

# Green Accounting in India—The Cry of Our Age

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**Abstract**—Unplanned industrialization and discharge of effluents by industries create environmental pollution. As environmental resources are invaluable natural resources of a country like India, there is an urgent need to maintain accounts of such resources. Economic development without environmental considerations brings about environmental crises and damages the quality of everyday life. The transition of corporate sectors from the traditional business of profit-making to their responsibilities as corporate citizens makes them now more conscious by contemplating social duties perfectly. Moreover, international acceptance and awareness of the importance of environmental issues has motivated the development of a distinctive branch of accounting called, “Green accounting”. Implementing Green accounting can bring about a change among corporate sectors to pick-up new challenges and threats. This paper seeks to provide discussion on the importance of Green accounting on the economy and society of India as a whole and also shows despite numerous anomalies, Green accounting is increasingly becoming an important aspect within the corporate sectors. Besides, it suggests various professional bodies and the Government to take effective measures to improve the Green Grid.

**Keywords:** Green accounting, Ecological balance, Environmental resources, Corporate citizen, Corporate responsibility, Corporate sectors.

## 1. Prologue

The ecological role of corporate sectors responsible for the widening impact of their activities on the environment is drawing keen attention globally. Not only are the finance and production results of business activities important, but also their environmental and social effects as well as environmental resources or natural resources are invaluable and hence there is a need to maintain accounts of such natural resources. The transition of corporate sectors from the traditional business of profit-making to their responsibilities as corporate citizens makes them now more conscious by contemplating social duties perfectly. Environmental protection movement throughout the world has forced the corporate sector to recognize the emerging concept of a new baby of accounting called “Green Accounting”.

## 2. Literature review

Over the past decades, corporate have recognized the benefits of green accounting. As a result, there was dramatic increase in the number of corporate reporting in numerous ways.

Sen., (2013)<sup>[1]</sup> argued the idea of sustainability as preserving the wealth of a nation for the present and future generations. Positive environmental influence is the real improvement which can create environment friendly production processes, products and services. Environment is comprehensively the whole ecosystem of living organisms and the non-living components around us. Kordestani et. al., (2015)<sup>[2]</sup> summarized the area of research towards developing sustainability. Natural Capital Accounting (NCA) is the measurement and valuation of nature’s benefits in terms of ecosystems, goods and services-like fresh water, flood control and forest products to be incorporated into a general standard format consistent with conventional national accounts. Mc Manners, (2014)<sup>[3]</sup> proposed sustainability economics as subservient to society. The concept of sustainability is important for all stakeholders who take and implement the concept of sustainability in different stakes. Chauhan, Mukesh, (2005)<sup>[4]</sup> came out with a suggested framework for implementing green accounting practices in India and 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. A well-defined environmental policy as well as proper follows up and proper accounting procedure is a must for sustainable development of country. Qureshi, Nasir Zameer, (2012)<sup>[5]</sup> in the research paper identified the major obstacles for green accounting and reporting and concluded that for sustainable development of a country, a well defined environmental policy as well as proper follow up and proper accounting procedure is must. Unless common people of India are not aware of environmental damages and safety, development of accounting in this regard really becomes difficult. Malarvizhi, P., (2008)<sup>[6]</sup> in the study based on a sample of 24 documents comprising annual reports, environmental or sustainability reports and other relevant reports of manufacturing and non manufacturing sectors identified Environmental policy; Environmental impacts; Environmental management systems; Environmental targets and Environmental performance disclosure as the most relevant types of environmental information. Gundimeda, HariPriya et.al, (2005)<sup>[7]</sup> presented a preferred methodology to reflect natural capital and human capital externalities in

India's national accounts, measuring as depreciation the depletion of natural resources and costs of pollution and rewarding education as an addition to human capital stock. They showed that green accounting for India is desirable, feasible, realistic and practicable and that a start can be made with available primary data already being collected by various official sources of the Government of India. They pointed out that there is a dearth of sustainability analysis and information provided to policy makers at the National and State levels in India. Recognizing that GDP growth is too narrow a measure of economic growth and not a measure of national wealth, they propose a "Green Accounting" framework for India and its States and Union Territories.

### 3. Research objective and methodology

This paper being based on concepts, the opinions expressed in this paper manifest basically the author's own perception and also perceptions of some reputed authors. This paper throws light on certain fundamental and theoretical aspects of "Green Accounting" today. In the light of this, the motivation for this paper is not to seek new solutions to the underlying problems facing green accounting, rather, it is expected that the discussion will highlight the theoretical development of green accounting research. The discussion will hopefully provide insights and a basis from which accountants can test their current practices and seek to improve them in terms of providing a better understanding of the interaction between corporate and the natural environment. More and more emphasis is ascribed to rationale of green accounting and awareness as this is supposedly the crying need of the day.

### 4. Green accounting--meaning

Green accounting is entirely an emerging and dynamic concept. Green accounting being a "Language of Societal Concerns" attempts to identify measure and communicate the resources consumed and costs imposed on the environment by the corporations especially for environmental preservation. It usually involves specifying monetary values to valuable environmental goods and services which are not traded in markets. Thus, green accounting refers to the measurement and communication of information on the environmental responsibility performance of an entity to interested parties. It is also popularly called green accounting or 'eco-accounting'.

### 5. Drawbacks of conventional accounting

Conventional economic accounting supports economic policy in two important ways. Firstly, they provide a summary of measure of a nation's overall economic performance and also a designed picture of the flow of economic activities. Secondly, change in the environment and in natural resources have not been explicitly included in economic accounts principally because agreement has not yet been reached on ways to measure their changes monetarily and, thus, it is still impossible to integrate them with other entries in the accounts. The conventional accounting system does not provide firms

with their costs of products and procedures. Identifying hidden or misallocated internal and external environmental costs and allocating them to particular products or processes are not done in this system. Thus, more effective business decisions and sustained profitability are not possible under conventional accounting system.

### 6. Rational of green accounting

Green accounting plays a vital role in backing up rational decision-making. Consequently, it helps corporate sectors and other sector boost their public trust and confidence and is associated with receiving a fair assessment. Green accounting deserves the following merits:-

Green accounting encourages consumers to purchase the environmentally friendly products, i.e., green products.

A nation's economic growth and social welfare and the fulfillment of corporate responsibility towards society can be collected through green accounting<sup>[8]</sup>.

Environmental resources taking place in the production as inputs are revealed in this accounting system. Value-added through the supply of public goods, like civic amenities, waste-disposal services etc. has to be estimated using prices obtained through valuation methods.

Pollution control being a burning topic of discussion, green accounting shows the extent to which pollution is controlled by the corporate sectors.

Green accounting helps in making query about certain matters like availability of natural resources in a country like India.

Green accounting gives an idea about industrial development, nation's economic progress and social welfare and fulfillment of social responsibility.

Current national accounting becomes complicated to measure the inter-relationship between environment and development. But green accounting considers the arguments relating to market, society, etc.

Green accounting helps in discharging organizational accountability and increasing environmental transparency.

By upholding environmentally friendly green image, corporate sectors may be successful in attracting funds from green individuals and new groups.

Green accounting minimizes risks stemming from management of product liabilities.

Green accounting improves environmental performance through better management of environmental cost, thereby benefiting the natural and human environments.

Green accounting takes the competitive advantage by minimizing environmental impacts through improved design of products, packages and processes.

- Green accounting identifies that part of the gross domestic product which exhibits the cost necessary to compensate for the negative impact of economic growth.
- Green accounting estimates the total expenditure on production or enhancement of environment.
- Green accounting fosters negotiation and establishes the corporate relationship with society in general and environmental pressure groups in particular. The Environmental Protection Agency (EPA)<sup>[9]</sup> also suggests that impressive decision taking, environmental costs and potential savings, more accuracy in costing and pricing of products, competitive advantage with customers, company's development and operation for an all-round environmental management system<sup>[10]</sup> etc. are possible with the help of green accounting.
- Green accounting helps the Government use data through the changes in financial budget and by other means achieve optimal allocation of scarce resources in the economy of a country.
- Multinational bodies like IMF, World Bank, UNO, etc. are looking for countries seeking their aid to meet their environmental requirements.
- Green accounting shows unsound production and consumption patterns, misuse and insufficient use of natural resources and assets like water, etc.
- Green accounting only makes sustainable development possible as it helps include ecological ability of enterprise.
- Countries placing importance to the ecological aspect are gaining more popularity particularly in western countries.
- Green reporting can be applied to contend all negative public opinions with efficacy.

In the light of the developed learning, it requires to make an endeavor to incorporate the effect of environmental resources in the entire corporate functions of a corporate house. Hence, every corporate citizen should evaluate a system of accounting to record the benefits and costs rendered by environment of a corporation. Justifying these costs and benefits are large constituents of green accounting.

## 7. Procedure of green accounting, major issues and challenges

### 7.1. Procedures

- **Profit and loss account:** Revenue expenditures incurred for the protection of the environment should be debited to this account.

**Balance sheet:** Environmental resources consumed should be regarded as environmental assets and it should be the liability of the corporate towards society to make use of such assets at

maximum possible capacity and at minimum cost without adversely affecting society's interest. Any capital expenditure incurred by a corporate should be shown in the balance sheet.

- **Budgets:** Every corporate should prepare environmental budget to determine the requisite amount for environmental activities and the responsible persons should check and verify the actual amount of expenditures incurred on various environmental activities.

### 7.1.1. Reporting:

Every corporate sector should report for environmental activities, the cost imposed by the corporate on the environmental benefits, benefits received from the environment and the costs imposed by the environment.

#### 7.1.1.1. Major issues and challenges

- Identification of environmental costs;
- Capitalization of costs;
- Identification of environmental liabilities; and
- Measurement of liabilities.

Environment is polluted by corporate every working day by consuming energy (e.g. raw materials, human resources, rain, sand, clay, etc.) and by creating wastes or effluents (e.g. copper, zinc, lead, mercury, acids, pesticides, toxic, etc.) unwillingly.

## 8. Corporate legal framework

Of late, corporations are known as citizen of the country. The prosperity of any corporation is largely dependent on profitability, quality and environmental responsibility. The Constitution of India imposes on every citizen to protect and improve the natural environment and to have compassion for living creatures as one of the fundamental duties. The managerial attitudes have also to change from time to time. Further, the Supreme Court has also observed that "Sustainable Development" calls up everyone to see to the maintenance of balance between development and its sustenance in future. All these highlight the concept and acceptance of "Environmental Responsibility" of corporate citizen. In addition, the Companies Act, 2013 has also laid down several provisions for the protection of the environment. The Supreme Court and the High Courts of several states have ordered the closure of many polluting industries. Therefore, the corporations have to prepare accounts as well as audit reports for compliance of Laws and Acts.

## 9. Green accounting in indian context- problems and awareness

### 9.1. Problems

Upkeep of green accounting induces the corporate sectors to use the environmental resources in limits and shows the extent

of pollution controlled by them. Responsibility, therefore, lies on the corporate to think and act accordingly for the sustainable development of the environment. Currently, there is sufficient degree of awareness and concern among the masses about the environmental degradation. Industrialization is basically concerned with physical environmental pollution; but, unplanned urbanization, construction of projects and migration - everything helps to change the ecology. Environmental pollution being serious problem in India, utmost efforts are being made to make the people conscious about its protection. Administrative step for pollution control has been melancholy due to lack of reliable information for violation and implementation of the regulations enacted in India. Very often, the worst polluting company seems to be the most successful and attracts further investment from the investing public<sup>[11]</sup>. Measuring the inter-relationship between environment and development has become a complicated issue mainly because the current national accounting practice does not duly consider the value of natural resources. Now, environment protection and the potential involvement of accountants have become a common subject of discussion among accountants around the world. Accountants should, therefore, take proactive role in the environmental protection process. Despite issuance of accounting standard for treatment of the aforementioned problems, this is not being used comprehensively in India. Most of the guidelines issued by many organizations internationally are basically advisory in nature. Corporations engaged in unprincipled pursuit of profits are doing social harm and as such the environment suffers. A meeting point between the corporate objective of profit maximization and the need for environmental management is crying need. Environmental information should be part and parcel of audited financial statements and reports. Environmental aspects are so significant in India that there is every possibility or risk for the frequent occurrence of misrepresentation or incomplete presentation of such information in the financial statements. Auditor also must pay due attention to the environmental aspects during the course of audit.

### 9.1.1. Corporate legal environment

Like good citizens of the country, corporate are also liable for polluting the environment and, thus, the action or inaction of the corporations as corporate citizens are injurious to society. Prosperity of any corporation is largely dependent on profitability, quality and environmental responsibility. The Constitution of India imposes on every citizen to protect and improve the natural environment and to have compassion for living creatures as one of the fundamental duties. The corporate sector has to work under frequently changing legal environment. Further, the Supreme Court has also observed that “Sustainable Development” calls up everyone to see to the maintenance of balance between development and its sustenance in future. All these highlight the concept and acceptance of “Environmental Responsibility” of corporate

citizen. Besides, the Companies Act, 2013 has also laid down several provisions for the protection of environment.

#### 9.1.1.1. Awareness

Environmental awareness among the Indians has grown amazingly with enactment of the laws for the protection of environment in India in 1970. Smt. Indira Gandhi, the then Prime Minister of India felt the necessity of clean environment conducive to health and expressed her energetic opinion in favor of environment at the United Nation’s Conference on the human environment in Stockholm, 1972. Various rules and laws have been enacted from time to time and India has been facing sharp competition particularly after liberalization of the Indian economy in 1990. The Central Government first declared environmental related information publicly in 1991. Keeping of accounts and records relating to environment is beneficial to check exploitation of natural resources and prevent their pollution. The Environmental Reporting Practices of the corporate sectors in India are poor; a few of them have few mention about the environment in general terms. Most of the corporate entities have taken the task of reporting on environmental aspects under more statutory obligations and less social responsibility. Keeping the global environment in mind, a standard accounting policy for determining the Gross National Product (GNP) with environmental data like industrially developed and experienced countries may be followed by the Government of India. The Government has launched different programs to maintain ecological balance and healthy environment at Central and State levels through research and education, yet it suffers from due attention and special treatment for determination of GNP, a tool for development of economies of the country. Although green accounting and reporting is voluntary exercise in India, the corporations preferring to disclose environmental issues in their statements enjoy various benefits such as improved image of the product or company.

### 10. Concluding observation and recommendation

Corporate as a good citizen should not destroy environment balance sheet, rather, it should contribute for sustainable development of the country. Social values of environmental goods and services are changing so rapidly that estimates are likely to be obsolete before they are available for use. An estimate of environmentally adjusted GNP is prerequisite for planning sustainable development. Despite the theoretical irregularities, the slogan for green accounting has gained immense benefit. Moreover, international awareness and acceptance of the importance of natural and environmental resources have laid to the development of green accounting. Incorporation of environmental data into the national and corporate levels and disclosure practices of environmental issues have become mandatory in many countries; but such mandatory is not everywhere. Taking steps globally and particularly to formulate the accounting and valuation techniques regarding environmental issues is now badly

needed. 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<sup>[12]</sup>. Green accounting will certainly occupy a more stable and efficacious position in near future as it could much improve the value of economics as a decision making tool, particularly in determining national policy. Despite difficulties associated with green accounting, there is much evidence to show that a large number of countries around the world have justly attempted to pick-up the new challenges and threats. The key to sustainable growth is, therefore, not to provide less but to provide competently with the help of green accounting system. With a view to developing harmonization accounting policy, a comprehensive plan in connection with applying green accounting may be initiated for all types of companies. It may create an environmentally conscious new atmosphere in corporate sectors and prepare and publish environment balance sheets which would pave the way for the increased earnestness among corporate. Every company should highlight and set aside a part of their funds for environmental and ecological balance. Unless comprehensive record for the use of natural resources and environment and their services is maintained, reliable and sustainable development is difficult to achieve. Current disclosure practices by most of the companies in India do not fully reflect the environmental impact of corporate operations. There is a need and challenge for companies to become greener when we are moving towards industrialization and globalization. Only an environmentally acceptable company has a secure future. Profit seeking companies must consider an ecological aspect in its business strategy, planning and policy. The sooner precautions are taken to protect them, the better it would be. The Government of India is spending a lot of money for removing water pollution, air pollution, noise pollution, etc. and has made constitutional provisions for environmental management. Our environmentalists should keep uninterrupted vigilance over the enforcement of the anti-pollution laws so that profit-minded industrialists are compelled to install modern scientific technique to minimize pollution. **"Back to Nature"** should be the slogan in the minds of people for protecting and survival of mankind and its health. Environmental friendly product is basically based on the non-exploitative use of natural resources. It necessitates to develop suitable program for creating environmental awareness among various sections of the society and orient them for adopting environmental friendly production and consumption practices in daily life. However, the administration of pollution control has been dreary due to dearth of reliable information on the transgression and implementation of the regulations. Industry has increasingly come forward to feel that strongly sound environmental management can be equated only with good management. Industry can, therefore, clearly benefit from a crucial self-examination of the processes and technologies it employ to see in which areas there is opportunity for improvement and foresee the potential problem areas, specially for pollution and

human health. Green accounting as a part of social and management accounting not only supplies information to all but, it also creates a sound environmental atmosphere in corporate consciously and prepare and publish environment balance sheet. Further, annual energy audit is to be made mandatory for all industries to preserve the precious resources of our nation. A few more recommendations are:-

- Careful attention is inevitable so that efforts at the national and corporate levels of various bodies do not run counter to each other;
- Annexure is to be included compulsorily in the company's Director's Report with requisite amendment in the Company's Act for development of pollution standards for industries or products vs. actual pollution generation position of the company;
- Establishment of the framework of green accounting nationally and globally has much importance for determining the environmental policy at the state level and national level where the revenues and costs of natural resources are to be recorded in books of accounts. In India, the level of environmental related disclosures in corporate annual reports is not encouraging<sup>[13]</sup>. Green accounting is a strong management tool and should be used by industry for having recourse to transparent environmental auditing which ought to be subjected to monitoring and public close investigation. Hence, absence of standardized green accounting as a part of environmental management practices, both at national and international levels and their legal enforcement is of urgent and pressing need to take steps globally to express the techniques and practices with regard to environmental issues in clear terms.

## 11. Conclusion

Existence for a number of paradigms from which green accounting research develops results in a lack of cohesion in the expectations and desired outcomes of green accounting. Further, lack of cohesion seeking explanation about the motivation behind corporate green accounting adds fuels. Planning for sustainable development requires an estimate of environmentally adjusted gross national product (GNP). Mostly, applications of green accounting require shadow pricing because we cannot ascertain market values, since the economic goods and services concerned are never traded or because we do not want them to be traded, but we want to know what they worth. However, despite their theoretical anomalies, the slogan for green accounting has won perpetual benefit inherent in it. International awareness and acceptance of the importance of natural and environmental resources has led to the development of green accounting. There is a high degree of confusion among the accountants' duty about how to fit environmental data into financial statements and the techniques available for valuation are not also free from uncertainty. Now, it is dire need to take steps globally and

particularly to formulate the accounting and valuation technique regarding environmental issues.

## 12. Conclusion comment

Mandatory guidelines may be issued to each and every corporate of India to incorporate green accounting in their annual reports. Work for the development of green accounting with dedication going on in our country will surely lead green accounting to occupy more stable and effective position in near future since it could greatly improve the value of economics as a decision making tool, particularly in determining national policy.

## 13. Research opportunities

Implementation of green accounting becomes complicated. No attempt has been made to make a comparative study of factors among the green accounting in corporate at national and international levels. The scope of the study as yet 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 still now, 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. Inputs for green accounting are not easily available as costs and benefits relevant to the environment are not easily measurable. Still, the researcher will make honest endeavor to do future research work.

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