CHAPTER-1

Environmental Accounting and Reporting: an Overview

1.1 Introduction

The rapid increase in economic activities in the world, more specifically the manufacturing firms use various natural resources for different kinds of manufacturing process. at the same time these manufacturing activities are accountable for pollution of environment, early times these manufacturing units have ignored the various waste treatment measures and regulatory norms stipulated by government were not followed this resulted in various types of pollution like soil, water, sound, air. Different legislations were made global, national and at regional levels. The enormous growth of population, economic development, gave ways for many environmental problems. The uncontrolled urbanization, industrialization, intensive agriculture destruction of forest cover is common among them. This kind of environment degradation is resulting to cyclones, floods, acid rains, reversal of seasonal pattern, drought etc there by transforming natural environment.

The environmental awareness appeared and regarded at various stages, at national and global level. Corporate social responsibility was considered for this situation since business firms are main cause. After globalization, Business firms both the private and the public sector companies started to disclose environmental accounting information but the quantity of environmental disclosure and their efforts are not up to the mark.
**Liberalization**

Liberalization is an unwinding of government restrictions in political economic and social policy. This may be related to deregulation. Economic Liberalization is the liberalization for transferring ownership or business outsourcing, enterprise, agency, public service from the public sector to the private sector. Liberalized and privatized public services may be dominated by large size firms specifically in sectors which require heavy capital. In some cases they may remain legal monopoly at least for some segments of the market like small consumers. In 1990-91 the prime minister of India P.V.Narsimha Rao Initiated the process of economic liberalization through LPG (Liberalization Privatization Globalization). LPG is actually Washington trinity consensus for economic freedom or liberalization.

Financial accounting focuses on the reporting of organizations financial information, to external users of the information, such as investors, regulators, banks, creditors, public and suppliers. The imperative goal of accounting is to recognize measure and report economic information to the concerned parties and hence it is known as “Language of Business”. And management accounting focuses on providing the necessary accounting information for internal use to management for taking various managerial decisions. The financial information which provides to the external parties is known as financial accounting, so the financial statements which are prepared to be more systematic and should follow more rules and norms prescribed by accounting bodies.
1.2 Corporate Environmental Responsibility

Environmental responsibility of firms is understood as internal, individual, external and collective. Internal corporate social responsibility which concentrates on company’s interactions with investors, shareholders, workers, whereas external corporate social responsibility focuses on NGO’S, community at large, suppliers and other organizations.

Corporate Environmental obligation has gradually developed from philanthropic thought to sustainable business strategy and from self instruction to multi-stakeholder concept. Confidence conceives confidence and faith, on the other hand non-communication, partial, or biased or foul correspondence will out rightly result in losing faith and gaining hatred. It is getting to be expanding imperative to assess everyone one of the stakeholders with significant data. The disclosures of social, ecological, health and safety (H&S) have involved steady research since 50 years, the review of literature concentrate upon the social reporting studies conducted earlier. A lot of the review of literature, creates somewhat confusion relating to the exact content, location, measurement technique supposed uses and perceived advantages out of social disclosures. It still seems to be a nascent but very relevant concept. Environmental disclosure is yet attempting to locate a solid establishment for itself. Corporate social disclosure practices have grasped the concentration of various researchers, NGO’S, organizations, environmentalists.

Enterprise Social Responsibility (ESR), Corporate Environmental responsibility or Corporate Citizenship are recent developments due to the initiations taken by the recent
business organizations. This etymology can be understood only in the extant literature on corporate ethics and social responsibility. Business ethics can be defined as “a set of principles that guides business practices to reflect a concern for society as a whole while pursuing profits” (Nisberg, 1988, p. 3). By giving the corporations a right to sell, buy properties, entering into contracts the law gives the companies a status of the citizen. In the words of Supreme Court Justice Felix Frankfurter "In a democracy, the highest office is the office of citizen". When corporations enjoy these rights of citizenship also should be responsible towards the society. Though there is no exact universally acceptable single definition; it is widely understood as imminent social obligations corporations should consider in their regular business practice (Shamir, 2005).

The concept of social responsibility has been defined in numerous ways. New elements are added to this area. All nations, developing and developed, have obliged to adopt the idea due to the enormous pressure from globalization and they all have to adjust themselves to the prevailing practices in the business world. Corporate social responsibility is seen as an advanced mechanism for handling the challenges posed by related to globalization.

1.2.1 Need for Corporate Environment Responsibility (CER)

The very basic notion or principle of corporate social responsibility is the responsibility or obligation on part of corporations to the society in return for what they are receiving from it. Whatever they are making are making from society in general and environment in particular. Rampant and unbridled globalization has forced corporations to decentralize its processes. This decentralization fundamentally made the corporations to be compliant to the local bodies or authorities. Now, general public, environmental activists and other
environmental boards are keenly observing companies’ operations and their impact on environment.

Now, everybody is cognizant of issues such as rising global warming, atmospheric pollutions and the aftermaths of environmental hazards. This awareness and deep rooted demands from various sections of the society and stakeholders has forced companies to discuss and disclose environmental related information. The enactment of RTI (Right to Information) has forced or poked corporations for social disclosure. Therefore, on one hand corporate are being forced to disclose environmental info, on the other hand it is genuinely need of the hour to protect environment or at least to be more conscious of what they are doing and act accordingly in the best interest of the human race.

1.3 Environmental Accounting and Reporting (EAR)

With rapid industrial growth and urbanization Environmental issue have become a global concern. Industrial growth is obviously helpful for improving the economic growth but it is causing a great threat to environment, solid, liquid, and gaseous wastes and releases from industries, domestic wastes are common. The issue of environment responsibility gave way for environmental accounting; environmental accounting is a branch of social accounting which aims at incorporating both economic and environmental information. For sustained development, environmental accounting is vital. Environmental accounting helps identify use of various natural resources and measure environmental performance, and then communicate this useful information to the interested parties for taking better business decisions. To say it precisely “Environmental accounting forms that part of accounting that
deals with environmental concerns”. “Environment is the situation or circumstance which exists around us and influence directly and indirectly on the lives and livelihood of man, animals and plants on earth” (Suchi Pahuja 2009, P.5). Norway was the first country to do environmental accounting in 1970s and later some countries like Netherland, Sweden followed it. the practices of environmental accounting is voluntary in India, companies which report environmental information in their annual report ,they get some advantages like it improves the image of the company and helps in mobilization of funds from the public.

1.4 Objectives of Environmental Accounting (EA)

Following are the objectives recognized on rational and logical base:

1. The conservative environmentalists always advocate the purchase of Environment friendly green products, so firms can gain competitive advantage by this disclosures
2. Companies show their social Responsibility by making disclosures there by gaining a good image for company.
3. Business Organizations which are following unfriendly environmental operation receive wide criticism from public.
4. Environmental accounting will help to eradicate negative popular sentiments,
5. Companies can build good image and responsibility by developing the illuminate methodology of environmental accounting.
6. It shows the organizations responsibility and showcases the environmental transparency.
7. Environmental Accounting helps organizations in doing effective negotiations with its various stakeholders such as general public and NGO’s and helps in achieving strategically deals.
8. Environmental Accounting will attract investment from green investors and groups.
1.5 Approaches of Environmental Accounting (EA)

1.5.1 Physical Approach vs. Monetary Approach

Physical approach depends on rational analysis of various resources available and its uses (for example land, water resources, minerals available etc...). Monetary valuation is not done in this approach. When the physical approach can not satisfy the requirements, then the monetary approach comes handy. Physical approach is primary as physical data about the resources are necessary for preparing the statistics and strategies for monetary approach, so one can say that physical approach is first step for monetary approach. In spite of several challenges, monetary approach is preferred as it enables us to measure profit and/or loss associated with business operations in connection with environmental consciousness and to maintain a balance between economic and environmental components (Hamid, 2002).

1.6 Environmental Accounting (EA) Related Issues

The issue of environmental accounting has been raised at world level by the UNCTAD (United Nations Conference on Trade and Development). UNCTAD is one of the chief organs of United Nations General Assembly played a vital role in addressing the issue of environmental accounting. UNCTAD advocated the sheer benefits of environmental accounting. ISAR (“Experts on International Standards of Accounting and Reporting”), which is again a group of inter-governmental members, was formed in 1982, and held 15 sessions till now. During the 13th and 14th sessions ISAR studied feasibilities of developing a “conceptual framework” for environmental accounting with the main goal of “sustainable Development” for both Governments and corporate companies. Geneva’s session (15th session) proposed some
GAAP based measures to tackle with some of the accounting issues for environmental accounting.

Table 1-1: “GAAP” based solution suggested by ISAR

<table>
<thead>
<tr>
<th>EA problems such as costs identification measurement and other related issues in EA</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of costs and expenses.</td>
<td>Environment costs that do not impact future expected benefits.</td>
</tr>
<tr>
<td>Costs identification and measurement issues.</td>
<td>Actuality, measurability and certainty</td>
</tr>
<tr>
<td>Capital or revenue allocation issue</td>
<td>Capitalize if it can reduce environmental damage.</td>
</tr>
<tr>
<td>Capitalization of environmental costs involved subsequent to the acquisition of a capital asset</td>
<td>Capitalize if (I) the costs result in an increment in expected future economic benefits or (ii) if the costs deemed to be a cost of expected future benefits.</td>
</tr>
<tr>
<td>Accounting for future environmental expenditure</td>
<td>Contingent costs towards any environmental lawsuits to be deemed as an outright liability</td>
</tr>
<tr>
<td>Accounting for the impairment disclosures</td>
<td>Like other assets, show the net balance in balance sheet after the impairment attributed.</td>
</tr>
<tr>
<td>EA policy disclosures</td>
<td>All significant accounting policies relating to financial statements to be disclosed</td>
</tr>
</tbody>
</table>

Sources: Cost and Management, May-June 1998 (Bangladesh)

Accrual based accounting can be affected by environmental issues due to contingent nature. IAS 37 deals with the recognition, measurement, and disclosure of environmental related issues and their accounting. Accrual of legal costs or compensation work, remedial works may be needed negligence to agree with legal needs with respect to environmental matters, i.e. emissions or waste disposal. For example, fines and penalties for an organization may be led to a failure to meet with laws of pollution control. Certain annual reporting costs are
environmental in nature. For example the utilization of toxic chemicals and other fossil fuels will emit carbon dioxide and thereby cause air pollution. So, environmental cost can calculate energy costs.

Organizations/companies/entities may need to disclose a potential environmental obligation as a contingent liability where

1. When such obligation is contingent event

2. When such obligation cannot be absolutely evaluated

3. When there are no reliable resources to settle such contingent obligation.

Additional disclosures to meet the accounting standards may be as follows:

1. The industry and its likely environmental issues

2. Accounting considerations to treat costs associated with environmental disturbances or any such mitigation by the company operations

3. Any fines or other legal fees paid for violating various laws or rules laid down by the local or municipal or state environmental boards
1.7 Environmental Accounting Types

Figure 1-1: EA detailed description- Source: Burrilt et al. (2002)
1.7.1 Monetary Environmental Management Accounting (MEMA)

MEMA is crucial for internal motive and successful business operations and management. It is developed and voluntary and external stakeholders don’t need this. (Schaltegger et al 1996). It would be the support system for environmental management system i.e. ISO14000, financial accounting if it is exactly done. To show direct costs of each environmental effect environmental accounts are continuously maintained in it. We should identify different environmental costs of every procedure .we must direct account money value of waste decrease, raw material usage. (OECD 2000).

1.7.2 Physical Environmental Management Accounting (PEMA)

PEMA is used the various strategies company has to do with regard to environment. this type proves to be important when firms focuses on reduction of discharges , waste and optimum utilization of resources mangers analyze the physical quantities to find whether targets are achieved or not .(Envirowise 2003). Physical environmental management accounting data can be used for various purposes like carbon trading which will yield more revenue for the firm; it will help organization in arriving at better methods of waste treatment and optimum utilization of resources thereby achieving sustainable development. (Burritt et al 2002).
1.7.3 External monetary Environmental Accounting (EMEA)

Banks, creditors and other stakeholders who have direct or indirect interest in the organizations have already started asking for exceptional information. (Schaltegger et al 1996). Such information provided by the organization is used to forecast the contingent environmental related costs or fees or any other monetary obligations of the company in the near future. Though it is not an obligation on the company to disclose the information through its financial statements, the company is indirectly obliged to disclose them explicitly through other forms in their financial reports.

1.7.4 External physical Environmental Accounting (EPEA)

EPEA as well as EMA have the same target and is used as a device to answer to external stakeholders today increasing pressures on organizations are put by external stakeholders to improve transparency and reliability of the environmental performance of the organizations . (schaltegger et al 1996).

Environmental protection agencies may not have direct zeal for money organization pays but for Physical Unit figures such as waste and contamination for their disposal .External Physical Environmental Accounting can be used by marketing departments to increase the “green image” of a particular organization utilizes data that PEAM creates. (Buritt et al 2002).
1.8 Other Types of Environmental Accounting

A stakeholder that requires particular data and forced the organizations to create exceptional accounting connections asks the reports relating to these kinds of environmental accounting. This is the situation for taxing agencies, environmental protection organizations require an extraordinary arranged report in specific cases in order to verify if controls are successfully met, or to estimate the seriousness of issues related to environment, and/or to plan future strategies to successfully deal with the environmental problems. (Schaltegger et al 1996)
<table>
<thead>
<tr>
<th>Regulatory</th>
<th>Upfront</th>
<th>Voluntary (Beyond Compliance)</th>
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<tbody>
<tr>
<td>Notification</td>
<td>Site studies</td>
<td>Community</td>
</tr>
<tr>
<td>Reporting</td>
<td>Site preparation</td>
<td>relations/outreach</td>
</tr>
<tr>
<td>Monitoring/testing</td>
<td>Permitting</td>
<td>Monitoring/testing</td>
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<tr>
<td>Studies/modeling</td>
<td>R&amp;D</td>
<td>Training</td>
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<tr>
<td>Remediation</td>
<td>Engineering and procurement</td>
<td>Audits</td>
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<tr>
<td>Record keeping</td>
<td>Installation</td>
<td>Qualifying suppliers</td>
</tr>
<tr>
<td>Plans</td>
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<tr>
<td>Training</td>
<td></td>
<td>Reports (e.g., annual</td>
</tr>
<tr>
<td>Inspections</td>
<td>Capital equipment</td>
<td>environmental reports)</td>
</tr>
<tr>
<td>Manifesting</td>
<td>Materials</td>
<td>Insurance</td>
</tr>
<tr>
<td>Labelling</td>
<td>Labour</td>
<td>Planning</td>
</tr>
<tr>
<td>Preparedness</td>
<td>Supplies</td>
<td>Feasibility studies</td>
</tr>
<tr>
<td>Protective equipment</td>
<td>Utilities</td>
<td>Remediation</td>
</tr>
<tr>
<td>Medical surveillance</td>
<td>Structures</td>
<td>Recycling</td>
</tr>
<tr>
<td>Environmental insurance</td>
<td>Salvage value</td>
<td>Environmental studies</td>
</tr>
<tr>
<td>Financial assurance</td>
<td></td>
<td>R &amp; D</td>
</tr>
<tr>
<td>Pollution control</td>
<td></td>
<td>Habitat and wetland</td>
</tr>
<tr>
<td>Spill response</td>
<td>Closure/decommissioning</td>
<td>protection</td>
</tr>
<tr>
<td>Storm water management</td>
<td>Disposal of inventory</td>
<td>Landscaping</td>
</tr>
<tr>
<td>Waste management</td>
<td>Post-closure care</td>
<td>Other environmental projects</td>
</tr>
<tr>
<td>Taxes/fees</td>
<td>Site survey</td>
<td>Financial support to environmental groups and/or researchers</td>
</tr>
</tbody>
</table>

**Conventional Costs**

**Back-End**

**Contingent Costs**

- Future compliance costs: Remediation, Legal expenses
- Penalties/fines: Property damage, Natural resource damages
- Response to future releases: Personal injury damage, Economic loss damages

**Corporate Image**

- Relationship with customers: Relationship with professional staff, Relationship with lenders
- Relationships with investors: Relationship with workers, Relationship with host communities
- Relationship with insurers: Relationship with suppliers, Relationship with regulators

Source: USEPA (1995 p. 9)

**Figure 1-2: Examples of Environmental accounting costs**
Though it is near impossible to record the whole gamut of environmental costs, it is indeed a wise idea to identify few items from the available literature and then disclose the relevant costs from the list (Dorfman et al 1992; Lanen 1996; Envirowise 1996; CCEM 1998; Block, D. 2000; USEPA 2000; Steele and Powell 2002; UN CSD 2001; BDO 2002; Envirowise 2002; IMU 2002; National Statistics UK 2002;). We could view, record and provide a list of environmental costs as the most vital in discrete accounts. This list is shown below:

I. Transportation costs

II. Water resource use.

III. Wastes from Various Atmospheric emissions

IV. Various forms of Energy consumption by the organization

V. Various kinds of resources usage, such as Material, Oil and gas consumption

VI. Various measures taken to mitigate pollution or other factory emissions

We must identify these and isolate the cost items to form into various overheads to give a proper accounting identification and accounting process which in turn enables the uniformity of reporting and better understandability.
1.8.1 Identifying Different Environmental Costs

Identification of costs and allocation of costs are two fundamental costing procedures that we have to develop for environment accounting and unfortunately this is the prime issue in its implementation. Environmental Managerial Accounting (EMA) performs these primary duties. We must reveal and perceive environmental costs to get the capacity to measure environmental issues. (Bouma1998). There is no accepted standard or definition of environmental costs. The description of Environmental Costs depends and varies from organization to organization. United Nations Division for Sustainable Development says “the prime issue of environmental management accounting is that we lack a standard definition of environmental costs”. (UNCSD 2001 p.4).

1.8.2 Types of Environmental Costs

Costs or expenses of environmental measures and losses are combined by environmental costs:

- **“Measures** are steps taken by an organization or for its benefits by others to prevent, decrease or remedy damage to the environment or to manage the preservation of renewable and non-renewable assets “(CICA 1993 p.9).

- **“Losses** are costs that have been incurred by an entity with respect to the environment for which there is no retort benefit, for instance, fines or penalties for non-compliance with environmental regulations, damages paid to others for environmental damage done, or assets of the entity that have to be written off because their costs cannot be recaptured because of environmental concerns” (CICA 1993 p. 11).
1.8.3 Techniques or Methods to Identify Environmental Costs

Environmental accounting is indeed an apparatus to recognize, record, and disclose information about the entity’s environmental costs. Following are some tools to do this:

1. We can utilize Life cycle assessment (LCA) or cycle inventory investigation for a significant number. To assess issues in product plan, sourcing, utilization and product disposal, to decrease environmental costs and effects, checking on a procedure is included in Life Cycle Assessment. (Adams 2002 p.15). The consideration of the costs brought over the entire product lifecycle in the most important point of life cycle costing.

2. We can use economic valuation techniques to find out environmental costs.

3. To examine the effects over bigger spatial range, we use cumulative effect appraisal. (Steele and Powell 2002).

4. To analyze the impacts of strategies, plans, and programs, we use Strategic environmental evaluation.

5. We can utilize an EMS (Environmental Management System) to analyze existing facilities. (Steele and Powell 2002).

6. An environmental impact assessment (EIA) is the most part utilized to analyze proposed facilities. (Steele and Powell 2002)
1.8.4 Capitalization vs. Expense

When we allocate costs, we must treat them as assets or expenses. Capitalization Vs expensing the costs is an ever debatable and controversial topic. (CICA 1993). The companies or organizations used this controversial method as a dodgy technique to balloon their profits. More capitalization will lead to overstated profits for the year. (Anthony et al 1999 p.36)

Expenditure can be capitalized when such expenditure will result in future economic benefit for more than the current accounting period. Whereas, some expenditures provide some long-run environmental benefits but may not yield any economic benefits. In such cases there will be a clash between accounting principles and Environmental Accounting spirit. As per accounting principles, strictly such expenditures should not be capitalized. (Deegan 2002). This is one of the major issues. This is still an ongoing debate even for some regular P&L line items such as R&D expenses. Academicians and industries should work in collaboration with accounting standard boards to deal with these problems for hassle free implementation of environment accounting.

Participants: we should make a mixed group that is accountable for its execution to get a successful EMA implementation. (Deegan 2003). Four principle members should be involved in this team.

1 One from accounting department of the organization
2. One from manufacturing unit
3. One from senior administration
4. One from environment department
1.8.4.(A) EMA Implementation Limitations

There are certainly some noteworthy limitations to implement environmental accounting.

1. It is expensive, particularly for SMEs

2. Time consuming process. For study, analysis and then implementing the process, for example the case of PWC (Price Water House Coopers) in 2002 for implementation of Environmental management accounting which takes on an average one year. Something has to be done to expedite the process.

1.8.4.(B) Marketing and Perception Benefits

There are certainly certain added advantages by incorporating environmental accounting in the organization. Such as:

- It improves company image
- It helps in being pro-active and avoid unnecessary fines from environmental and other government authorities
- It helps anticipate and mitigate huge damages or risk associated with environmental damage.
- It enables organization to adhere to the regulatory compliance

Some organizations need the projection of a green image. A green image in an organization is valued by number of stakeholders.

It is the right thing to decrease the effect of our society on the environment. It is our duty with the world to decrease our effect and the usage of resources. It brings benefits to the society.
1.9 Environmental Accounting Guidelines 2005 (Regulatory framework)

As mentioned in the previous pages, isolating the environmental and non-environmental costs is really challenging. Enormous amount of data is required to successfully achieve this objective. Cost of gathering data is more expensive and challenging than the actual environmental costs. (Men-Chin 2002).

The cost of corporate effect on the environment has taken place and environmentally when we have reduced the cost of information management, urged financial effect on organization is increasing quickly. From being utilized to bring rest outside environmental activists, the usage and goal of environmental accounting has changed in the middle of recent 17 years, it is an urgent source of data for the managers of organizations at present. (Schaltegger et al 1996).

Nonetheless, environmental accounting is an invaluable tool to measure the environmental related input/output relation. It has changed out to be urgent during the recent years, this was not necessary before 10 years when ecological accounting was just a commentary on the yearly report. It has changed to a part of financial reports at present in some organizations. (Cox 2001).

1.10 Need of Environmental Accounting (EA)

To accomplish and maintain sound business and administration, the efficient method is the quantitative management of ecological prevention activities. Finally investments and costs can be recognized and measured by an organization or different companies identified with environmental preservation activities. The organization cannot increase the effectiveness of
their activities by having better knowledge in to the potential advantage of these investments and costs. Environmental Accounting undoubtedly plays a pivotal role in improving various business decisions.

Organizations have a responsibility towards stakeholders, when they utilize environmental resources for their business purpose, environmental accounting is an important procedure in performing responsibility, to improve the public trust and confidence of organizations and other companies connected with getting a fair evaluation, environmental accounting helps.

The magnitude of the average benefits or savings by implementing environment accounting, in Europe in SME is roughly $0.2mn. When the companies implement the above strategies through the execution of environmental accounting, there will be some advantages. (CCEM 1998, Larrinage and Bebbington 2001, Benidickson 1997).

- Optimum resource utilization and thereby – increase in profit,
- Reduced contingent environmental liabilities,
- Improved image and thereby easy access to financial needs,
- Reduced environmental hazards,

1.11 Functions of Environmental Accounting

These functions are divided mainly into internal and external functions.

1.11.1 Internal Functions

Environmental conservation activities cost and benefits obtained from the environmental conservation activities play a main role in internal environmental accounting. The environmental information is provided to managers for decision making purpose
1.11.2 External Functions

Reporting the quantitative measurement of environmental preservation activities to the various stakeholders is dealt with external functions for their decision making. The needs of stakeholders as well as evaluation of environmental activities are fulfilled by the environmental conservative information.

1.12 Benefits of Environmental Accounting

1. Involvement in strategy formulation

2. Product pricing

3. Putting quantified performance targets

4. Evaluation of annual costs/expenditures related to environmental obligations

5. Betterment of business planning processes

6. Estimation and evaluation of cost/benefit analysis various environmental projects

7. Eco-Friendly products

8. Development and execution of environmental management systems

9. Design of various environmental measures, evaluation and benchmarking with best practices.

10. Integration of business management and environmental performance management

11. Reporting of environmental expenditures, investments and liabilities

12. Including environmental consequences and improved CAPEX decisions
The prime objective of implementing environment account is to achieve two major cost benefits with respect to environment. Those are: Conservation cost benefit and Preservation benefit.

1.12.1 Environmental Conservation Cost Benefit

Invested amount and environmental conservation expenses are measured in monetary value. Invested amount, and spending expenditure in a particular targeted period (Towards environmental conservation related activities) and the derived benefits from such investments are showed as expenses in that period.

1.12.2 Environmental Preservation Benefit

We measure benefits obtained from the environmental preservation activities in actual units in physical terms.

1.12.3 Conservation Cost Categories

1.12.3.(A) Categories related to Business Activities

As per the relationship between the business and environmental effects, important business activities comprises of R&D activities, administrative activities, and social activities.

1.12.3.(B) Business Area Cost

These are brought to mitigate environmental effects through the business area resulting from the business operations. an organization can directly handle environmental effects in the business area costs relates with environmental conservation activities is divide in to two categories: they are costs associated with pollution prevention, and global environmental conservation.
Costs of Pollution Prevention

These are various costs to mitigate various pollutions caused by the organization. These costs include equipment costs such as purifiers or filters to reduce the effect of various pollutants released by the company. Various pollutions that are to be mitigated are:

I. Noise pollution
II. Vibration pollution
III. Stinking odor (such as odor comes from pharmacy, sugar companies other chemical factories)
IV. Ground Water contamination
V. Atmospheric pollution (including acid rain)
VI. Contamination of other water bodies (such as sea, lake or rivers)

Costs related to global environmental conservation

Global warming, ozone layer damaging and the related costs come under this category.
1.13 Environmental Reporting (ER)

Corporate initially started reporting the above said costs as part of regular financial reporting. Now, due to improved awareness, they started reporting these items as special disclosures to brag their environmental consciousness. Environmental reporting is a voluntary reporting from the mid 1990’s. Different countries started to present commanding reporting necessities; Denmark is the first country introduced the need for the public environmental reporting for the organizations in 1996, later followed by Norway, Sweden and the Netherlands in1999 with effect from 2000 in Australia. All private and public companies need to report on economic, social and environmental issues relating to the amendment to the Companies Act. European Register for Pollutant Emissions (EPER) has been set up and member nations have to follow national legislation in European Union (EU). Reporting on toxic and hazardous chemicals is a necessary in the USA (KPMG; 1999). A new law has been enacted by the UK for that all companies have to report OFR (Operations and Financial Review) from the year 2005. It should be included environmental, social and community problems. Because of the significance of the environmental disclosure changed a lot. It’s very difficult to show any particular cause for this change because of burning issues.
The purpose of taking this reporting differs from Area to Area. This shows that obligations of the principal drivers in Europe to the environment, picking up an upper hand and legal consent. Share holders pressure has enormous influence than legal consent in North America. Consumer pressure and pressure from shareholders, pressure from environmental activists have scored more than legitimate consent as explanations behind undertaking this reporting. The usage of these reports designed interest group of the report. Shareholders use these reports to control if there are these liabilities. If they are not properly handled, it will cost them large losses on their investments. NGO’s utilized the substances of these reports widely and pressure from these various stakeholders to encourage more responsibility towards the mighty environment. There are also widespread apprehensions to corporate companies that the data that can be used by different groups for their own particular interest are discharged by them. By investigating these statistics of their competitors, organizations can increase importance to their technology used and gained competitive advantage though there is a pressure these organizations have to consider the cost including for providing these reports regarded against the benefits obtained from the reports.

This reporting change into an urgent issue presents corporate reporting. This status and future focus centre shows that it will catch a continuous position in the financial statements. Corporate reporting is required by all stakeholders and they are very much interested to know information relating to environmental protecting. This is the need of the hour to set a set of standards and methods guide this reporting. But we don’t have any standards developed for much disclosure. Voluntary disclosure does not bind companies for disclosure and thereby may result in non-disclosure or no disclosure at all, whereas commanding disclosure leads to, at least,
minimum disclosure. So, this disclosure needs to have two kinds of aspects since it is an issue of life and support. Environmental reporting is the collecting, conformation, creation, division and show of data regarding to present situations, patterns, and issues and individually connecting with a non-human world. People are fundamentally interactive with it. As a reporter, he has to understand these issue and practices, historical environmental resources, present trends of environmental practices and able to communicate environmental information without any confusion to all the public.

Trendy areas that have been arising with the advent of LPG (Liberalization, Privatization, and Globalization) are corporate governance and social responsibilities. The health and safety for workers human rights are necessary to organizations. To save the consumer and maintain these standards where they operate their operations, relevant data is given by organizations about their environmental conservation activities and strategies, with the help of management system. It is widely well known as Triple Bottom-line Reporting (Elkington, 1997). The idea may be given which is more important thoughtfulness related to these matters may remind in costs and so bring down profits. Better understandability of the financial reports that contain environmental information has actually enhanced investors’ faith and resulted in reduced financing cost (Reduced cost of capital) (Cornier and Magnan 2003). Companies operate in a bottleneck competition within the society and economy. This, in essence, compels organizations to disclose their environmental social responsibility (AI –Tuwaijri, Christensen and Hughes, 2004).

A tough competition from international companies after 1990’s liberalization has been faced by Indian organizations as multinational companies are establishing their operations in India. Environmental information is being disclosed by these multinational companies in their annual reports. This made the Indian companies provide environmental information and show
considerable concern on the environment and made them highly responsible towards society more than mere traditional role of providing financial information (Elkington, 1997).

1.15 Environmental Audit

These are reviews conducted by the organizations, whether they succeeded in meeting the environmental compliances. These audits cover the whole range of business activities with keen observations on the interactions of these business activities with the outer environment. The term Environmental Audit means varied things to various individuals. Companies think Environmental Audit as matters pertaining to environments whereas others think it of a review of various matters that are being impacted by the environmental interventions, such as health and other matters.

According to ICC (International Chambers of Commerce,1989) environmental auditing is “A management tool comprising a systematic, documented periodic and objective evaluation of how well environmental organization management and equipment are performing with the aim of helping safeguard the environment by simplifying management control of environmental practices and by assessing compliance with company policies which would include meeting regulatory requirements”.The European commission in its regulation follows the ICC definition.

Environmental auditors should get certification and acknowledgement from the Environmental Auditors Association Code of Ethics. There are different designations in the environmental auditorship. CECAB (Canadian Environmental Certification Approval Board) administers these designations.
1.15.1 Emergence of Environmental Audit

Environmental health and safety was developed in the mid 1970s, environmentally sensitive industries are operated by organizations for example oil and steel, Petro chemicals. A corresponding improvement of the methodologies and techniques followed help this auditing speeded quickly; a few parts have certainly influenced this development. This auditing started in the USA in 1970s. Rigorous control measures have been implemented in the wake of following environmental liabilities.

1. Frequent Accidents in Manufacturing and Other Hazardous Industries

The organizations which are planning for new projects, it is not possible to implement the project without considering the environmental issues because environmental audit will help to reduce the environmental risk.

2. Regulatory Compliance Requirements.

Since the mid 1970s regulations on environmental issues spurted substantially. In the light of this fact, organizations started to be more conscious whenever they start any new project, whether the plant is complying with all necessary legislation or not.


At present the public are aware about environmental issues and hazards which take place in industries. So that companies are hugely forced to disclose to the public and effective handling of environmental risk.
4. Legal Compliances and Litigations

Legal compliances and litigations in appellants stringently forced organizations to adopt environment audit, especially in the United States.

Accordingly, Environmental auditing is an internal instrument to manage effectively and evaluates environment efficient management system with the aim of fulfilling the following objectives.

- Providing environmental information in the public domain
- Prevention or mitigation of industrial waste
- Evaluating regulatory compliances.

1.16 The Regulatory Scene on Environment Accounting

As per Section 217 (1e) of the Indian Companies Act of 1954, it is indeed mandatory for the companies to disclose environmental information. Additionally, The Ministry of Environment Forests & Climate Change (MoEFCC) also imposes certain restrictions and seeks explanations about companies’ activities related to environmental safety and protection in which these companies operate.
The Ministry works for the following broad objectives:

- A forestation and regeneration of degraded areas
- Protection of the environment and
- Ensuring the welfare of animals
- Conservation and survey of flora, fauna, forests and wildlife
- Prevention and control of pollution

At present there has been a fine and encouraging trend towards environmental accounting and disclosure practices, but significant environmental disclosure has not been accomplished related to organization activities for example pollution prevention. So, reporting yet to develop both the quantitative and qualitative. The present disclosure practices very weak because of (1) no specific standards in accounting/GAAP for environmental information disclosure (2) there is no mandatory or binding obligation/ requirement for environmental disclosure regarding company. There should be a more efforts required in different countries to frame the uniform standards for disclosure practices. In India there is no mandatory or binding definite requirement for environmental information. Very little legislations need submission of environmental information to specific regulatory authority, so that we can say that environmental reporting in annual reports is purely based on voluntary.
1.17 Chapterization

The study has divide into the following chapters

1. Introduction
2. Literature Review
3. Objectives and Research Methodology
5. An Analysis of Association Between ERI and Different Independent Variables
6. Regulatory Framework and The perceptions of Investors
7. Summary, Findings, Conclusions

BIBLIOGRAPHY
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