprehension of the business environment, business activities and capabilities and the constraints upon its operations. In the absence of specific guidelines with regard to environmental accounting and reporting techniques, usually social cost is considered as a measure of cost of the resources used by the organization during its activities. Unless comprehensive records for the use of natural resources and environment and their services is maintained, reliable and sustainable development cannot be planned and achieved. To foster, create and encouraging greening all over the world nobody can deny social costs alone to atmospheric pollution arising out of the discharge of dangerous affluent and wastes.

In the light of evolved wisdom, it is considered essential to make an endeavor to incorporate the effect of environmental resources in the entire business function of a business corporation. The technology is available today to reduce environmental pollution and it must be used to correct the excess ecological brutality and minimize the degree of environmental degradation. Current disclosure practices by most companies in India do not fully reflect the environmental impact of corporate operations. There is a need and challenges for the companies to become greener when we are marching towards industrialization and globalization. No company has a secure future unless it is environmentally acceptable. The possible long-term harmful effects of unrestricted and unregulated economic growth demand to preserve the environment for future generations.

9. SUGGESTIONS

Following suggestions are recommended to adopt the measures of green accounting in a fruitful manner:

1. Statement showing disclosures of the conservation of energy and natural resources and expenditures incurred to protect the environment and for replacing environmental degradation may be developed and shown as an annexure to a Director's Report. Installation of pollution control equipment or use of better technology may be considered as a positive contribution. The necessary amendments may be made in the Company's Act to ensure such disclosures.
2. Necessary changes in the rating guidelines may be made as companies contributing to environmental degradation are rated low.
3. Annexure may be added to a Director's report with necessary amendment in the Company's Act for development of pollution standards for industries or products vs. actual pollution generation position of the company.

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