Environmental Accounting Disclosure Practices: A Survey of Some Listed Companies in Bangladesh

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Abstract: *The aim of the authors is to know the disclosure behavior of listed companies in Bangladesh relating to environment and also provide some suggestions for encouraging about environmental issues to the companies. For preparing the report, the authors mainly focus on secondary data using annual reports. For analyzing the data, statistical mean, standard deviation, variance and frequency distribution have been calculated. It has found that, most of the companies in Bangladesh are poorly disclosed (average 20.62%) about the environmental issues in annual reports but in banking sectors the disclosure practice is about satisfactory level with comparing other sectors.*
Keywords: *Environment, Pollution, Accounting, Energy, Policy, Disclosure, Wastes, Green, Annual Report, Sustainable*

I. Introduction

Environmental Accounting has become the most important issue for the present time, not only for Bangladesh but also the whole world. So it's very important to conscious about the environmental issues for all the sectors of any country besides their profit motive in the business. In accordance with this view all the listed companies of any country should disclose the environmental policies to their Annual Report that have been taken by the company. To know this fact, whether, the Bangladeshi listed company disclose the environmental issues to their annual report or not and if disclose what is the extent to disclose, is the main purpose of this study. According to the study (Kukobo et at, 2002) discloser of different environmental related information in corporate annual reports begins in the 1970s and it expanded in the 1990s. Another research argued that before 1990s, there was no specific evidence that any listed company in Dhaka Stock Exchange (DES) has disclosed environmental related information in their annual reports (Shil & Iqbal, 2005).

The author has given more importance about the disclosure fact because most of the industry and company is directly related with different types of environmental pollution such as, air pollution, water pollution sound pollution etc. In Bangladesh the textile industries are mostly responsible for the overall environmental pollution. Because they through their wastage to the river which is very harmful for water, they use huge amount of fuel which is very harmful for air and the sound made by these industries is responsible for sound pollution. So it is must for these type of industry to take some necessary steps which will be helpful for the environment and should publish all the steps and policy taken by them in the annual report so that the general people become conscious about the environment pollution.

Overall the environment pollution has become the alarming issue to the government of Bangladesh in the present age. If the corporate sectors of the country do not come forward for accounting and reporting of the environmental issues, then it will be very extreme task for the government to solve the environment pollution problem.

II. Literature Review

Hossain and Chowdhury, 2014 studied environmental disclosure of 71 listed companies of Bangladesh which resulted that only 33 (46.48%) companies reported at least one line of environmental information in the annual report. They also found that 21 companies have provided „good news", 12 companies „both good and neutral" and no companies „bad news",

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Rahman and Muttakin, 2005 have examined 125 manufacturing companies listed in the CSE and found that only five of them 125 companies have disclosed environmental information in their annual report. They also pointed that the main problems involved in the environmental reporting are lack of provision for environmental reporting in the company's act 1994, separate International Accounting Standard, understanding and awareness, qualified and trained personnel and motivation.

Dutta and Bose, 2008 have observed 104 sample companies only 17 companies (16.35 percent) disclosed environmental information on their websites. Out of these 17 companies, 17.65 companies belong to Pharmaceutical and Chemical sector and 2 (11.76 percent) companies from each of the four sectors such as Papers & Printing, Cement, Engineering & Electrical and Textile & Clothing sectors, disclose environmental information on their websites. All but one company (Dutch-Bangla Bank Ltd.) belong to environmentally sensitive industries.

Shil and Iqbal, 2005 has conducted a survey on 121 listed companies in DSE and found that out of 121, only 13 companies (11%) have disclosed environment related information that is very much insignificant. They also noted that no company disclosed quantitative information.

Moneva and Liena (2000) opined that the environmental reporting practices in the annual reports published by companies is sensitive for the environment in Spain, and determine the evolution of these practices during the period 1992-1994. Moneva and Liena (2000), on the basis of stakeholder theory, also found out that the environmental reporting of these sample companies has a fundamentally narrative character, although there has been an increase in both quantitative and financial reporting, as well as in the number of companies that are reporting.

The environmental disclosure made by 51 United States manufacturing firms for 1992 and 1993 were focused by Hughes et al (2001). They used content analysis to analyze the annual reports and found that disclosure performance differs between firms which they rated as good, mixed or poor.

Objectives of the Study:
The objective of this study is directly related with the environmental disclosure practices of Bangladeshi companies. These objectives are:
i)   To know whether the companies disclose the environmental information to the users or not,
ii) To know the extent of disclosure practices,
iii) To know how much an organization play role for reducing environmental pollution,
iv) To know which sector plays the most important role for encouraging the people about the environmental issues,
v)   To provide some suggestions for taking necessary steps to solve the environment pollution to the corporations of Bangladesh.

III. Methodology

Data Collection: In this study totally secondary sources have been used for collecting the data. Here total listed companies (total 22 sectors) of DSE are the population and the sample have been selected as 5 sectors (Tannery industry, Banking sector, Telecommunication, Textile and Pharmaceutical & Chemical sectors) from the total 22 listed sectors. In Tannery Industry the number of listed industry is 6 and from these 5 companies have been taken as sample. In banking sector 5 Banks have been selected from the total 30 listed banks. In Textile sector there are 48 number of listed industry which is the highest number of DSE. Here also 5 companies have been selected. 5 pharmaceutical & Chemical industries have been selected from the total 28 listed industries. But in case of Telecommunication sector only 2 companies are listed. So these 2 companies have been taken as sample.
Data have been collected from the annual report, published by these companies to the general people. Here Annual report of 2016 for each company has been used for collecting the data.
**Data Analysis:** For analyzing the data, total 56 items of six different classes (Environmental policy items 5, environmental pollution items 20, environmental energy items 7, environmental financial items 9, environmental audit items 7 and other environmental items 7) environmental information was developed through literature review which has shown in (Appendix 2). These items have been found from the study of Shirley, et al, (2009), Lodhia (1999), Dutta and Bose (2008), Islam and Deegan (2010), Hossain, Islam and Andrew (2006), Zhang, et al, (2009), Kamla, Gallhofer and Haslam, (2006) and Hafij, Yakub & Musharof (2013).

After collecting all these 56 items related data from the annual report of the companies, different types of statistical formula (mean, standard deviation, variance and frequency distribution) have been used for knowing the extent of disclosure of environmental issues of the companies. From the calculation this study has found the extent of disclosure practice of Bangladeshi listed companies. Then sector wise mean and standard

deviation has also been calculated to know which sector has disclosed the most environmental information to their annual report from all the sample sectors.

Analysis and Findings:

Under evaluating of 22 sample companies from 5 particular sectors authors have found Dutch Bangla Bank Ltd. disclosed the highest number (32) of elements from 6 items related to development of disclosure index of 56 environmental elements (Appendix: 2). On the other hand, Metro Spinning disclosed lowest number (2) of items in its Annual Report. Authors have not found any environmental items in Annual report of Al Haj Textile, Bangladesh Submarine Cable Corporation Ltd. (BSCCL), Fortunes Shoes and Legacy Footwear which is totally unexpected in the present age. Moreover, it is easy to catch overall ranking of companies on the basis of the disclosed elements related to the environmental elements like Dutch Bangla Bank (32) has placed in the top position.
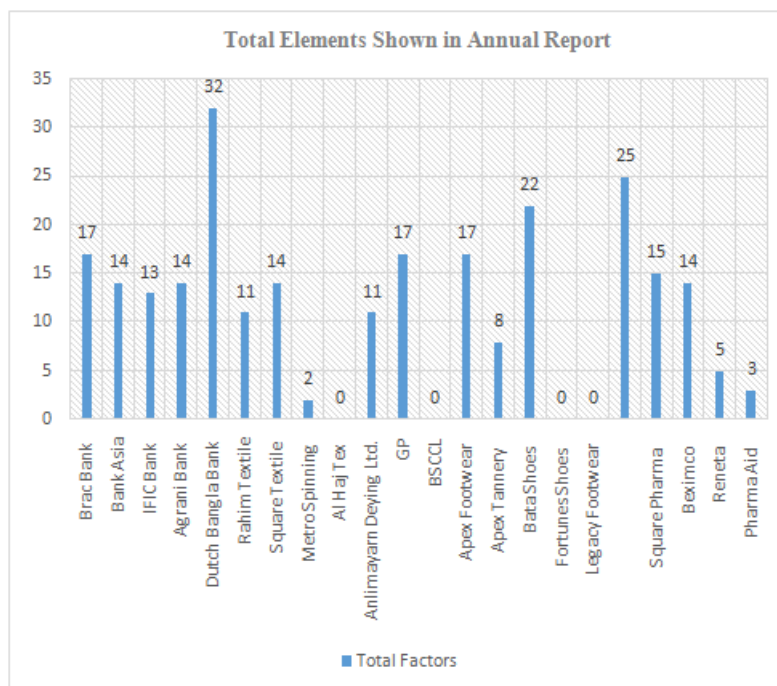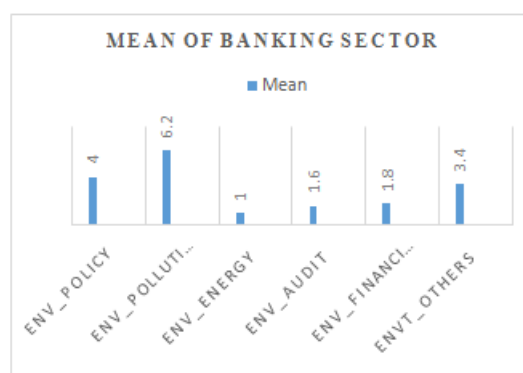

Source: Developed by Authors

Sector wise analysis: Authors have decided to conduct this analysis to find out the current senior of environmental elements of each sector by developing statistical mean, standard deviation, variance with the frequency distribution (Mean) on the basis of considered samples.

Table 1: Banking Sector

|	N	Sum	Mean	Std. Deviation	Variance
Envt_Policy	5	20.0	**4.000**	1.4142	2.000
Envt_Pollution	5	31.0	**6.200**	5.0695	25.700
Envt_Energy	5	5.0	**1.000**	.7071	.500
Env_Audit	5	8.0	**1.600**	.5477	.300
Envt_Financial	5	9.0	**1.800**	.8367	.700
Envt_Others	5	17.0	**3.400**	.5477	.300
Valid N (listwise)	5				

Source: Developed by SPSS

The study is designed by taking 5 listed banks among 30. Authors have found the disclosures scenario on the basis of 56 environmental elements under 6 items considered for development of disclosure index where Environment Pollution has been disclosed highly according to the Mean (6.2), Standard Deviation (5.0695) and Variance (25.70) inside banking sector. On other hand the elements related to Environmental Energy has been disclosed poorly according to its 7 elemrnts.

Table 2: Textile Sector

|	N	Sum	Mean	Std. Deviation	Variance
Envt_Policy	5	10.0	**2.000**	1.4142	2.000
Envt_Pollution	5	16.0	**3.200**	2.4900	6.200
Envt_Energy	5	7.0	**1.400**	1.5166	2.300
Env_Audit	5	1.0	**.200**	.4472	.200
Envt_Financial	5	1.0	**.200**	.4472	.200
Envt_Others	5	4.0	**.800**	.8367	.700
Valid N (listwise)	5				

Source: Developed by SPSS
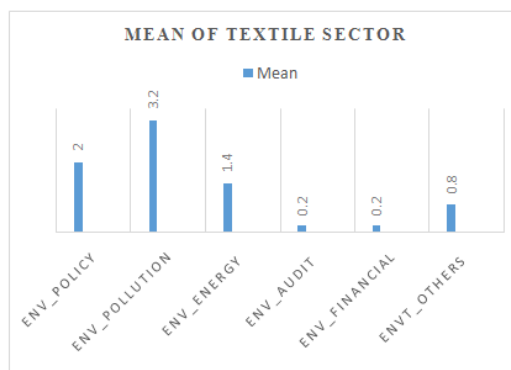
Authors realized that in Textile Industries there is huge connection to Environment because of industrial wastages and plants during their operating activities. According to Mean (3.2), Standard Deviation (2.49) and Variance (6.2) it has found that in textile sector Environmental Pollution has got priority than other itemswhere elements inside Environmental Audit and Environmental Financial have been disclosed poorly on consideration of total 16 environmental elements.

Table 3: Telecommunication Sector

|	N	Sum	Mean	Std. Deviation	Variance
Envt_Policy	2	3.0	**1.500**	2.1213	4.500
Envt_Pollution	2	3.0	**1.500**	2.1213	4.500
Envt_Energy	2	4.0	**2.000**	2.8284	8.000
Env_Audit	2	2.0	**1.000**	1.4142	2.000
Envt_Financial	2	1.0	**.500**	.7071	.500
Envt_Others	1	4.0	**4.000**	.	.
Valid N (listwise)	1				

Source: Developed by SPSS
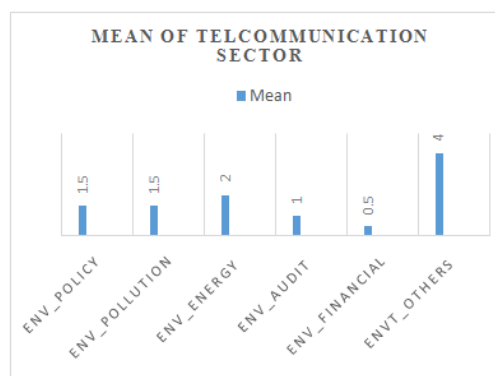
Source: Developed by SPSS

As the available number of listed telecommunication companies are only 2, authors have designed the data collection method considering these 2 companies. According to Mean (4.00) it is found that these 2 companies presented much importance by disclosing Environmental Others where Environmental Financial has presented poorly inside the published annual report. The analysis has also represented the overall discloser practices in Telecommunication Sectors of Bangladesh under environmental context as the total number of companies is taken for analysis.

Table 4: Tannery Sector

	N	Sum	Mean	Std. Deviation	Variance
Envt_Policy	5	12.0	**2.400**	2.5100	6.300
Envt_Pollution	5	10.0	**2.000**	2.0000	4.000
Envt_Energy	5	4.0	**.800**	1.3038	1.700
Env_Audit	5	7.0	**1.400**	1.5166	2.300
Envt_Financial	5	6.0	**1.200**	1.3038	1.700
Envt_Others	5	8.0	**1.600**	1.6733	2.800
Valid N (listwise)	5				
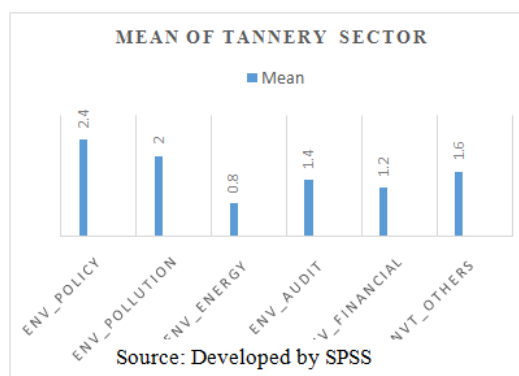
Source: Developed by SPSS

'Human Right Watch' reported that this sector is responsible for pollution of air, water, and soil that lead to serious health problems in the population but it has found by the authors that environmental disclosures in Tannery Sector is very poor in Bangladesh. There are 6 listed tannery companies in Dhaka Stock Exchange where authors take 5 samples. According to Mean (2.4), Standard Deviation (2.51) and Variance (6.3) it is

found that only Environmental Policy has played satisfactory role in Annual Report where Environmental Energy is positioned in poorly.

Table 5: Pharmaceuticals Sector

	N	Sum	Mean	Std. Deviation	Variance
Envt_Policy	5	16.0	**3.200**	1.9235	3.700
Envt_Pollution	5	11.0	**2.200**	1.6432	2.700
Envt_Energy	5	9.0	**1.800**	1.7889	3.200
Env_Audit	5	8.0	**1.600**	1.8166	3.300
Envt_Financial	5	5.0	**1.000**	1.2247	1.500
Envt_Others	5	13.0	**2.600**	1.5166	2.300
Valid N (listwise)	5				

MEAN OF PHARMACEUTICALS SECTOR
■ Mean

Source: Developed by SPSS
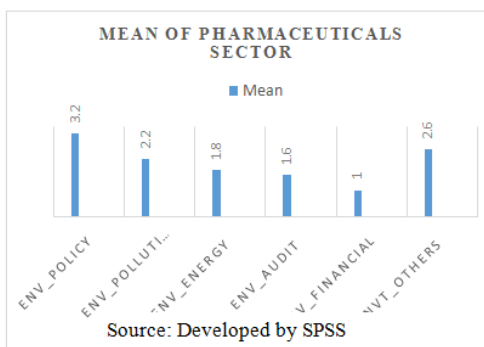
According to Mean (3.2), Standard Deviation (1.9235) and Variance (3.70) it is found that pharmaceuticals sectorhashighly disclosed elements related to Environmental Policy where Environmental Financial is stood in unsatisfactory discloser part inside annual reports.

IV. Recommendations

Through the discloser practice of banking sector is about satisfactory level, authors suggest that they should emphasize more items relating to environment for encouraging the people about environmental protection. Besides there is an interconnection between environment and tannery sector but the environment discloser practice is not at satisfactory level. So, this sector should play important role to save the environment by disclosing their environmental elements to their annual report.

V. Conclusion

It has been realized by the authors that the environmental accounting discloser practice in annual report is not only a legal obligations but also a social responsibilities to the organizations. But in this study it has found that most of the companies have disclosed very negligible information relating environmental issues which is not expected for the overall social impact in any country. However, the result of the study may vary if the sample is changed. Moreover the government should take necessary measures for increasing the awareness to the companies and for implementation of the rules relating to the environmental discloser in their annual report as soon as possible.

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Appendix: 1
List of Companies under study and their Environmental Disclosures

Banking Sector	Envt_Policy	Envt_Pollution	Envt_Energy	Env_Audit	Envt_Financial	Envt_Others	Total Elements
Brac Bank	4	4	1	2	2	4	17
Bank Asia	4	3	1	2	1	3	14
IFIC Bank	2	6	0	1	1	3	13
Agrani Bank	4	3	1	1	2	3	14
Dutch Bangla Bank	6	15	2	2	3	4	32
Textile Sector							
Rahim Textile	3	5	3	0	0	1	11
Square Textile	3	5	3	1	1	1	14
Metro Spinning	1	1	0	0	0	0	2
Al Haj Tex	0	0	0	0	0	0	0
Anlimayarn Deying Ltd.	3	5	1	0	0	2	11
Telecommunication Sector							
GP	3	3	4	2	1	4	17
BSCCL	0	0	0	0	0	0	0
Tannery Sector							
Apex Footwear	5	4	1	3	2	2	17
Apex Tannery	2	2	0	1	1	2	8
Bata Shoe	5	4	3	3	3	4	22
Fortune Shoes	0	0	0	0	0	0	0
Legacy Footwear	0	0	0	0	0	0	0
Pharmaceuticals Sector							
Orion	6	5	4	4	3	3	25
Square Pharma	4	2	3	3	1	2	15
Beximco	3	2	2	1	1	5	14
Reneta	2	1	0	0	0	2	05
Pharma Aid	3	3	4	5	2	2	19

Appendix: 2
Environmental Items Considered for Development of Disclosure Index
A. Environmental policy:

Serial No.	Elements
1	Establishment of environmental management systems
2	Actual statement of policy
3	Statements of formal intentions
4	Investment appraisal to include consideration of the environment
5	General statements of "the company will, the company does" nature

B.Environmental pollution:

Serial No.	Elements
1	Undertaking wildlife conservation
2	Designing facilities harmonious with the environment
3	Raw materials conservation
4	Land reclamation and forestation programs
5	Installation of effluent treatment plant
6	Recycling plant of waste products
7	Conservation of natural resources
8	Solid waste disposal information
9	Pollution reductions in the conduct of business operations
10	Pollution control of industrial process
11	Pollution –prevention technologies
12	Research on new methods of production to reduce environmental pollution
13	Water discharge information
14	Air emission information
15	Products and product development, improvements in products (including products that care for and help protect the environment)
16	Waste(s) management
17	Eco-efficiency

18	Packaging and take-back.
19	Pollution and emissions- noise, spills, visual quality, including any attemptsto identify, improve, control, treat or prevent
20	Carbon sequestration, climate change

C. Environmental Energy:

Serial No.	Elements
1	Discussion of the company's efforts to reduce energy consumption
2	Voicing the company's concern about the energy shortage
3	Direct energy use
4	Energy saving and conservation
5	Use/development/exploration of new sources, efficiency, insulation etc.
6	Utilization of waste materials for energy conservation
7	Indirect Energy use

D. Environmental audit:

Serial No.	Elements
1	Environmental risk assessment and estimation
2	Compliance with environmental standards and regulation
3	Execution of environmental policies
4	Conducting Environmental Impact Assessment (EIA) / air quality assessment
5	Reference to environmental review, scoping, audit, assessment, including independent attestation
6	Incidents of and fines for non-compliance
7	Obtaining certification for Environmental Management Systems/ISO 14001

E. Environmental financial:

Serial No.	Elements
1	Environmentally-related loans, grants; costs of purchasing and installing environmental friendly machines and equipment; maintenance and consultancy costs
2	Reference to financial/economic impact
3	Investment and investment appraisal
4	Discussion of areas with financial/economic impact
5	Discussion of environmental-economic interaction
6	A record of the allocation of specific fund
7	Future estimates of expenditures for pollution control equipment and facilities
8	Past and current expenditure for pollution control
9	Contingencies, provisions

F. Environmental other:

Serial No.	Elements
1	Environmental awards; employee environmental training and awareness; partnerships between environmental research institutions and business
2	Environmental education (note: care should be exercised noting the overlapwith community)
3	Landscaping
4	Public amenity provision
5	Involvement with initiatives and schemes
6	Maintenance the balance of environment
7	To protect and enhance the well-being of future generations
8	The enhancement of a moral responsibility influenced by Islamic principles