

# Environmental and Climate disclosure trends of red zone industries in Bangladesh: A study on tannery and cement industry

Sanzida Begum, Most. Mukta Khatun & Mehedi Hasan

## Abstract

This article was prepared with an intent to find out some discrete industry's (cement, tannery) decisiveness toward climate disclosure. Both cement and tannery industry are considered a red zone industry according to Ministry of the Environment and Forests, Bangladesh. Research was done mainly on the annual reports (5 periods) of SEC listed companies that corresponded as representation on industry scenario. Climate disclosure was marked up against GRI standards specifically the GRI-300. The study found out that MNCs are doing better in publishing climate disclosure issues than the local companies. Overall, the cement industry is in a better condition than the tannery industry regarding environmental consciousness and climate disclosure. 67% of cement industry, and 50% of tannery industry publishes climate disclosure related issue. This study has found the position of cement industry and tannery to be in a place, where there is still a lot of room for improvements.



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## Introduction

Being one of the largest deltas on earth, Bangladesh is highly vulnerable to climate change. The melting of glaciers in the Polar Regions and the Garhwal Himalaya raises sea levels, making the country more vulnerable by the day. Industrial pollution is one of the biggest culprits responsible for climate change. Bangladesh is no exception. In the country, there are a number of industries that emit lots of destructive gases or release chemicals that are devastating for biodiversity. This report took some of the industrial sector as a sample. The prime aim of this report is to find out if the industries such as tanneries and cement in Bangladesh are living up to standards and to examine the climate disclosure trends of these industries. Climate and environmental reporting is becoming more common. The focus on risk disclosure means it doesn't matter whether you believe in climate change or not—what matters is transparency about corporate risk. A research done by Ahmed (2012) on significant companies in Bangladesh such as cement, tannery, etc. revealed that in regards to environmental protection, 100% of the pharmaceutical industries and 40% of the fuel and power industries, textile industries, cement industries, tannery industries, food and beverage industries, ceramic industries, and engineering industries have mentioned environmental protection in their annual reports.

The relevance of climate disclosure by companies around the world has been steadily growing over the past few years and has now emerged as a key topic underpinning both the new policy dynamic promoting sustainable development and, increasingly, financial market development. Even though the term has been used in disguise in Bangladesh, it is gaining popularity these days. Climate disclosure is becoming a more prominent factor in several industries in our country, driven by the scale and urgency of the challenge of sustainable development. No direct mention of climate disclosure was found in the annual reports; rather, some of the terms such as recycling, waste management, or terms such as global warming or climate change were noticed. Empirically speaking, there is no mandate by the government in Bangladesh for companies to disclose climate-related data. Despite that, six of the sample companies in this report voluntarily took the initiative to publish climate-related data. So, throughout the report, we will have a close look at the scenario regarding the climate disclosure of the selected companies. Besides, the article will substantially bring attention to two significant red zone industries (cement and tannery). In addition, it will assist in measuring the volume of climate disclosure in the tannery and cement industries in order to analyze climate disclosure trends in Bangladesh. as well as suggest some solutions regarding the matter and bring a cautious realization as to how vital climate disclosure is for the modern business era.

## Related literature

Since the beginning of the Industrial Revolution in around 1750, human activities have had a considerable negative impact on climate change by raising atmospheric CO<sub>2</sub> and other heat-trapping gases. The earth's temperature has increased as a result of the greenhouse effect, which was in turn caused by these greenhouse gas emissions. This rising temperature, as in global warming, has become an international concern, resulting in industries being more careful regarding their operations. Additionally, human waste and industrial waste mixing with the environment have caused the environment to degrade. This in turn makes the environment more disaster-prone. According to Trencher and Asuka (2022), companies are showing interest in strategies related to carbon reduction and clean energy. Despite that, these strategies that we speak of are dominated by pledges but not by actions. We thus conclude that the transition to clean energy business models is nonexistent, as the investments and actions don't match the plans. The accusations of "greenwashing" will remain accusations until the actions and investments match the plans. Similarly, Saeudy et al. (2022) argued that investors'

perspectives regarding climate change found their attitudes and conversations with companies having climate issues to be related to a risk discourse: their incentives and activities were dominated by risk management motivations. Ahmed and Dewan (2015) stated that the relevance of global warming as a big problem is being recognized by all of the major stakeholders in the world. As a result, companies today confront several obstacles in running their business operations. So, they are trying to demonstrate that they are concerned about environmental contamination and acting responsibly in this regard. According to UNEP, the amount of GHGs in the atmosphere is directly related to the average global temperature on Earth. Since the Industrial Revolution, the concentration has been continuously increasing along with mean world temperatures. Despite being one of the smallest emitters of pollutants and effluents as compared to some of the industrialized countries of the world, Bangladesh, like many other developing nations, is one of those most negatively affected by climate change. Developed nations are paying a penalty in the form of a carbon tax, but even so, prevention is better than cure. Consequently, smaller countries are mostly the victims of climate change. The United Nations also revealed that Bangladesh was placed sixth among the top 10 countries in the world in terms of the severity of extreme weather catastrophes over the previous 20 years. In Bangladesh, 185 climate catastrophes caused an average death toll of 679.05 people between 1996 and 2015, according to the Global Climate Risk Index by think tank German Watch. The consequence was a loss of 0.7324% of the nation's GDP. Nonetheless, even the smallest amount of pollution can cause a great deal of damage. That is why it is necessary that the country's regulatory structure has strong regulations regarding climate change and global warming. In this regard, Mahmud et al. (2017) discuss that the involvement of the government and the financial sector's regulatory body in Bangladesh is significant for solving this problem.

To ensure good governance and improved transparency, all regulators, as well as civil society, should be required to take the initiative to create a culture of sustainable reporting. It will ultimately address governance issues and make our cherished world more sustainable. According to empirical research, companies operating in Bangladesh are hesitant to disclose climate information. A study done by Kamal (2013) revealed that after examining the selected corporations' annual reports, it was found that they had a very poor track record of providing information related to climate change. These insufficient disclosures may have the effect of preventing accountability. According to Farooque et al. (2007), in the context of Bangladesh, the financial reporting environment is not perfectly consistent with international accounting standards. In actuality, financial transparency and information are given to appease tax authorities rather than to satisfy the demands of investors and vested interest groups. Hossain et al. (2017), in a similar manner, found out that companies also report receptively to lessen pressure from influential stakeholders like foreign purchasers and governmental organizations. Back in 2012, research conducted by Ahmed (2012) on 40 companies in Bangladesh revealed that for its economic successes, Bangladesh has had to pay a heavy price. The time has come to consider the environmental harm caused by the business operations conducted by corporate organizations in Bangladesh. A far more recent study done by Paul et al. (2013) on the Bangladeshi leather industry shows most tanneries lack adequate effluent treatment facilities, resulting in the daily production of 232 tons of solid waste and 20000 m<sup>3</sup> of tannery effluent. To prevent the massive pollution caused by tanneries, et al. (2010) made an extensive discovery, revealing that only 5% of businesses have an effluent treatment plant, according to website data. Nurunnabi (2016), in a study, finds that on average 2.23% of Bangladeshi companies have made reports on climate change. Particularly, the study shows that, due to their privileged market positions, major corporations report on climate change issues more frequently than smaller businesses. Again, there is very little disclosure about

climate change due to a lack of regulations and a culture of low social responsibility among the companies.

### Research Methodology

The methods that will be used to make the article successful will basically be built on the secondary data. Content analysis based on annual general reports was done. This report scrutinizes the recent annual reports to find out any occurrences of climate and environmental disclosure. In the annual report, companies making any form of environmental disclosure were rigorously examined. Different sections of the annual reports were examined while noting the presence of mention of environmental reporting. Due to time and resource constraints, the research appears to be descriptive and exploratory.

**Sample size:** It is conducted from a Bangladeshi perspective, as the title suggests. So, industries like cement and tanneries are studied. The duration and company numbers are as follows:

Industry	Reporting period (2016 to 2020)	Number of companies	Number of Listed Companies
Cement	05 years	05	07
Tannery	05 years	04	06

### List of companies:

SL	Cement MNC	SL	Tannery MNC
1	Lafarge Surma Cement Limited	1	Bata Shoe Company Bangladesh Limited
2	Heidelberg Cement Bangladesh Limited		Local
	Local	2	Apex Tannery Limited
3	MI Cement Factory Limited	3	Apex Footwear Limited
4	Confidence cement Limited	4	Legacy Footwear Limited
	Premier Cement Mills Limited		
5	Meghna Cement Mills Limited		

### Climate Disclosure Index:

SL	Disclosure Issues
1.	Disclosure regarding health and safety plan and the information is available in publicly published documents
2.	Climate change/global warming/ environmental degradation mention in CEO/Chairman/ Director's Report.
3.	Mention of environment in reference to chairman's statement/CEO/Directors report in the annual report.
4.	Policy regarding renewable energy and alternative sources of energy.
5.	Waste management/ recycling.
6.	Reduction of GHG/ ODS emission.
7.	Indication of energy consumption within and outside the company alongside the indication of approach to reduction of energy consumption.
8.	Management approach for materials
9.	Portrayal of separate section only for climate change and global warming in the annual report.
10.	Mention of Paris agreement and Kyoto protocol.
11.	Compliance with GRI, GHG protocol and other standards of reporting benchmark.
12.	Formation of distinct committee for climate change and environmental safety.
13.	Impact of company's activities on products & services on biodiversity.
14.	Air pollution
15.	Non-compliance with environmental law and regulation
16.	Water pollution caused due to discharge of water and water sources affected by withdrawal of water.
17.	Tree plantation.

### Climate change, Environmental Regulation and Bangladesh:

Bangladesh is scrutinized as one of the most vulnerable countries to global warming and climate change. Bangladesh relies heavily on nature for its resources and services. The country

also tends to show a pattern of unique geographic location, wide range of flood zone areas, and high level of poverty. As history tells that natural calamities in the past have wiped out most developments that ever took place in the country. If this pattern continues, it will have reducing impacts on our assets and investments in near future. Climate change and global warming has increased the number of internally displaced people due to river erosion, flood and other natural disasters. The amount of government help and action to address the problems does not suffice as one after another the disasters strike. It is oblivious that the climate hazards in future will challenge our human security, infrastructural development and efforts. Needless to say, right after the industrial revolution global warming is increasing at an accelerating rate. Which finger points that industries are contributing to this mishap to some extent. Bangladesh Environmental Conservation Act 1995 mandates each and every industry to get environmental clearance. According to the Act industries are classified as Green, Orange/Amber-A, Orange/Amber-B and Red. Different documents have to be submitted as according to the industry category. Here to mention that both cement and tannery industry falls within the category of the last zone-Red zone. Under the law no factory of Red category shall be established near residential area. It may be established within a commercial area under certain conditions. It prescript to establish in the industrial zone due to its adverse effect on surrounding area. The time frame to get the clearance and the fees varies according to the industry variance and size variance. But the basic steps to get the environmental clearance can be generalized as follows-

Step 1: Submit application with supporting documents.

Step 2: Verification of application and supporting documents by DOE

Step 3: Inspection by the authorized officer after verification of all reports and documents. [Then make decision about the clearance (Only Green and Orange-A)]

Step 4: Meeting of Environmental Clearance Committee (for Orange-B and Red Category)

Step 5: Decision

According to the Ministry of the Environment and Forests the red zone industries list is as follows :Tannery, Formaldehyde, Urea fertilizer, T.S.P. Fertilizer, Chemical dyes, Polish, Varnish, enamel, Power Plant, all mining projects (coal, limestone, hard rock, natural gas etc.), Cement, Fuel oil refinery, Artificial rubber, Paper and pulp, Sugar, Distillery, Fabric dying and chemical processing, Caustic soda, potash, Other alkalis, Production of iron and steel, Raw materials of medicines and basic drugs, Electroplating, Photo films, photo papers and photo chemicals, Various products made from petroleum and coal, Explosives, Acids and their salts (organic or inorganic), Nitrogen compounds (cyanide, Cyanamid etc.), Production of plastic raw materials (PVC, Polyesterin etc.), Asbestos, Fiberglass

## Analysis

**Table 1: Overall climate change disclosures by the companies**

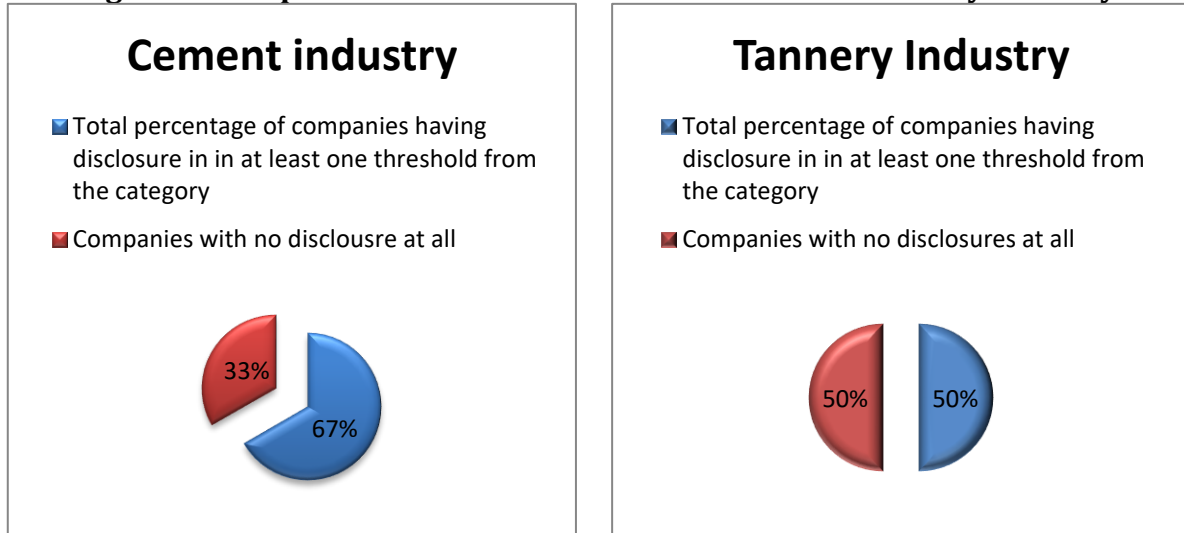
Description	Percentage (%)
Total percentage of companies having disclosure in in at least one threshold from the category	60
Total percentage of companies with no disclosures at all	40
Total	100

**Table2: Overall climate change disclosures by the cement industry**

Description	Percentage (%)
Total percentage of companies having disclosure in in at least one threshold from the category	67
Total percentage of companies with no disclosures at all	33
Total	100

**Table3: Overall climate change disclosures by the tannery industry**

Description	Percentage (%)
Total percentage of companies having disclosure in in at least one threshold from the category	50
Total percentage of companies with no disclosures at all	50
Total	100

**Figure 1: Comparative disclosure locus of cement and tannery industry**

It is depicted from the table and the figure that of the sample companies only 60% publish climate disclosure in their annual report and 40% do not (table-1). The cement and tannery industry fraction reveal that 67% of the cement industry and 50% of the tannery industry publishes climate disclosure in their annual report. And the remaining 33% of the cement industry, 50% of the tannery industry don't publish any climate disclosure. These tables conclude that climate disclosure practices in the cement and tannery industry are at medium level.

**Table 4: Comparison between MNC and Local companies**

Description	Number	Total Company	%
Cement industry:			
Number of MNC's disclosing	2	2	100
Number of local companies disclosing	2	4	50
Tannery Industry:			
Number of MNC's disclosing	1	1	100
Number of local companies disclosing	1	3	33.33

Table-5 gives a picture of how different issues are being disclosed by the companies. It can be seen that local companies are far behind than multinational companies in addressing climate disclosure issues. The issue 'Separate "Environment, health and safety" plan and it discloses in the publicly available documents' was only disclosed by 83.35% of the disclosing companies and only 50% of the sample companies. This category is one of the most frequently disclosed categories of the disclosing and the sample companies. Regarding this MI Cement Factory Limited- (2017, p41) published that Environment, Health and Safety is a vital part of the company's Journey towards sustainable and safe development. Their goal is to ensure "0" Harm to people keeping Health and Safety as a core principal of the business. They believe in visible leadership and accountability for Health and Safety at all levels throughout the organization. The company has numerous attributes to its plan to embark on the ISO-14001 EMS (Environmental Management System) and OHSAS-18001 (Occupational Health and Safety Assessment Series) certifications as early as possible. Similarly, Lafarge Surma Cement

Limited- (2017, p22) also ensures health and safety to be the company's core value. The Company is taking the necessary steps to ensure the employee's and the employees of the third-party contractor's work safely on the Company's sites as well as in the distribution of its goods and services. The company makes sure that it is rooted in every employee's work ethics. 'Climate change/global warming/ environmental degradation mention in CEO/Chairman/ Director's Report' was found to be reported by 50% Of the disclosing companies and 30 % of the sample companies. Heidelberg Cement Bangladesh Limited mentioned in their annual report (2016, p70) that the Company believes that competition on a global scale along with concerns about climate change is creating a major sphere of product innovation, extraordinary customer service and strong policy leadership. 'Mention of environment in reference to chairman's statement/CEO/Directors report in the annual report' was disclosed by 66.67% of the disclosing companies and only 40% of the sample companies.

**Table 5: Main issues regarding climate change disclosures observed in the companies**

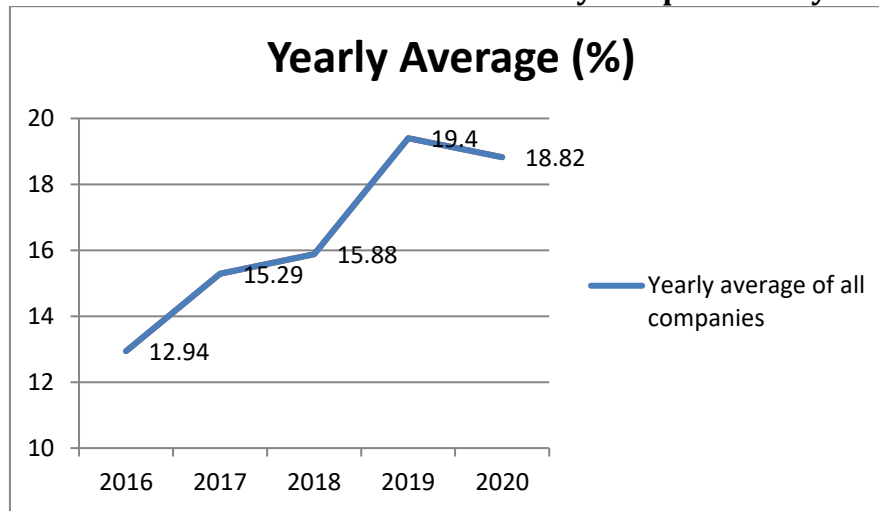
Disclosure Issues	Cement		Tannery		No of companies disclosing the issue	% compared to total number of disclosing companies	% compared to total sample companies
	MNC	Local	MNC	Local			
Disclosure regarding health and safety plan and the information is available in publicly published documents	2	2	0	0	4	66.67%	40%
Climate change/global warming/ environmental degradation mention in CEO/Chairman/ Director's Report	2	0	0	0	2	33.33%	20%
Mention of environment in reference to chairman's statement/CEO/Directors report in the annual report.	2	2	0	1	5	83.35%	50%
Policy regarding renewable energy and alternative sources of energy.	0	0	0	0	0	0%	0%
Waste management/ recycling	1	1	1	1	4	66.68%	40%
Reduction of GHG/ ODS emission	2	1	0	0	3	50%	30%
Indication of energy consumption within and outside the company alongside the indication of approach to reduction of energy consumption.	2	1	0	0	3	50%	30%
Management approach for materials	1	0	0	0	1	16.67%	10%
Portrayal of separate section only for climate change and global warming in the annual report.	0	0	0	0	0	0%	0%
Mention of Paris agreement and Kyoto protocol.	0	0	0	0	0	0%	0%
Compliance with GRI, GHG protocol and other standards of reporting benchmark.	2	2	0	0	4	66.67%	40%
Formation of distinct committee for climate change and environmental safety.	1	0	0	0	1	16.67%	10%
Impact of company's activities on products & services on biodiversity	0	2	0	0	2	33.33%	20%
Air pollution	2	1	0	0	3	50%	30%
Non-compliance with environmental law and regulation	0	0	0	1	1	16.67%	10%
Water pollution caused due to discharge of water and water sources affected by withdrawal of water.	1	0	0	0	0	16.67%	10%
Tree plantation	1	2	0	0	3	50%	30%

It was observed in Premier Cement Mills Limited annual report (2016, p 42) that the installation of Vertical Roller Mill (VRM) mechanism which is included as a part of expansion project would not be injurious to their environment because of being environment friendly and assist to maintain ecological balance as well. Moreover, it aims is to run production process by saving greater power. Here to mention that Lafarge Surma Cement Limited was the only company to disclose the actual amount spent on the environment. Surprisingly almost all of the disclosing companies has proper waste management system in their operation and disclosed 'Waste management/ recycling'. Lafarge Surma Cement Limited- (2017, p111) stated that that company ensures conservation of water by making sure that there is less usage of fresh water and more and more usage of processed water by installing Effluent Treatment Plant to purify domestic water waste alongside purifying water from workshops. Other than that, the company is harvesting rain water at mine, residential areas and colonies etc. Only 3 companies disclosed about 'Reduction of GHG/ ODS emission', which is 50% of disclosing companies and 30% of total sample. Heidelberg Cement Bangladesh Limited (2016, p72) published an experienced & enthusiastic Q.A. team members are contributing in inspection, process controlling, testing, environmental monitoring and R & D activities to make sure consistent cement quality production. Our contribution towards environment is the use of SCMs (Supplementary Cementitious Materials) for the reduction of CO<sub>2</sub> emission at ambient. 'Indication of energy consumption within and outside the company alongside the indication of approach to reduction of energy consumption' was disclosed by only 3 companies which consist of 50% of the disclosing companies and 30% of sample companies. Regarding the issue Heidelberg Cement Bangladesh Limited (2016, p73) promulgated in the annual report such that Electrical Energy Efficiency Enhancement: Constant developments to the production process as well as modernization of older less efficient equipment has allowed HCBL to reduce the amount of electricity used in the production of cement, this greatly helps in better utilization of the country's power. 'Management approach for materials' was mentioned by only one company i.e. Premier Cement Mills Limited. The company described the issue as (2016, p66) them using or reusing many of the byproducts into further production. The company on a regular basis keeps on checking that waste products be kept as minimum as possible. 4 companies mentioned that they are in 'Compliance with GRI, GHG protocol and other standards of reporting benchmark.' which results in 66.67% of the disclosing companies and 10% of the total sample. MI Cement Factory Limited- (2017, p 41) proclaimed that considering all of the attributes, the company aims to achieve the ISO-14001 EMS (Environmental Management System) and OHSAS-18001 (Occupational Health and Safety Assessment Series) certifications within the shortest possible time. In a similar fashion Premier Cement Mills Limited (2016, p42) said that environmental preservation is one of the company's top priorities. The company even got certification from Department of Environment, Government of People's Republic of Bangladesh for abiding by environmental laws imposed by the ministry. Only Heidelberg Cement Bangladesh Limited had 'Separate committee related to environment/climate change'. So, in their annual report (2016, p36) HCBL mentioned HCBL is highly committed to complying with all environmental laws, rules and regulations to prevent pollution and continuously improve environmental performance. Under the supervision of Mr. Alamgir, Country Health & Safety Manager, health and safety concern of the company is also significantly improving. As a result of strong health and safety culture the overall safety management is moving successfully towards the highest pinnacle. 'Significant impact of activities, products & services on biodiversity' Lafarge Surma Cement Limited (2016, p114) stated that the company is vigorously supporting the local community by planting inhabitants of Nongtrai village have planted 20,000 saplings of indigenous Khasi Mandarin, a variety of orange which will preserve the biodiversity and maintain the traditional methods of plantations. 'Air pollution' was disclosed by only 3 companies constituting 30% of the sample



companies and 50% of the disclosing companies. Lafarge Surma Cement Limited in the annual report (2016, p118) published that besides working closely with the village Durbar of Nongtrai for protection of biodiversity of the surrounding areas, the year 2016 witnessed the installation of 2 km long automated water sprinkling system along with Mine's haul road. Your company also installed a fogger system at the Crusher Hopper to help mitigate dust hazard. Only one company stated that they had legal issues, the company is Apex Tannery Limited. The problem started in the year 2016 when there was numerous media report regarding the company's Hazaribag factory. Finally, the company was executed in 2016 by the court. So 'Non-compliance with environmental law and regulation' in Apex Tannery Limited (2017, p17) words "Although we were compliant with the High Court's order in ceasing production at the Hazaribagh facility on April 8, 2017, and we were able to commence partial production in Hemayetpur, Savar, on April 27, 2017, BSCIC has failed to duly operate the Central Effluent Treatment Plant (CETP) at the BSCIC Savar Tannery Estate. At the time of writing this report, the CETP is still not functioning efficiently, leading to environmental problems which a CETP is supposed to mitigate, as has been widely reported in the Bangladesh media." And this is 10% of total sample, 16.67% of disclosing companies. 'Tree plantation' were disclosed by only 3 companies which is 30% of the total sample and 50% of the disclosing companies. Premier Cement Mills Limited (2016, p40) revealed in its annual report that considering the changing ecological environment tree plantation holds an immense importance to the company. Thus, the company is continuously arranging tree plantation programs and raising awareness in the local community with the help of stakeholders with the intention to balance off or reduce the carbon emission occurring as a result of the industrial revolution in the country. The importance of tree plantation in this century is immense as industrialization has become one of the major reasons for deforestation. To maintain ecological balance and to protect our environment our Company continuously arranges numerous plantation drives and awareness programs to create environmental consciousness amongst the local habitants with the help of its stakeholders; intended to offset the carbon emissions associated with the industrial revolution in the country. Every year the company plants a significant number of saplings at rural parts of the country and roadside. Every year, Company plants a substantial number of saplings at roadside and rural parts of the country. During this financial year the company planted more than a thousand saplings in more than 16 different districts including Bogra, Mongla, Rangamati, Bandarban, Cox's Bazar etc. "Policy to develop alternative and renewable energy, Separate section devoted to climate change/global warming, Mention of Kyoto protocol and Paris agreement (General Concern)," these issues were not disclosed at all by any of the companies.

Table-6 solely describes how every single issue is being addressed every year. Simultaneously this table also averages the year wise issue disclosure trends. An eyeful of the table shows that the issue "Mention of "environment" in the chairman's statement/CEO/Directors report in the annual report (General Concern)" caught the attention every year; it was the highest addressed issue. The figure below represents how on an average all the issues are being addressed. This figure simplifies that disclosures issues are showing an upward trend every year.

**Figure 2 : Main issues of climate disclosures by companies on yearly basis.****Table 6: Main issues of climate disclosures by the companies on yearly basis (%)**

Disclosure Issues	Year					Average
	2020	2019	2018	2017	2016	
Disclosure regarding health and safety plan and the information is available in publicly published documents	40%	40%	40%	40%	40%	40%
Climate change/global warming/ environmental degradation mention in CEO/Chairman/ Director's Report	20%	20%	20%	20%	20%	20%
Mention of environment in reference to chairman's statement/CEO/Directors report in the annual report.	50%	50%	40%	50%	40%	46%
Policy regarding renewable energy and alternative sources of energy.	0%	0%	0%	0%	0%	0%
Waste management/ recycling	40%	40%	20%	20%	10%	26%
Reduction of GHG/ ODS emission	30%	20%	20%	20%	10%	20%
Indication of energy consumption within and outside the company alongside the indication of approach to reduction of energy consumption.	30%	30%	30%	20%	20%	26%
Management approach for materials	10%	10%	0%	0%	0%	4%
Portrayal of separate section only for climate change and global warming in the annual report.	0%	0%	0%	0%	0%	0%
Mention of Paris agreement and Kyoto protocol.	0%	0%	0%	0%	0%	0%
Compliance with GRI, GHG protocol and other standards of reporting benchmark.	10%	10%	10%	10%	10%	10%
Formation of distinct committee for climate change and environmental safety.	10%	10%	10%	10%	10%	10%
Impact of company's activities on products & services on biodiversity	20%	20%	10%	20%	10%	16%
Air pollution	20%	20%	30%	10%	20%	20%
Non-compliance with environmental law and regulation	10%	10%	10%	10%	10%	10%
Water pollution caused due to discharge of water and water sources affected by withdrawal of water.	10%	10%	0%	0%	0%	4%
Tree plantation	20%	20%	20%	20%	10%	18%
Average	18.82%	18.24%	15.29%	14.71%	12.35%	

**Table 7: Extent of climate change disclosures in “sentences”**

No. of sentences	Cement		Tannery		No. of companies disclosing	Percentage (%)
	MNC	Local	MNC	Local		
0 to 5 sentences	0	1	1	0	2	20%
6 to 10 sentences	0	0	0	0	0	0%
11 to 15 sentences	0	0	0	0	0	0%
16 to 20 sentences	0	1	0	1	2	20%
21 to 25 sentences	0	0	0	0	0	0%
More than 25 sentences	2	0	0	0	2	20%
<i>Subtotal</i>	2	2	2	0	6	60%
<i>TOTAL</i>	4		2			60%

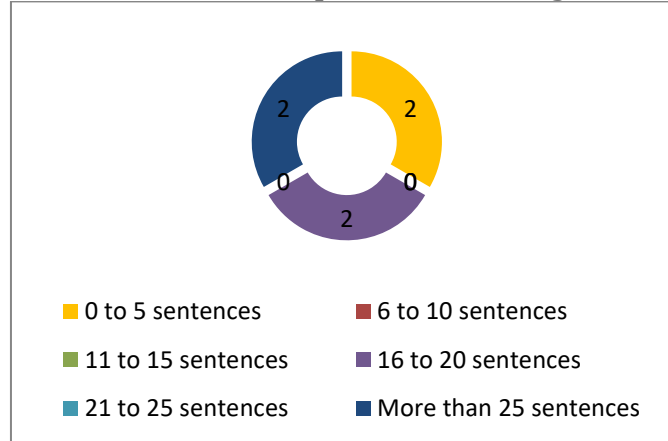
**Figure 3: Number of companies disclosing in sentence**

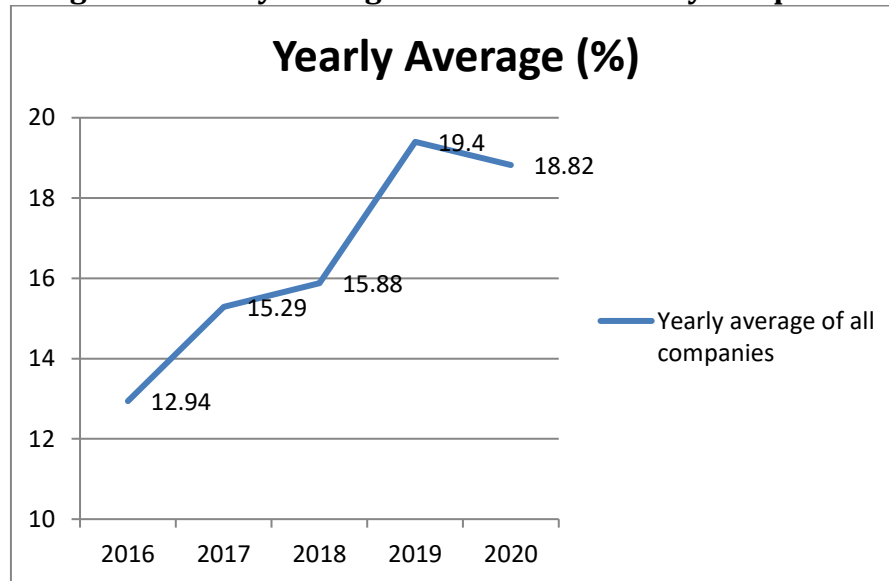
Table-7 and figure-3 represent the number of sentences disclosed by the companies. The table separately fractions the both industries and shows their separate latitude. Here again the cement industry is one step ahead of the tannery industry in the case of disclosing climate related issues in sentences. The least number of sentences that mean 0 to 5 sentences was published by one tannery industry and one cement industry

**Table 8: Company wise average yearly disclosure trends**

Company Name	Year					Year wise average
	2020	2019	2018	2017	2016	
Cement Industry:						
MNC						
Lafarge Surma Cement Limited	47.04%	47.04%	29.4%	35.28%	41.16%	37.58%
Heidelberg Cement Bangladesh Limited	52.92%	52.92%	52.92%	41.16%	29.4%	45%
Sub average	49.98%	49.98%	41.16%	38.22%	35.28%	
Local						
MI Cement Factory Limited	23.52%	23.52%	17.64%	17.64%	17.64%	20%
Confidence Cement Limited	0%	0%	0%	0%	0%	0%
Premier Cement Mills Limited	47.04%	52.92%	47.04%	47.04%	29.4%	44.69%
Meghna Cement Mills Limited	0%	0%	0%	0%	0%	0%
Sub average	17.64%	19.11%	16.17%	16.17%	11.76%	
Yearly Average (cement industry)	28.42%	29.40%	24.50%	23.52%	19.60%	
Tannery Industry						
MNC						
Bata Shoe Company Bangladesh Limited	5.88%	5.88%	5.88%	5.88%	5.88%	5.88%

Sub average	5.88%	5.88%	5.88%	5.88%	5.88%	
Local						
Apex Tannery Limited	11.76%	11.76%	5.88%	5.88%	5.88%	8.23%
Apex Footwear Limited	0%	0%	0%	0%	0%	0%
Legacy Footwear Limited	0%	0%	0%	0%	0%	0%
Sub average	3.92%	3.92%	1.96%	1.96%	1.96%	
Yearly Average (tannery industry)	4.41%	4.41%	2.94%	2.94%	2.94%	
Average	18.82%	19.40%	15.88%	15.29%	12.94%	

**Figure 4: Yearly average disclosure trends by companies**



This figure-6 is a graphical reorientation of how companies are disclosing climate disclosure issues in their annual reports every year. This figure takes into account all of the companies all together and shows their upward or downward trends every year. Here we can see that the year 2016 kicks in with 12.94% of disclosure then the next year (2017) it shows a further upward trend at 15.29% of disclosure of issues. The following year (2018) corresponds to a slight increase with 15.88% of disclosure. Then again, the next two years (2019, 2020) exhibits 19.4%% and a slight dearth of 18.82% disclosures of issues.

### Findings

This article finds out that cement industry expresses more climate disclosures than tannery industry, as in 67% of sample cement companies and 50% of sample Tannery Company discloses at least one climate related issue. More importantly disclosure regarding health and safety plan and the information is available in publicly published documents, mention of environment in reference to chairman's statement/CEO/Directors report in the annual report, Compliance with GRI, GHG protocol and other standards of reporting benchmark, these three issues were most frequently reported by the companies. Issues such as "Policy regarding renewable energy and alternative sources of energy, Mention of Paris agreement and Kyoto protocol" was not disclosed by any of the sample companies. In total these are 5 issues. Surprisingly volume of climate disclosure by companies shows an upward increase every year. 100% MNC's consisting of the sample cement companies discloses climate related issue, local 50% of the sample companies disclose climate related issues. Similarly, 100% of the MNC's

consisting of sample tannery companies discloses climate related issues, whereas only 33.33% of the local companies have disclosures.

### Recommendations

The authors recommend that the ministry of environment should have more stiff rules regarding environmental clearance. When a company gets environmental clearance, they should be kept under supervision if they are following the rules and regulations constantly.

It is vital that green belt for red zone industries should be mandated or instead of that the government can introduce carbon tax for the biggest carbon emitters. The government should encourage companies to publish climate related disclosures and include climate disclosures in the scope of their work by engaging the financial accounting and the audit community.

### Conclusion

Undoubtedly, the global climate is changing on a large scale. The climate is already 1°C warmer compared to 1990. Global warming has an insurmountable impact on human life, the environment, and the economy. Because the natural environment is being harmed by human intervention and pollution, the global climate will suffer. The same goes for countries like Bangladesh. Kamal's (2013) outlook is that Bangladesh may acknowledge the fact that its greenhouse gas emissions may be low as compared to those of industrially developed countries. Despite that, local companies appear to take measures to reduce the impact of natural disasters. However, the measures and disclosures are not enough to raise public awareness; they are still below the bar. Global warming is an issue in need of a dire global response. It will be difficult for many eco systems to adapt to the rapid changes in climate, as they have adverse impacts on human health, eco systems, biodiversity, and so on. Because weather patterns are changing, greenhouse gases are rising, and biodiversity is deteriorating, society expects businesses to take immediate action to protect the planet. It is a call for industries to step forward and play a more responsible role. Otherwise, in the near future, it will be too late to take any action. This article found somewhat alarming situations, with both industries fabricating environmental disclosures in the name of good image. Even though the cement industry is in far better condition than the tannery industry, there is still room for improvement. In the case of the tannery industry, data on the environment and climate were discovered on rare occasions. It is a matter of concern as the industry is at the top of the red zone industry list. Multinational corporations are doing far better than the local companies in this scenario. So, the government should encourage the local companies to take more initiative in this regard.

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