

Environmental Accounting and Its Applicability in Bangladesh

Md. Mohobbot Ali*

Md. Mamunur Rashid**

Mollah Aminul Islam***

Abstract

Environmental matters are becoming significant to an increasing number of organizations and may, in certain circumstances, have a material impact on their financial statements. This is particularly true for environmental liabilities. These issues are of growing interest to the users of financial statements and other stakeholders. Hence, the recognition, measurement, and disclosure of these matters are the responsibility of management.

This paper examines the nature of environmental accounting in Bangladesh and shows the procedure of presenting the impact of companies' activities on the environment. Whilst the article is generally concerned with Public Limited Companies that are by law required to publish accounts, it should be remembered that most organizations have an environmental impact of some kind. It is observed from the study of annual reports of a number of companies doing business in Bangladesh that the practice for the treatment of environmental costs and benefits in the financial statements has yet not been developed. In other words, they are not showing the impact of companies' activities on environment in their financial statements. But the modern world is very much serious about the maintenance of environment good. The time has come and companies doing business in Bangladesh have to be serious and careful about the impact of their activities on environment and they must disclose environmental related costs and benefits in their annual reports.

Keywords: Environmental accounting, environmental management accounting, environmental financial accounting, green accounting, environmental costs and benefits.

Introduction

In general, companies publish their annual reports which include an income statement (or profit and loss account, or statement of comprehensive income, or statement of earnings), a balance sheet (statement of financial position), and a cash flow statement (or statement of changes in financial positions) and the information provided in the foot notes in such reports in money terms. In developed countries, a significant number of companies now disclose the impact of their activities on the environment. A review of literature from Western and Asia-Pacific regions indicate a low level of environmental disclosure practices but there has been a considerable increase in the number of organizations performing environmental accounting and reporting. (Gibbon and Joshi, 1999) This information frequently takes the form of details about the firm's emissions into air, or waste to water, or details of fuel and materials used. Some reports are more

* Associate Professor, Dept. of Accounting & Information Systems, University of Dhaka

** Lecturer, Dept. of Business Administration (Accounting), Stamford University Bangladesh

*** Lecturer, Dept. of Accounting & Information Systems, Jatiya Kabi Kazi Nazrul Islam University, Mymensingh

detailed than others and may be descriptive or include quantitative data produced from environmental performance indicators. In Bangladesh, there is still no disclosure in the financial statements of companies in this regard.

As environmental legislation is strengthened and becomes more intense, companies will be required to take a cleaner approach to production.

Clearly, waste products are a major source of pollution. Whilst production without waste is impossible, waste products incur costs that impact on profits. Waste is also an inefficient use of resources and may be seen as an environmental cost. The environmentally responsible firm will seek to reduce waste wherever it can by introducing improved and more cost effective processing methods.

In addition, waste creates the problem of disposal. Disposal costs place further pressures on a company's profits, but in addition they create a social cost by putting pressure on disposal sites. Environmental costs and their impact on company's profit are disclosed by financial accounting. (Bennett & James, 1997)

If a company's accounts fail to pay full consideration to the green issues affecting its business, can they actually show a true and fair view? Bob Martin investigates.

It is hardly debatable that the body of literature on accounting standards, guidelines and practice around the world is immense. However, with the widespread adoption of IFRS, there is a hope that a uniform framework for environmental and sustainability accounting will emerge, which will tie information on environmental costs and benefits, and sustainability to the financial statements - beyond the box of current thinking.

Many companies are now interested in being "green," as many investors place a high value on environmental responsibility. Regulations have been developed to govern "waste management" and to ensure that corporations are environmentally conscious." (Smith, 2003).

Corporations doing business in Bangladesh must identify how to quantify environmental costs and benefits as well as they have to develop the structure for presenting environmental costs and benefits to the stakeholders of the business.

Concept of Environmental Accounting

The common definition of "environmental accounting" is "the identification, measurement, and allocation of environmental costs, the integration of these environmental costs into business decisions, and the subsequent communication of the information to a company's stakeholders" (AICPA).

Environmental Accounting is the practice of including the indirect costs and benefits of a product or activity, for example, its environmental effects on health and the economy, along with its direct costs when making business decision

Environmental accounting is the collection, recording, classification, extraction and summary of information relating to the natural environment. (pearsoned.co.uk)

Environmental Accounting is the practice of including the indirect costs and benefits of a product or activity, for example, its environmental effects on health and the economy, along with its direct costs when making business decisions-also called Green Accounting.(bnet dictionary)

'Environmental accounting is the collection, analysis and assessment of environmental and financial performance data obtained from business management information systems,

environmental management and financial accounting systems. The taking of corrective management action to reduce environmental impacts and costs plus, where appropriate, the external reporting of the environmental and financial benefits in verified corporate environmental reports or published annual reports and accounts'. (Environment Agency, UK)

Benefits of Corporate environmental accounting

There are three reasons of implementing environmental accounting- Cost savings, improved environmental performance, and Minimizing environmental risk.

“Environmental accounting is an important management tool that can be used for a number of purposes. It can improve environmental performance, control costs, help invest in "cleaner" technologies, help develop "greener" processes, and inform management decisions about product.” (EPA)

Corporate environmental accounting is about making environment related costs more transparent within corporate accounting systems and reports.

The benefits of undertaking a corporate environmental accounting initiative are:

- i) The identification and greater awareness of environment related costs often provides the opportunity to find ways to reduce or avoid these costs, whilst also improving environmental performance.
- ii) It is also significant for complying with the different laws in country to avoid penalty for damaging the environment.
- iii) Corporate environmental accounting can provide a valuable tool that enables business to respond to environmental challenges whilst retaining a focus on bottom-line imperatives.
- iv) Conserve natural resources like water and energy for sustainable development, and adopt environmentally safe processes.
- v) Ensure appropriate treatment of all effluents prior to discharge, to prevent pollution or degradation of environment.
- vi) Ensure appropriate communication and cooperate with internal and external interested parties on environmental issues.

The emergence of environmental accounting is not only due to the protection of the environment but also for the benefits of the corporations or industrial units using it. It has been proved from many case studies in developed countries that through the conscious and rational use of systematically and well-organized environmental accounting system, any industrial unit can save its many of the environment related costs. (Bailey, 1995)

Environmental Accounting at present

In most of the countries in the world, corporate environmental accounting is an emerging and dynamic field that can be considered work in progress. As a result, it is important to remember that the different streams of work that have greater or lesser emphasis on internal or external reporting, or private or external costs, are not mutually exclusive. Indeed corporate environmental accounting can also be closely linked to other corporate environmental management initiatives. But in Bangladesh; environmental accounting can be considered at the infant stage.

Several rules governing environmental disclosures have been developed in recent years. At the highest level, generally accepted accounting principles (GAAP) have been issued in this regard. Laws now require responsible parties to pay to clean up their past contamination, which is often expensive. In response to consumer interests and regulatory enforcement, some corporations have had to change their way of doing things. This will certainly increase the cost per unit of product or service. (Smith, 2003)

Some firms have had to learn to recycle, limit waste output (air pollution, water pollution, soil pollution), and most importantly, follow their hazardous products from creation to final disposal. Consequently, for many organizations, significant risks surround environmental issues. As penalties have increased for poor environmental choices, many companies are paying closer attention to regulations, often going beyond what is required. Authorities in Bangladesh have to be aware in formulating rules, standards, and policies to compel the entities to be friendly to the environment.

Corporate sectors doing business in Bangladesh is not conscious in this regard. Further, the authoritative bodies do not strictly monitor the compliance of the companies with GAAPs and the pronouncements of ICAB (show separately the ICAB pronouncements) relating to the expression of environmental cost and benefits in monetary terms. But Environmental Protection Agencies are very much conscious regarding air pollution, water pollution, soil pollution caused by the industrial units.

Objective of the Study

The major objective of the present study is to evaluate the present status of the application of environmental accounting in Bangladesh. To this end the study has chosen the annual reports of different companies doing business in Bangladesh. The specific objectives of the study are:

- i. to provide guidelines how to measure and analyze the environmental costs and benefits,
- ii. to measure to what extent Companies in Bangladesh are complying to the rules and regulations of the authoritative bodies in Bangladesh, and
- iii. to recommend some steps to develop environmental reporting system so that they can be friendly to the environment as well as take the fullest possible benefits of saving environment-related costs.

Methodology of the Study

In order to achieve the specific objective of the study secondary sources of data are used. These data have been collected mainly from the published annual reports of the companies. Besides, various records and documents maintained by the company, related books and journals and relevant websites were also reviewed. The collected data and information have been processed manually and report in the present form has been prepared in order to make the study more informative, analytical, and useful for the users. Apart from the review of relevant literatures, a number of telephone interviews have been made with qualified accountants practicing in Bangladesh. However, the methodology used in this study is largely qualitative and explorative.

Limitations of the study

The major limitations of the study are resources constraints. First thing is that the concept is not yet practiced and a very few people has idea of this issue. More over non-availability of published data on environmental accounting was also a great limitation to this study. In addition to this, lack of specific and clear cut guidelines for environmental protection by Government of Bangladesh or other authorities. These forced the researcher to use secondary data available in published research and articles and web sites.

Review of related literature

In years past, environmental issues were often ignored by both corporations and individuals. Hazardous waste and other such items were considered a necessary cost of a growing economy. Times have changed, as people now realize the effects of waste products that potentially could damage the environment. Most people now recognize that preserving clean air, water, and land is more important than lower-cost products for consumers or higher profits for business firms. Many people are willing to pay more for a product that is environmentally friendly. (Smith, 2003)

The period 1971 - 1980 heralded the beginning of environmental accounting in the guise of 'social responsibility accounting'. Social responsibility accounting sought to establish the degree of responsibility that companies should have towards stakeholders other than the firm's shareholders. During the period 1981 - 1990 the emphasis in the accounting literature shifted from 'social responsibility accounting' to 'environmental accounting', reflecting the strong interest in the latter. Research became more analytical in approach and the philosophical debate began to focus more on what kind of environmental information was appropriate for companies to disclose.

Companies usually undertake environmental accounting for compliance reasons, and to maintain good public relations, but it has also been suggested that 'going green' may reduce business costs. This view is expressed by Porter and Linde. They offer examples of firms that have reduced costs as a result of undertaking an environmental audit and changing their production processes, making them more environmentally friendly.

Another aspect of the management accountant's role is assessing the life cycle of products and identifying where environmental improvements may be made to reduce their environmental impact at every stage of life. (Bennett & James, 1998).

The best organizations are now moving beyond environmental auditing and developing environmental management accounting systems (EMAS) that seek to establish environmental costs at every stage of production. Neither is it cost free, and firms will tend to equate the marginal cost of identifying environmental costs with the marginal benefit derived from doing so. An EMAS requires that environmental costs are identified and made explicit. The arrival of Activity Based Costing systems in the 1980s has made the tracking of environmental costs easier (Kreuze & Newell, 1994).

Interest is growing in modifying national income accounting systems to promote understanding of the links between economy and environment. (Hecht, 2009)

Accounting and the environment can no longer be considered mutually exclusive. The role of environmental accounting is to analyse and account the interactions between business and the environment. The purpose of environmental accounting research is to develop, suggest and analyse ways out of the environmental problems.

Environmental accounting or accounting for the environment, has been of major concern in the last twenty years and is one of the major growth areas within accounting.

Companies have to prepare environmental accounting in a systematic and standard way to ensure a wise comparisons between the environmental performance of companies Whereas profit and loss accounts and balance sheets are produced in standard formats with notes giving details of how results have been arrived at, this is clearly not the case with measures that identify the environmental performance of a company.

While green issues are hot news and public awareness of them is at an all-time high, the media tend to concentrate on climate change and carbon trading, which are often seen as beyond the scope of businesses to affect over and above the legal obligations imposed on them. The true environmental exposure is unknown in many cases merely because the company concerned hasn't taken appropriate action to quantify it. For that reason more than any other, environmental disclosures are still absent from companies' annual accounts.

In this study, we have attempted to give an overview of the different aspects of environmental accounting and to provide suggestions and ways to implement this practice in corporations doing business in Bangladesh.

Structure of Environmental Accounts

All economics are heavily dependent on the environment as a source of materials and energy, as a sink for waste products and as the physical habitat for the human community. The capacity of the environment constitutes our natural capital.

Stock and flow of environmental goods are to be recorded in system of national accounts (SNA) as it is supposed by the concerned efforts of United Nations statistics division, the European Union, the World Bank, and the OECD. Through their efforts, they proposed framework and methodologies of environmental accounts. These framework and methodologies certainly provide a set of indicators that can monitor the environmental economic performance at the sectoral level as well as at the macro level. Also they provide guidelines to the resource manager to make important policy decisions.

For many organizations, especially in high-polluting industries, environmental issues significantly impact their business performance and financial profitability. Environmental liabilities are financial obligations that companies have to provide for, incur, and disclose, to address environmental concerns.

Environment and natural resource accounts have four components:

1. Natural resource assets accounts, stock of natural resources constructed to revise the balance sheet of the SNA and improve resource management.

2. Pollutant and material (resource and energy) flow accounts, which provide information at the industry level about the use of energy and materials as input to production and final demand, and the generation of pollutant and solid waste.
3. Environmental protection and resource management expenditure accounts, which identify expenditure in the conventional SNA incurred by industry, government, and households to protect the environment or manage resources.
4. Environmentally adjusted macroeconomic aggregates, which include indicators of sustainability such as environmentally adjusted net domestic product. (Lange et al, 2003).

A major feature of this structure is that it integrates the environmental issues with the economic issues as it is proposed by UN's system of integrated economic and environmental accounting.

Nature of Environmental Accounting Data

While the system outlined in the Guidelines provides for quantitative assessment of environmental conservation activities through environmental accounting, qualitative information supporting quantitative data must be included in addition to data in the form of monetary and physical units.

The table below lists the quantitative and qualitative information for each component factor:

Component factor	Quantitative data	Qualitative information
Environmental conservation cost	Monetary value	Cost details
Environmental conservation benefit	Physical unit	Benefit details
Economic benefit associated with environmental conservation activities	Monetary value	Benefit details

Source: MOE, Japan "Environmental Accounting Guidelines 2005"

Two significant aspects of Environmental Accounting

Environmental accounting can be divided into two categories. These are Financial Environmental Accounting and Managerial Environmental Accounting.

In the former, accountants provide relevant and reliable financial information on the environmental costs and benefits to the external parties through financial statements. In particular, they identify costs that impact on the firm's profits. These may be the costs of complying with the law (compliance costs), or perhaps waste disposal costs. As environmental legislation is strengthened and becomes more intense, companies will be required to take a cleaner approach to production. (Bennett & James, 1998)

In the latter case, accountants provide information about environmental costs and benefits to the internal parties i.e. managers in making important business decisions that can help them to reduce costs paid by the corporations in the forms of penalty for violating environmental regulations, to reduce wastage and defects, to find the ways to improve the production process that can help to adapt a process to produce goods that are friendly to the environment.

In addition, management accountants must consider the environmental impact of their capital investment strategy. Where a choice is possible between alternative machines, the decision should not be based solely on NPV or IRR criteria, but be guided by the impact the chosen machine will have on the environment throughout its lifecycle.

Specific Requirement for Environmental Disclosure

Many jurisdictions have specific requirements for disclosing environmental information. For example, the US Securities regulations require registered companies to disclose:

1. The material costs of complying with environmental regulations in future years;
2. The costs of remediating contaminated sites if a liability is likely to have been incurred and its magnitude can be approximately estimated;
3. Other contingent liabilities arising from environmental exposures;
4. Involvement as a party to a legal proceeding about an environmental issue, especially with an agency of government; and
5. Any known trend or uncertainty involving environmental issues, including pending regulation that would materially affect the company's business.

In Japan, the Environmental Accounting Guidelines issued by Ministry of the Environment, for which the Japanese Institute of Certified Public Accountants offered support in the process of development and revision, encourage companies to include separate statements to reflect environmental cost and environmental performance in their sustainability reports. For example, Ricoh presents a table showing monetary amounts of effect on environmental conservation and environmental impact as well as environmental costs and revenues in its sustainability report. (MOE, Japan, 2005)

To promote environmental management, Toshiba Group is striving for “environmental accounting” for calculation and analysis after accurately grasping the investment amount and costs involved in environment conservation and exploiting the investment effect and cost-effectiveness for managerial decision-making. (Toshiba, 2007)

Toshiba Group has reported the following costs and benefits in their annual reports:

Environmental Costs

Business area costs:

- (1) Pollution prevention costs (for prevention of pollution of atmosphere, water, soil, etc)
- (2) Global environmental protection costs (Prevention of the greenhouse effect, protection of the ozone layer, etc.)
- (3) Resource circulation costs (Efficient use of resources, reduction of volume of waste, etc.)
- (4) Upstream/downstream costs (Green procurement, recycling, etc)
- (5) Administration costs (Environmental education, maintenance of EMS, planting of greenery at factories, etc.)
- (6) R&D costs (Development of environmentally conscious products)
- (7) Social activity costs (Support of environmental activities, contributions, etc)
- (8) Environmental remediation costs (Recovery from soil pollution, etc)

Environmental Benefits

- 1) Actual benefits (Benefits that can be directly converted into monetary value, such as reduced charges for electricity, water, etc.)
- 2) Assumed benefits (Benefits concerning reduction in environmental impacts expressed in monetary value).
- 3) Customer benefits (Reduction of environmental impacts at the usage phase expressed in monetary value)
- 4) Risk prevention benefits (The extent to which risks are reduced after the investment compared with before the investment is calculated)

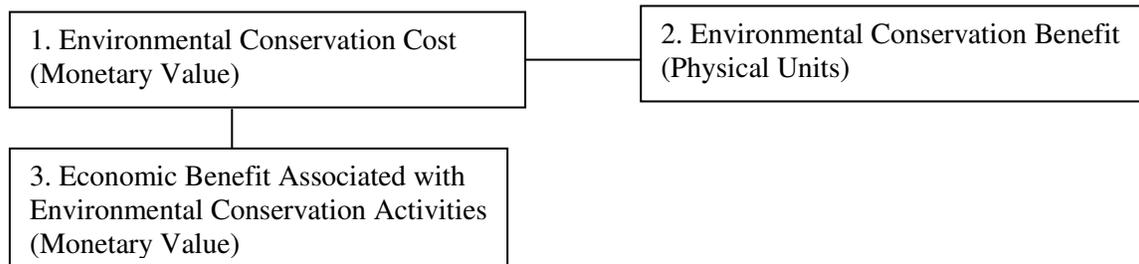
Significance of Environmental Cost in decision making

In making decisions, management usually considers relevant costs or differential costs associated with the decision alternatives. Relevant costs are costs that differ between alternatives in a decision. A decision analysis can be flawed by incorrectly including irrelevant costs such as sunk costs and future costs that do not differ between alternatives. It can also be flawed by omitting future costs that do differ between alternatives. This is a problem particularly with environmental costs because they have dramatically increased in recent years and are often overlooked by managers. (Boer et al, 1998).

Thus to make effective business decisions, environmental costs have to be considered. Otherwise, the decisions may misguide the enterprise in the process of achieving its goals.

Structural Elements of Environmental Accounting

Environmental accounting as defined under these guidelines consists of the following structural elements with the purpose of attaining two types of benefits derived from costs incurred from environmental conservation activities during the regular course of business.



(Source: MOE, Japan "Environmental Accounting Guidelines 2005")

1. Environmental Conservation Cost (Monetary Value):
Investments and expenses related to the prevention, reduction, and/ or avoidance of environmental impact, removal of such impact, restoration following the occurrence of a disaster, and other activities.

2. Environmental Conservation Benefit (Physical Units):
Benefits obtained from the prevention, reduction, and/ or avoidance of environmental impact, removal of such impact, restoration following the occurrence of a disaster, and other activities.
3. Economic Benefit Associated with Environmental Conservation Activities (Monetary Value):
Benefits to company's profits as a result of carrying forward with environmental conservation activities.

Emergence of Environmental Accounting in Bangladesh

The activities of the corporate sector of Bangladesh, specifically manufacturing industry is specially seriously damaging the environment. Though guided by the Department of Environment, Bangladesh, most of the companies still do not have proper waste management mechanism. Most the manufacturers especially, the textiles, pharmaceuticals, chemical , tannery etc, are yet to redesign their production process and waste management process. This unmanaged waste is mostly transferred to the rivers or left open and is hampering the biodiversity of the country to a great extent. To reduce the impact of the damages caused by them, the department of environment and other regulatory authorities have issued /formulated several laws and regulations. Industrial undertaking must have to comply with these laws and regulations; for example Medical waste (Management and processing) regulations 2008. Laws have the provision of charging fines and other punishments to the companies or individuals damaging the environment. Besides these companies have to bear the recycling costs for the pollutant wastes and if not recycled or managed properly the country will have to pay for it in the long run.

Present Situation of Environmental Pollution and its Estimated Costs in Bangladesh

According to the Global Climate Risk Index, Bangladesh is the most vulnerable nation to extreme weather events, which many scientists say are being exacerbated by climate change. From 1990 to 2008, an average of 8,241 people died each year in 244 instances of extreme weather conditions in Bangladesh with cost of damage \$2,189 million a year and loss of GDP 1.81 percent.

Impact of environmental pollution in Bangladesh from 1998-2008

Average number of people died	8,241
Cost of damage	\$2,189 million a year
Cost of damage as a percentage of GDP	1.81%

(Source: Global Climate Risk Index, 2008)

Considered the most threatened ecosystem in Bangladesh, the moist deciduous Sal forest (*Shorea robusta*) is on the verge of vanishing. In 1990 only 10 percent of the forest cover remained, down from 36 percent in 1985 according to statistics from the Food and Agricultural Organization (FAO).

The industrial sector is one of the most dynamic sectors of the economy and plays an essential role in economic development and the alleviation of poverty. If environmental considerations are not effectively integrated into the design of industrial processes, the implications can be manifold.

Industries, in general, consume 37 per cent of the world's energy and emit 50 per cent of world's CO₂, 90 per cent of world's SO₂ and nearly all of its toxic chemicals. Lately, however, the severity of some of the local impacts of industry and the high cost of remediation industry is becoming an increasingly sensitive issue.

Environmental Impact of Large Industries

A significant portion of the total pollution is caused by the larger industries in Bangladesh. Industries such as fertilizer, cement, glass, ceramic, iron and steel, paper and pulp, refineries, etc, exercise a wide range of environmental impacts. They emit large amounts of nitrogen, sulphur and carbon oxides into the air. Emissions of lead, arsenic and chromium, both from glass and iron and steel industries, are extremely toxic. Waste disposal from such industries causes extensive water and soil contamination too. Extraction of raw materials causes large-scale surface disturbance and erosion.

Environmental impacts of SMEs in Bangladesh

A large number of manufacturers in Bangladesh meet the criteria of SMEs. These industries are also responsible for the environmental disaster. The environmental costs of rapid industrial growth in Bangladesh can be divided into:

- Contamination of water resources, including pollution of groundwater
- Unacceptable levels of air pollution, and
- Unsafe handling and disposal of toxic substances.

These costs are increasingly measured in terms of contaminated water, air and land; adverse health impacts; and damage to local fisheries and wildlife. Public health impacts (cancers, respiratory ailments, etc.) are now being found in and around industrial areas, particularly in the vicinity of heavy metallurgical, chemical and coal-fired industrial processing plants.

These impacts are the direct result of using both dirty fuels (coal) in highly inefficient thermal processes (boilers, heating, cooking, etc.), and the manufacture and application of chemicals with inadequate treatment facilities.

Textile Dyeing SMEs in Bangladesh

The major problem afflicting local environment around Bangladesh's textile dyeing industries is the hazards caused by dye effluents, which contain both chemical and organic pollutants. These can be highly toxic. Research has, for the first time, provided empirical evidence that the volume of such effluents from small-scale industries in the Third World often exceeds acceptable standards. Though the volume of effluents from individual small-scale dyers might be small (up to 8 cubic metres per day), the concentration of pollutants is generally high. The impact is significant where several producers are located at one place and discharge effluents into the same body of water. Large-scale dyers on the other hand generate greater volumes of effluent (70-400 cubic metres per day), but show a lower pollutant content per cubic metre of waste. (State of the Environment, South Asia, 2001)

Air pollution entails a massive cost amounting to Tk 124 billion a year in the capital alone in terms of lost human health and life, an economic evaluation of the pollution shows. The figure comes to 3-4 per cent of the country's national GDP. After evaluating economic impacts, a study found over Tk 83 billion comes as the total cost of excess death, Tk 20 billion as cost of chronic bronchitis and Tk 5 billion as cost of restrictive activity days.

Tk 153 million as cost of respiratory hospital diseases, Tk 114 million as emergency room visits, Tk 4 billion cost of asthma attacks and Tk 11 billion as cost of respiratory symptoms diseases. (AK Azad and S Jahan)

Air pollution also reduces food production and timber harvests, because high levels of pollution impair photosynthesis. In Germany, for example, about US\$4.7 billion a year in agricultural production is lost to high levels of sulphur, nitrogen oxides, and ozone.

The World Health Organization estimates that about 700,000 deaths annually could be prevented in developing countries if three major atmospheric pollutants - carbon monoxide, suspended particulate matter, and lead - were brought down to safer levels. The direct health cost of urban air pollution in developing countries was estimated in 1995 at nearly US\$100 billion a year. Chronic bronchitis alone accounted for around US\$40 billion). Environmental pollution generated from process industries in Bangladesh. It was found that the food industry was the worst air polluter; whereas pulp and paper was the worst water polluter, and tanneries and leather industries were worst polluter of toxic chemicals. Industrial pollution control measures are recommended.

Over and above, the following factors are responsible for environmental pollution by business sector in Bangladesh:

- Water abstraction
- Greenhouse gases
- Acid rain and smog
- Nuclear waste
- Dust and particles
- Coal
- Nutrients and organic pollutants
- Others

Accounting Guidelines for Environmental Issues

We have examined the annual reports of a number of companies in Bangladesh and seen that they are not disclosing environmental related costs, liabilities, and benefits on the face of the financial statements or note to the financial statements or in the supplementary schedules. Financial statements of most of the companies include balance sheet, income statement, statement of cash flows, statement of changes in equity, notes to the financial statements and other supplementary schedules. We have interviewed a number of qualified accountants practicing in Bangladesh and found that they are not yet concerned regarding this issues. SEC (Securities Exchange Commission) does no issue any specific guidelines for showing the environmental impacts of

companies operations on their financial statements .Thus, it is clear that the practice of disclosing environmental impact of entity's operation has not yet been developed in Bangladesh.

ICAB (Institute of Chartered Accountants of Bangladesh) has clearly spelt out how to deal with environmental impact of entity's operation in the BFRS (Bangladesh Financial Reporting Standards) and BAS (Bangladesh Accounting Stanadards). Major BFRS and BAS (including accounting policies and related interpretations) that deal with environmental disclosures are highlighted below:

Accounting policies: An entity should disclose the accounting policy adopted in respect of provisions for site restoration and environmental rehabilitation.

BFRS 3 (Business Combinations) states that while computing fair value of assets exchanged between companies, environmental impact, if any, must have to be recognized in the computation process. (BFRS- Volume -1, 2008)

BAS 2 (Inventories) asserts that in detereminining the cost of the inventory to be reflected in the fianancial statements, the related environmental costs and liabilities like clean up costs of wastage in producing such inventories, penalty for violating rules in producing that inventories must be recognized.

BAS 10 (Events after the Balance Sheet Date) states that Events that provide evidence of conditions that existed at the balance sheet date related to environmental issues must have to be recognized in the published annual reports.

BAS 16 (Property, Plant and Equipment) addresses rehabilitation by stating that the cost of an item of property, plant, or equipment includes "the estimated cost of dismantling and removing the asset and restoring the site, to the extent that it is recognized as a provision under the statement on provisions, contingent liabilities, and contingent assets." Rehabilitation costs include the cost of rehabilitating damage that incurred on initial acquisition and set-up of an asset, as well as damage incurred over the life of the asset.

BAS 36 (Impairment of Assets) states that where initial set-up and dismantling costs are included as part of the cost of an asset, and there is an indication that the asset may be impaired, the recoverable amount of the asset should be calculated under this standard.

BAS 37 (Provisions, Contingent Liabilities and Contingent Assets) clearly spelt how, when, and to what extent provisions for environmental contingent liabilities are to be kept in the books of accounts.

BAS 38 (Intangible Assets) includes greenhouse gas emission allowances, which are subject to a test that measures impairment of their carrying value if they exceed the amount recoverable from use or realization.

ICAB also provides guidance on accounting for changes in decommissioning, restoration, and similar liabilities that have previously been recognized both as part of the cost of an item of property, plant, and equipment under BAS 16, and as a provision (liability) under BAS 37.

Concluding Remarks

In Bangladesh, environmental accounting has not yet been established and practiced. By examining the annual reports of different companies, we found that companies in Bangladesh are not disclosing any financial information on environmental issues. As a result, we just have attempted to provide an overview of environmental accounting, the significance, and the benefits of using it and recommendations for introducing this unique practice in Bangladesh.

The issue of environmental accounting is gradually receiving enhanced recognition throughout the world due to its greater significance. Most organizations are now trying to be environmentally friendly not only to avoid penalty and other costs associated with environment but also for availing the greater benefits that corporations may attain in the forms of effective decisions made on the basis of information provided by accountants on environmental issues. Most corporations opined that it is still very difficult to quantify environmental liabilities and costs. To cure this problem most of the authoritative bodies are now working to provide an overall guideline for measuring environmental related liabilities.

The corporations in Bangladesh should quantify the environmental costs and maintain the procedure for presentation of environmental costs in financial statements. To ensure this ICAB should formulate separate guidelines and pronounce those to be strictly practiced, SEC should be strict for showing the environmental impact at the financial statements and the practitioners in Bangladesh should enforce the reporting of environmental issues in financial statements while auditing the financial reports specially the companies causing environmental damages. Besides these the Government and other regulatory bodies should emphasize the setting up of waste management or recycling plants to protect the environment. We believe that this will certainly be helpful for the concerned in implanting this new accounting system.

References

- AICPA, 1996. "Environmental Remediation Liabilities," AICPA Statement of Position 96-1.
- Alin Ionel Ienciu, Dumitru Matis, and Mihali 2009 "The Environmental Accounting Evolution: Between Past, Present, and Future", Babes-Bolyai University Cluj Napoca, , Romania
- Bennett, M., James, P. (1997), "Environmental-related management accounting: current practice and future trends", *Greener Management International*, Vol. 17 pp.33-51.
- Bennett, M., James, P. (1998), *Environment Under the Spotlight: Current Practice and Future Trends in Environment-related Performance Measurement in Business*, ACCA, London,
- Bibler, Gregory A., and Christopher Davis, 2003. "Disclosing Environmental Liabilities in the Wake of Sarbanes-Oxley," *The Metropolitan Corporate Counsel*.
- Dr. L. Murphy Smith, 2003 "Accounting Guidelines for Environmental Issues", Website Article
- Emery, 2002, "Artchallenge of environmental accounting", *The Teaching Business & Economics*.
- Germain Boer, Margaret Curti, and Louis Hoyt, 1998, "Environmental Cost Management," *Management Accounting*.
- Gibson, K., Martin, B. (2004), "Demonstrating value through the use of environmental management accounting", *Environmental Quality Management*, Vol. 13 No.3, pp.45-52.
- Glenn-Marie Lange, Rashid Hassan and Kirk Hamilton-2003; *Environmental Accounting in Action, A Case study in southern Africa*
- Gray R and Bebbington J (2001) 'Accounting for the Environment', Sage Publications, London

- Gray R, Kouhy R and Lavers S (1995) 'Corporate Social and Environmental Reporting: A Review of the Literature and a Longitudinal Study of UK Disclosure', *Accounting, Auditing and Accountability Journal*, Vol 8 No 2 4777
- Hussen A M (2000) *The Principles of Environmental Economics: Economics, Ecology and Public Policy* Routledge London and New York
- ISO 14000 Meet the whole family! 1998 Mathews M R (1997) 'Twenty-five Years of Social and Environmental Accounting Research: Is there a Silver Jubilee to Celebrate?', *Accounting, Auditing and Accountability Journal*, Vol 10 No4 481-531
- Jane Gibbon, Dr. Prem Lal Joshi – 1999 “A survey of environmental accounting and reporting in Bahrain”, *Journal of Applied Accounting Research*; ISSN: 0967-5426; V- 5,
- Joy E. Hecht- 1999, “Environmental Accounting-Where We Are Now, Where We Are Heading”, *Resources for the future- issue 135. Resources 14.*
- Kreuze J G and Newell G E, 1994, “ABC and Life-Cycle Costing for Environmental Expenditures” *Management Accounting* February, pp38-42
- Ministry of the Environment, Japan, 2005, “Environmental Accounting Guidelines 2005”
- Paul Bailey, 1995, “ICF Environmental Accounting Case Studies” EPA #742-R-95-003 September
- Porter M and van der Linde C ,1995, “Green and Competitive: Ending the Stalemate”, *Harvard Business Review*, Vol 73, No 5, Sept-Oct.
- Rogers, G., Kristof, J. 2003, "Reducing operational and product costs through environmental accounting", *Environmental Quality Management*, Vol. 12 pp.17-42.
- Sizer J, 1989, “An Insight into Management Accounting Penguin Books”, London
- Walley N and Whithead B ,1994, 'It's Not Easy Being Green', *Harvard Business Review*, Vol 72, No 3, May/June
- Enhancing the Competitiveness of SMEs in Transition Economies and Developing Countries in the Global Economy and their Partnership with the SMEs of OECD Countries, *SME Conference Business Symposium*, Bologna, 2000.
- Carter, Brandon and Kutty, Raman: 'Approaches to Industrial Pollution: Towards an Environmental Strategy for Asia', *World Bank Discussion Papers # 224*, 1993.
- “Environmental Matters”, *World Bank Report*, 1997.

Websites:

- http://acct.tamu.edu/smith/env_acct/Acctenv.htm
- http://findarticles.com/p/articles/mi_qa3889/is_200210/ai_n9137054/
- <http://www.basb.org/Home.htm>
- <http://www.toshiba.co.jp/env/en/management/account.htm>
- www.advancedenvironmentaldimensions.com/fasb_standards.htm
- http://www.sos-arsenic.net/english/environment/dhaka_air.html