

Extent of Corporate Sustainability Disclosure in India: A Study with reference to the Environmental Aspect of GRI Standards

Rupam Majumder¹, Dr. Ahmed Hussain²,
¹ Research Scholar, ² Assistant Professor,

Department of Commerce, Raiganj University, West Bengal, India

Abstract

The study aims to examine and analyse the present corporate sustainability reporting practices of corporate India based on GRI standards 2016. Our study is confined to the reporting of Environmental Aspect as prescribed in the latest GRI Standard. For the purpose of the study, we thoroughly examined the sustainability reports of 37 Indian companies during 2016-17 to 2019-2020. The selection of the sample companies was based on their Core & Comprehensive Status; as outlined in the GRI comprehensive table. Using an unweighted disclosure checklist comprised of 32 environmental aspect parameters, our study assesses the compliance level of corporate sustainability reporting of environmental aspect as guided by GRI standards. The result shows that the minimum disclosure is of 18.18% which is extremely low level of disclosure while the maximum score is 100% indicating full compliance of GRI standard. The average disclosure score (72.46%) indicates a moderately satisfactory level of disclosure in Indian context. The study shows a wide variation in environmental aspect disclosure which is evident from the range of 81.82% and standard deviation of 23.47%. Based on these research findings, it can be inferred that there still exists considerable scope for improvement in reporting the environmental aspects by companies in India.

Keywords: GRI Standards, Corporate Sustainability Reports, Annual Reports, Environmental Aspects, India.

Date of Submission: 02-04-2024

Date of acceptance: 12-04-2024

I. Introduction

Environmental sustainability is the responsibility to conserve natural resources and protect global ecosystems to support health and wellbeing, now and in the future. Because so many decisions that impact the environment are not felt immediately, a key element of environmental sustainability is its forward-looking nature. In fact, the U.S. Environmental Protection Agency defines it as “meeting today’s needs without compromising the ability of future generations to meet their needs.” In “The Concept of Environmental Sustainability,” Robert Goodland substantiates a history documenting this need, presenting proponents ranging from Mill and Malthus to Meadows and Brundtland et al., and puts forth a definition of “environmental sustainability as the maintenance of natural capital” and as a concept apart from, but connected to, both social sustainability and economic sustainability.

Environmental regulations come from organizations like the United States Environmental Protection Agency (EPA). The EPA has congressional authority to write rules that lead to the implementation of laws.

According to the EPA, these regulations are mandatory and can apply to:

- Businesses
- Individuals
- Non profit institutions
- State or local governments

These regulations create accountability, but they need to be both strict and strictly enforced, Weinstein said, if they are to succeed in creating environmental sustainability. The challenge is, he said, that the EPA is backlogged, and our current public infrastructures are failing to create accountability. It may feel frustrating, but there are ways everyone can begin to make a difference. The UN offers **17 goals** for sustainable development that act as the path to achieving a more sustainable future. These goals address global challenges like:

- **Clean water and sanitation:** Such as learning to avoid wasting water
- **Climate action:** Acting now to stop global warming
- **Life below water:** Avoiding the use of plastic bags to keep the oceans clean
- **Life on land:** Planting trees to help protect the environment

- **Responsible consumption and production:** Recycling items such as paper, plastic, glass and aluminium

- **Sustainable cities and communities:** Biking, walking or using public transportation

Three key strategies for advancing the environmental aspect of sustainable development are as follows:

1. Renewable Energy Technologies: A key component in achieving sustainable development is to harness renewable energy sources, which are replenishable and don't deplete. This involves converting natural phenomena into useful forms of energy, such as solar energy from sunlight and wind, heat from the sun, falling water, and plant growth. Over the past few decades, solar energy technology has advanced significantly, particularly in photovoltaic. However, there are challenges, such as high setup and maintenance costs and limited accessibility that need to be addressed through ongoing research and development. The focus is on improving collection and conversion efficiencies, reducing setup costs, and optimizing conditions for wider use.

2. Energy Efficiency and Conservation: Another important aspect of sustainable development is to improve energy efficiency and conserve resources. This involves improving the efficiency of renewable energy, implementing appropriate pricing policies, and managing resource loads. Conservation measures should be adopted at every stage, from energy production to consumer use. Despite efforts by nations and international organizations, many countries have not yet embraced conservation practices due to technical, financial, managerial, and policy barriers.

3. SDG Implementation: Jeffrey D. Sachs and colleagues presented six transformational strategies for achieving the United Nations' Sustainable Development Goals (SDGs) in 2019. These transformations, including energy decarbonisation and sustainable industry, sustainable food, land, water, and oceans, and sustainable cities and communities, are viewed as the building blocks for SDG achievement. They require long-term, structural changes in all aspects of society, from resource usage to technology to social relationships. These transformations have time-bound targets, such as net-zero carbon emissions by mid-century, and require regular monitoring and evaluation to ensure progress and make adjustments as needed. (Sachs et al. 2019).

Since the 1970s, the concept of sustainability has evolved to encompass the well-being of humanity on Earth; leading to the most frequently cited definitions of sustainability and sustainable development. The United Nations World Commission on Environment and Development defines sustainable development as "development that fulfils the needs of the present without jeopardizing the ability of future generations to fulfil their own." This definition encompasses three interconnected objectives: environmental, economic, and social aspects. Since 1987, there has been a noticeable surge in the incorporation of sustainable development principles across various fields. Researchers from diverse backgrounds have contributed empirical research to gain deeper insights into areas relating to social and environmental aspect of sustainability. In this context, an attempt has been made to study sustainability disclosure with regard to environmental aspect by Indian corporate.

II. Review of Literature

Over the past decade, a substantial body of research focusing on sustainability reporting with reference to the Global Reporting Initiative (GRI) has emerged in various foreign countries. These studies have explored diverse facets of sustainability reporting from a multitude of angles:

Several studies conducted abroad have delved into the extent of sustainability disclosure across all GRI indicators, encompassing economic, environmental, and social dimensions (e.g., Ho and Taylor, 2007; Staksson and Steimle, 2009; Cardoso et al., 2014; Stoma et al., 2017; Orazalin and Mahmood, 2019; Waiznaik and Pactwa, 2019; Putri et al., 2020).

Certain researchers have concentrated on just two indicators, namely social and environmental (e.g., Setyorini and Ishak, 2012).

Some authors have narrowed their focus exclusively to environmental indicators (e.g., Tanimoto and Suzuki, 2005).

While many of these studies have been reviewed in the context of the present research, the following studies are examined separately in this section, as they have been deemed especially pertinent and valuable for our study.

i) Tanimoto & Suzuki (2005)

Tanimoto and Suzuki conducted a study to analyze the association between GRI guidelines and environmentally relevant businesses in Japan. They used secondary data from the GRI database for the year 2002 and employed a maximum-likelihood probit estimation model, Chi-square tests, and descriptive statistics. Their findings indicated that factors such as company size, environmental relevance, foreign ownership, and overseas sales influenced adherence to GRI guidelines.

ii) Melin & Webrell (2009)

Melin and Webrell conducted an empirical investigation on how companies disclose their environmental performance in alignment with GRI guidelines during time period 2005 to 2007. The researchers used secondary data from annual reports and interviews to assess environmental performance and employed stakeholder theory and legitimacy theory to analyze the relationship between environmental factors and reporting practices. Their analysis revealed that companies have the freedom to choose how they report and what information to include, making it challenging to compare environmental reporting practices.

iii) Junior et al. (2014)

Junior et al. conducted a study on 149 industrial companies with CIESP (Centre of Industries in Sao Paulo) to examine the implementation of environmental indicators on sustainability reporting. They used a non-probability sampling method and a survey-based research approach to analyze nine aspects of environmental indicators proposed by GRI. Their aim was to gauge the extent of implementation for each aspect, utilizing a scale that ranged from 1 to 7, where 1 signified "not at all," and 7 indicated "to a great extent," complete with descriptive anchors at the extremes. To ensure the reliability of their data collection instrument, Cronbach's Alpha was calculated for the collection of variables. The study found that companies focused on aspects directly related to their operations, which had immediate impacts on costs and competitiveness.

iv) Cardoso et al. (2014)

Cardoso et al. conducted an empirical investigation on the disclosure practices of Brazilian companies through the lens of sustainability, using a disclosure index and GRI indicators. In order to analyze they took 33 companies from various sectors during the year 2009-2010 using content analysis. The study found that high levels of disclosure were linked to addressing environmental issues and improving quality of life, with environmental and social indicators being important. Companies showed limited discussion on workplace safety and health measures, but emphasized employee training and development with comprehensive discussions beyond hours spent.

v) Engvall&Pettersson (2016)

Engvall and Pettersson conducted a study on sustainability reporting in the European oil and gas industry, analyzing 20 companies from 2012 to 2014. They considered the level of compliance as the dependent variable while the 34 items within the environmental category served as independent variables. Content analysis, along with a deductive approach using a coding scheme, was employed in their research. This coding scheme assigned a score of (1) for fully complied indicators, (0.5) for partial compliance, and (0) for the absence of environmental information. The level of compliance with GRI guidelines ranged from 12% to 88%, while the lowest level of compliance at 12%. 17 out of 20 companies at least 50% compliance for one or more years. The study noted that the increase in the disclosure of environmental information within the oil and gas industry was mainly driven by stakeholder expectations

vi) Orazalin and Mahmood (2019)

Orazalin and Mahmood conducted a study on sustainability performance disclosures in Kazakhstani companies listed on the stock exchange from 2013-2015. The study examined economic, environmental, and social performance indicators following GRI guidelines in 146 firms in the energy, manufacturing, and service sectors. Data was gathered from CSR reports and annual reports to evaluate sustainability performance and construct sub-index scores. The study found that energy companies had the highest disclosure rate while service companies had the lowest Overall, sustainability reporting practices in Kazakhstan are still in the early stages of development.

vii) Woźniak and Pactwa (2019)

Woźniak and Pactwa conducted a study on three companies in Poland to assess their compliance with disclosure practices and the impact of socio-economic activities. They collected non-financial data from integrated reports using a checklist of 43 information items related to environmental and social aspects. The study found that Heidelberg had the highest number of indicators for both social and environmental aspects, followed by Cemex and Lafarge. The companies also introduced their own indicators aligned with their specific business activities to showcase their achievements in disclosing non-financial data. It's important to note that the study did not involve external stakeholders in its analysis.

viii) Putri et al. (2020)

Putri et al. examined sustainability reports of 28 Indonesian companies to identify key indicators in different industries. K-means clustering analysis and ANOVA were used to analyze the data and allocate objects into clusters based on differences in indicators for the year 2016-2017. The study found variations in the quality of

disclosure for GRI G4 indicators across industries, with the financial industry focusing on economic aspects and other industries emphasizing environmental indicators.

In the Indian context, there have been a limited number of studies focused on sustainability disclosure within corporate sustainability reports

i) Kaur & Das (2015)

Kaur and Das conducted a study comparing sustainability reporting in mining companies, analyzing data from 53 private and 47 public companies over a 5-year period from 2007 to 2012. In order to analyse the data content analysis and independent t-tests, utilizing a checklist of 84 information items covering economic, environmental, and social aspects were used. The study found that public mining companies had higher sustainability disclosure scores compared to private companies, although the volume of disclosure was mostly partial. Only 23 public mining companies provided information on non-financial aspects. The study revealed a significant difference in disclosure practices between public and private sector mining companies, with public sector companies having higher mean scores.

ii) Dutta et al. (2011)

Dutta et al. examined the applicability of the concept of Triple Bottom Line Reporting (TBLR) in line with the Global Reporting Initiative (GRI) Guidelines, They attempted to examine the extent of Corporate Social Responsibility (CSR) disclosure by Indian companies under GRI, to examine the present status of sustainability-based reporting as per Karmayog, and to make a comparative study of GRI-based companies under Karmayog CSR activities. The study considers three parameters: people, environment, and profit. The sample consists of 19 Indian companies selected following random sampling method. Content analysis was used to measure the disclosure level. The findings revealed that the extent of CSR disclosure by Indian companies under GRI is moderate. The present status of sustainability-based reporting as per Karmayog is low. There is a significant difference in the CSR disclosure practices of GRI-based companies under Karmayog.

Objectives of the Study

The objective of the research is to empirically measure and analyze the extent of Corporate Sustainability Reporting in India based on GRI Standards on environmental aspect.

III. Research Methodology

In order to examine the environmental aspect of disclosure based on GRI Standards, the present study has used sustainability reports of 37 sample companies for the years 2016-2017 to 2019-2020. The sample consists of all companies available on GRI database having status of 'Core' and 'Comprehensive' In the next step, an environmental aspect of disclosure checklist comprised of 32 information items was prepared based on GRI Content Index. Dichotomous scoring approach was used to measure the extent of disclosure.

1. Empirical results relating to the Extent of Environmental Disclosure

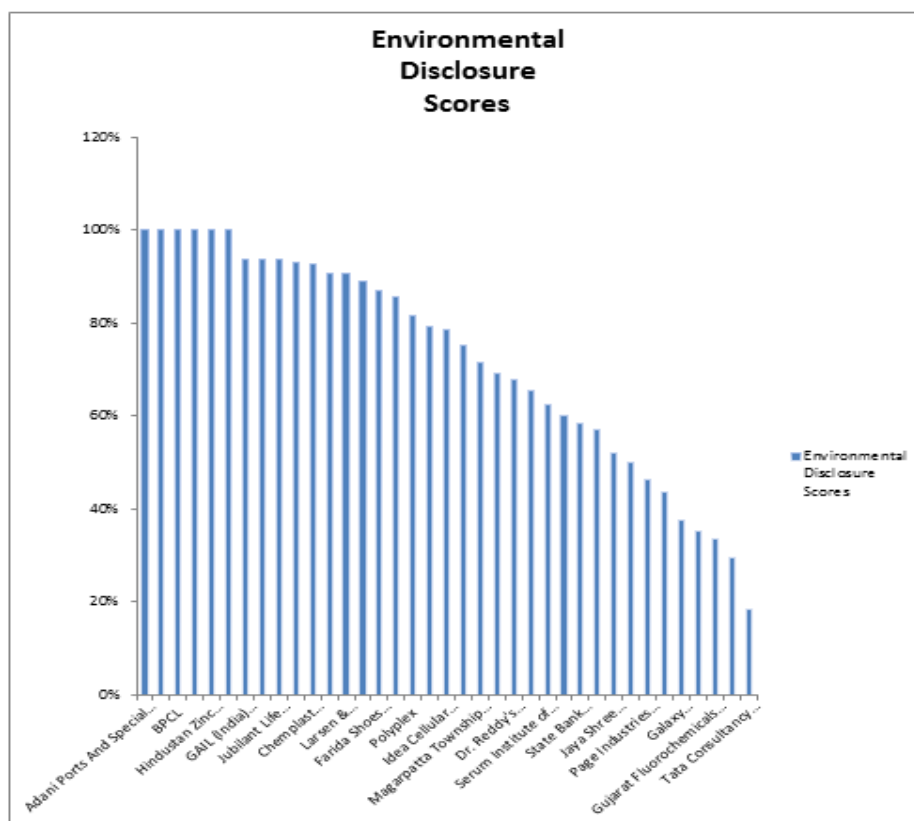
Environmental GRI disclosure score of 37 sample companies is reported in the Table 1 and presented in Chart 1.

Table 1
Environmental Disclosure Score of Sample Companies (in Descending Order)

Sl. No	Name of the Companies	Company Codes	Environmental Disclosure Scores
1	Adani Ports And Special Economic Zone Ltd.	C 2	100%
2	Axis Bank	C 5	100%
3	BPCL	C 7	100%
4	Havells	C 15	100%
5	Hindustan Zinc Limited	C 17	100%
6	Yes Bank	C 34	100%
7	GAIL (India) Limited	C 11	94%
8	Indian Oil	C 19	94%
9	Jubilant Life Sciences Ltd	C 21	94%
10	Mumbai International Airport	C 37	93%
11	ChemplastSanmar Limited	C 8	93%

12	ACC Limited	C 1	91%
13	Larsen & Toubro	C 24	91%
14	Shree Cement Limited	C 31	89%
15	Farida Shoes Private Limited	C 10	87%
16	Mindtree	C 26	86%
17	Polyplex	C 29	81%
18	Adani Power	C 3	79%
19	Idea Cellular Ltd	C 18	79%
20	Mahindra & Mahindra Limited	C 25	75%
21	Magarpatta Township Development & Construction Company Limited	C 36	71%
22	NALCO	C 27	69%
23	Dr. Reddy's Laboratory	C 9	68%
24	Hindustan Construction Company Limited	C 16	65%
25	Serum Institute of India Pvt. Ltd.	C 30	63%
26	Gloster Limited	C 13	60%
27	State Bank of India	C 32	58%
28	Kirloskar Oil Engines	C 22	57%
29	Jaya Shree Textiles	C 20	52%
30	Ambuja Cements	C 4	50%
31	Page Industries Limited	C 28	46%
32	Hetero Group of Companies	C 35	43%
33	Galaxy Surfactants Ltd.	C 12	38%
34	L&T Financial Services	C 23	35%
35	Gujarat Fluoro chemicals Limited	C 14	33%
36	Birla Cellulose	C 6	29%
37	Tata Consultancy Services (TCS)	C 33	18%

Source: Computed from information reported



2. Analysis of the Extent relating to the Disclosure score in Environmental Category of Information
With a view to making analysis, the overall GRI Standards disclosure scores have been classified into different groups. Such classification has been presented in Table 2

Table 2
Frequency Distribution of Environmental GRI Standards Disclosure Score

Disclosure Scores	Sample Companies		Cumulative Sample Companies			
	Number	%	More than Type		Less than Type	
			Number	%	Number	%
Col. (1)	Col. (2)	Col. (3)	Col. (4)	Col.(5)	Col.(6)	Col.(7)
Above 90%	13	35%	13	35%	24	65%
80% - 90%	4	11%	17	46%	20	54%
70% - 80%	4	11%	21	57%	16	43%
60% - 70%	4	11%	25	68%	12	32%
50% - 60%	4	11%	29	78%	8	22%
40% - 50%	3	8%	32	86%	5	14%
30%-40%	3	8%	35	95%	2	5%
20% - 30%	1	3%	36	97%	1	3%
10% - 20%	1	3%	37	100%	0	0%
	37	100%				

Source: Computed from Total Environmental Disclosure Score Presented in Table 1

The information presented in Table 2 reveals the following:

- The maximum number of companies (13) representing 35% of sample companies have extent of environment disclosure above 90%.

- ii) 57% companies have disclosed more than 70% GRI standards information.
- iii) Only one company has disclosed below 20%.

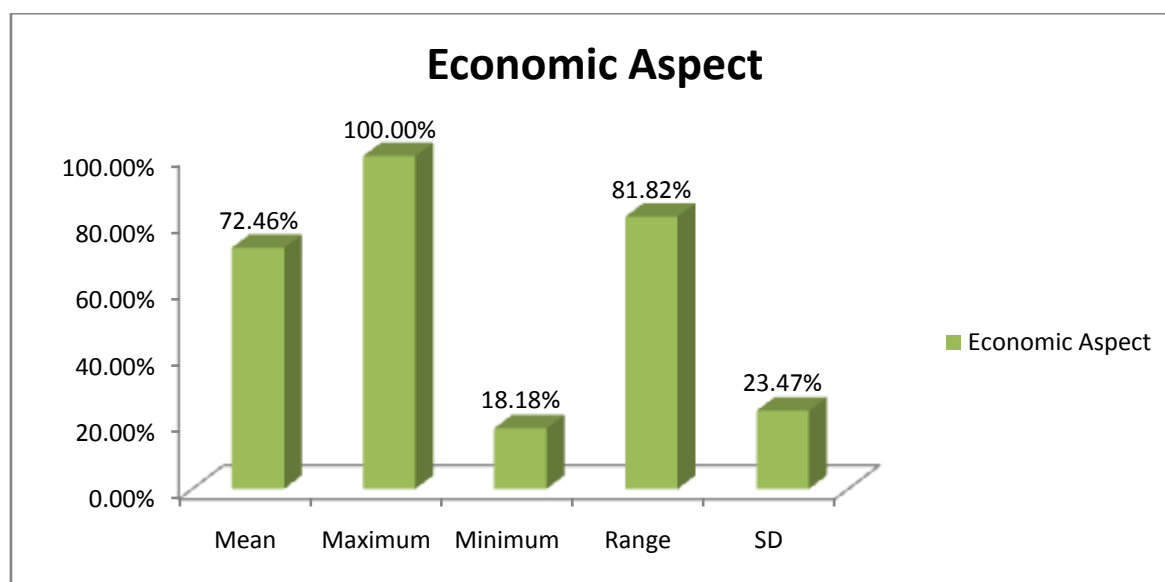
3. Analyses of the Extent of Disclosure in Environmental Category of GRI Standards Information

For making further analysis, some descriptive statistics have been calculated using the overall GRI Environmental Standards disclosure scores which are presented in Chart 2 and Table 3

Table 3
Table showing descriptive statistics of Environmental Information

Information	Environmental Aspect
Disclosure Items	32
Sample Size	37
Mean	72.46%
Maximum	100.00%
Minimum	18.18%
Range	81.82%
SD	23.47%

Source: Computed from information reported



From the information presented in Table 3, we have the following important observations in respect of overall environmental disclosure reporting by our sample companies

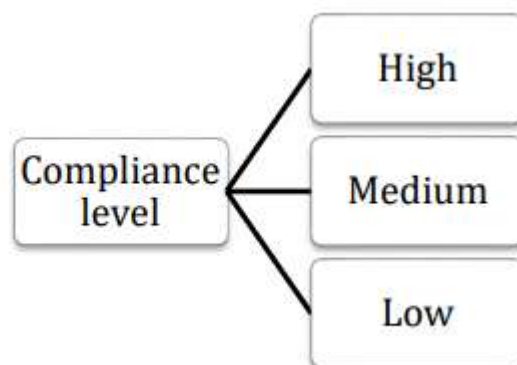
- (i) Extent of GRI standards disclosures varies from 18.18% to 100.00% yielding a range of 81.82%.
- (ii) Mean Disclosure of 72.46 per cent indicates that average level of GRI standards environmental information disclosure is moderate.
- (iii) Minimum disclosure of 18.18 per cent is very low.
- (iv) Maximum disclosure 100 is per cent. 13 out of 37 sample companies representing 35% have disclosed all information relating to environmental aspect.
- (v) A wide variation is observed in the extent of environmental disclosure which is evident from range of 81.82% and standard deviation of 23.47%.

4. Level of Compliance

As per Hewaidy and Al Mutawaa (2010), compliance levels are categorized into four distinct tiers. A disclosure level of 80 percent or more is classified as a high level of compliance. The intermediate range falls between 60 and 79 percent, while compliance within the range of 40 to 59 percent is considered low. Any figure below 40 percent signifies a substantial disparity between the prescribed disclosure requirements and the IFRS standards. We have used this compliance level to examine the disclosure level in our sample companies.

However, this study has opted for a three-tier compliance classification, as illustrated in the subsequent figure, due to the absence of items falling below the 40 percent threshold.

The Compliance level is shown in the following figure.



Source: Hewaidy and Mutawaa

Based on the previous studies, the researchers divide the compliance level into three levels as discussed above during the period 2019-2020:

Table No 4
Table showing the compliance level

Sl. No	Level of Compliance	Disclosure Category	Number of Sample Companies
A	High Level of Compliance	Above 80%	17
B	Medium Level of Compliance	Between 61% and 80%	9
C	Low Level of Compliance	Below 60%	11
Total Number of Companies			37

Table No 5
Table showing the disclosure category of sample companies based on environmental aspect of GRI Standards

Sl. No	Name of the Companies	Company Codes	Environmental Disclosure Scores	Disclosure Category
1	Adani Ports And Special Economic Zone Ltd.	C 2	100%	High
2	Axis Bank	C 5	100%	High
3	BPCL	C 7	100%	High
4	Havells	C 15	100%	High
5	Hindustan Zinc Limited	C 17	100%	High
6	Yes Bank	C 34	100%	High
7	GAIL (India) Limited	C 11	94%	High
8	Indian Oil	C 19	94%	High
9	Jubilant Life Sciences Ltd	C 21	94%	High
10	Mumbai International Airport	C 37	93%	High
11	ChemplastSanmar Limited	C 8	93%	High
12	ACC Limited	C 1	91%	High
13	Larsen & Toubro	C 24	91%	High
14	Shree Cement Limited	C 31	89%	High
15	Farida Shoes Private Limited	C 10	87%	High
16	Mindtree	C 26	86%	High
17	Polyplex	C 29	81%	High

18	Adani Power	C 3	79%	Medium
19	Idea Cellular Ltd	C 18	79%	Medium
20	Mahindra & Mahindra Limited	C 25	75%	Medium
21	Magarpatta Township Development & Construction Company Limited	C 36	71%	Medium
22	NALCO	C 27	69%	Medium
23	Dr. Reddy's Laboratory	C 9	68%	Medium
24	Hindustan Construction Company Limited	C 16	65%	Medium
25	Serum Institute of India Pvt. Ltd.	C 30	63%	Medium
26	Gloster Limited	C 13	60%	Medium
27	State Bank of India	C 32	58%	Low
28	Kirloskar Oil Engines	C 22	57%	Low
29	Jaya Shree Textiles	C 20	52%	Low
30	Ambuja Cements	C 4	50%	Low
31	Page Industries Limited	C 28	46%	Low
32	Hetero Group of Companies	C 35	43%	Low
33	Galaxy Surfactants Ltd.	C 12	38%	Low
34	L&T Financial Services	C 23	35%	Low
35	Gujarat Fluoro chemicals Limited	C 14	33%	Low
36	Birla Cellulose	C 6	29%	Low
37	Tata Consultancy Services (TCS)	C 33	18%	Low

Source: Computed from examination of Sustainability Reports

From the above table we found that 17 out of 37 sample companies representing 46% have high level of compliance followed by 30% (11 out of 37 sample companies) have low level of compliance and 9 companies comprising 24% have moderate level of compliance.

Table No 6
Table showing applicability and non-applicability of GRI standards/sub-standards

Name of the Company	Company Code	Environmental Aspect		
		No. of Standards/sub-standards applicable	No. of Standards/sub-standards not applicable	Total Environmental Aspect
ACC Limited	C 1	32	0	32
Adani Ports And Special Economic Zone Ltd.	C 2	25	7	32
Adani Power	C 3	29	3	32
Ambuja Cements	C 4	32	0	32
Axis Bank	C 5	10	22	32
Birla Cellulose	C 6	17	15	32
BPCL	C 7	26	6	32
ChemplastSanmar Limited	C 8	27	5	32
Dr. Reddy's Laboratory	C 9	28	4	32
Farida Shoes Private Limited	C 10	23	9	32
GAIL (India) Limited	C 11	32	0	32
Galaxy Surfactants Ltd.	C 12	24	8	32
Gloster Limited	C 13	25	7	32

Gujarat Fluorochemicals Limited	C 14	15	17	32
Havells	C 15	28	4	32
Hindustan Construction Company Limited	C 16	26	6	32
Hindustan Zinc Limited	C 17	32	0	32
Idea Cellular Ltd	C 18	14	18	32
Indian Oil	C 19	32	0	32
Jaya Shree Textiles	C 20	25	7	32
Jubilant Life Sciences Ltd	C 21	32	0	32
Kirloskar Oil Engines	C 22	28	4	32
L&T Financial Services	C 23	17	15	32
Larsen & Toubro	C 24	32	0	32
Mahindra & Mahindra Limited	C 25	20	12	32
Mindtree	C 26	21	11	32

Level of Compliance	Number of information items	Frequency	Percentage
Yes (Reported)	32	653	55.15%
No (Not reported)	32	265	22.38%
Not Applicable	32	266	22.47%
Total	32	481	100.00%

NALCO	C 27	29	3	32
Page Industries Limited	C 28	26	6	32
Polyplex	C 29	27	5	32
Serum Institute of India Pvt. Ltd.	C 30	32	0	32
Shree Cement Limited	C 31	27	5	32
State Bank of India	C 32	12	20	32
Tata Consultancy Services (TCS)	C 33	22	10	32
Yes Bank	C 34	12	20	32
Hetero Group Of Companies	C 35	23	9	32
Magarpatta Township Development & Construction Company Limited	C 36	28	4	32
Mumbai International Airport	C 37	28	4	32

Source: Computed from examination of Sustainability Reports

Table No 7
Table showing the Level of compliance of sample companies

Source: Computed from examination of Sustainability Reports

From the above table we found that 55.15% of environmental aspect has been disclosed by 37 sample companies during the period 2019-2020 followed by 22.38% has not disclosed the environmental related information and 22.47% of environmental aspect information are not applicable to our sample companies.

5. Test of Hypothesis

To study the industry wise sustainability disclosure practices of Indian companies; the companies reporting in line with GRI Standards for the year 2019-2020 were grouped into specific industry. Percentage mean scores were obtained to study industry wise sustainability disclosure practices. This has been shown in Table No: 8 below:

Table No 8
Table showing the calculation of Percentage mean scores based on environmental disclosure scores

Sl. No	Company Name	Sector	Industry Group	Percentage Scores	Percentage Mean Score
1	Mumbai International Airport	Air Line service	Service	0.93	0.67
2	Mindtree	Consumer Service		0.86	
3	Hindustan Construction Company Limited	Construction of dams, tunnels etc		0.65	
4	Magarpatta Township Development & Construction Company Limited	Real estate and construction services		0.71	
5	Dr. Reddy's Laboratory	Healthcare Products		0.68	
6	Tata Consultancy Services (TCS)	IT services, consulting, and business solutions		0.18	
7	BPCL	Oil & Gas Company	REFINERIES	1	0.86
8	GAIL (India) Limited	OIL DRILLING AND EXPLORATION		0.94	
9	Indian Oil	Oil & Gas Company		0.94	
10	Kirloskar Oil Engines	Oil & Gas Company		0.57	
11	NALCO	Mining	Energy Utilities	0.69	0.83
12	Adani Power	Thermal Power		0.79	
13	Hindustan Zinc Limited	Mining		1	
14	Yes Bank	Banking	Finance	1	0.74
15	Axis Bank	Banking		1	
16	Mahindra & Mahindra Limited	FINANCE - LEASING & HIRE PURCHASE		0.75	
17	State Bank of India	Banking		0.58	
18	L&T Financial Services	FINANCE - LEASING & HIRE PURCHASE		0.35	
19	Havells	Equipment	Manufacturing	1	0.66
20	Shree Cement Limited	CEMENT - MAJOR		0.89	
21	ChemplastSanmar Limited	Chemicals		0.93	
22	ACC Limited	CEMENT - MAJOR		0.91	
23	Farida Shoes Private Limited	Leather Products		0.87	
24	Polyplex	Metals		0.81	
25	Serum Institute of India Pvt. Ltd.	Health products and Pharmaceuticals		0.63	
26	Gloster Limited	Textiles and Apparel		0.6	
27	Idea Cellular Ltd	Equipment		0.79	
28	Ambuja Cements	CEMENT - MAJOR		0.5	
29	Gujarat Fluorochemicals Limited	Chemicals		0.33	
30	Jaya Shree Textiles	Textiles		0.52	
31	Hetero Group Of Companies	Health products and Pharmaceuticals		0.43	
32	Page Industries Limited	Apparel		0.46	

33	Galaxy Surfactants Ltd.	Chemicals		0.38	
34	Birla Cellulose	Textiles and Apparel		0.29	
35	Jubilant Life Sciences Ltd	Construction of dams, tunnels etc		0.94	
36	Larsen & Toubro	Construction and engineering	Others	0.91	0.96
37	Adani Ports And Special Economic Zone Ltd.	Infrastructure		1	

Source: Computed from examination of Sustainability Reports

With reference to the objectives of the study and to know whether the disclosure practices of selected Indian companies among industries differ significantly from each other or not; the following hypothesis has been framed,

H₀: There is no significant difference in the disclosure scores of the industries.

H₁: There is a significant difference in the disclosure scores of the industries.

Table No 9
Table showing ANOVA from SPSS
ANOVA

PERCENTAGESCORES

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.297	5	.059	1.044	.410
Within Groups	1.762	31	.057		
Total	2.058	36			

We computed one-way ANOVA comparing the mean disclosure of the industry groups. The above table gives the result of the analysis of the hypothesis It shows that there is no statistically significant difference in the mean disclosure score of the industries, $F(5, 31) = 1.044, p > .05$. Therefore, the null hypothesis cannot be rejected. This result implies that Indian companies do not give much consideration to their industries characteristics while disclosing information in their sustainability reports in regard to environmental aspect.

IV. Conclusion

The study shows the evidences of low to high level of environmental disclosure by sample firms. The findings show that the minimum disclosure is of 18.18% which is extremely low level of disclosure while the maximum score is 100% indicating full compliance of GRI standard. The average disclosure score (72.46%) indicates a moderately satisfactory level of disclosure in Indian context. The study found a wide variation in environmental aspect disclosure among the companies. Analyses of the extent of environmental disclosure namely on an average 77% sample companies have not been reported on biodiversity (GRI 304), 51% sample companies have not been reported on effluents & wastes (GRI 306), 49% on water and effluents (GRI 303), 47% have not been reported on supplier environmental assessment (GRI 308) and 41% have not reported on environmental compliance (GRI 307). Moreover, wide variations have been observed in the extent of overall environmental disclosure. The result suggests that there is scope for improvement in environmental reporting by companies in India. Test of hypothesis confirms that there is no significant difference in the disclosure scores of the industry groups. The policy makers should bring the provisions to encourage the Indian companies for reporting the environmental aspects in line with GRI Standards so that stakeholders can take prudent environmental decision based on the satisfactory level of information.

References

- [1]. G. H. Brundtland, World commission on environment and development, OurCommon Future, Oxford University Press, UK (1987).
- [2]. M. Redclift, Sustainable development and global environmental change: Implications of a changing agenda, Global Environmental Change, 2, 32 (1992).
- [3]. A. G. Chofreh, F. A. Goni, A. M. Shaharoun, S. Ismail, and J. J. Klemeš, J. Clean. Prod. 71, 139 (2014)
- [4]. G. Chofreh, F. A. Goni, A. M. Shaharoun, S. Ismail, and J. J. Klemeš, J. Clean. Prod. 71, 139 (2014)
- [5]. Cardoso et al., (2014). Practices of Economic and Environmental Disclosure in Major Brazilian Companies, Rev. Adm. UFSM, Santa Maria, v. 9, numero 1, Pp. 156-173, JAN. - MAR. 2016. DOI: 10.5902/19834659 9778
- [6]. Dutta, S. (2011). Triple Bottom Line Reporting: an innovative accounting initiative. International Journal on Business, Strategy and Management, vol.1, No.1, June, 2011, Pp-1-13
- [7]. G. H. Brundtland, World commission on environment and development, OurCommon Future, Oxford University Press, UK (1987).
- [8]. Ho, L., & Taylor, M. (2007). An Empirical Analysis of Triple Bottom Line reporting and its determinants: Evidence from the United States and Japan. Journal of International Financial Management and Accounting, 2007, pp-125-149.
- [9]. Kaur, D., & Das, N. (2015). Sustainability Reporting Practices in Indian Mining Companies, thesis ISM Dhanbad, India. Vol. 10(2), 641-655 (2015). <http://dx.doi.org/10.12944/CWE.10.2.30>
- [10]. M. Redclift, Sustainable development and global environmental change: Implications of a changing agenda, Global Environmental Change, 2, 32 (1992)

- [11]. Orazalin, N., & Mahmood, M. (2019). Determinants of GRI-based sustainability reporting: evidence from an emerging economy. *Journal of Accounting in Emerging Economies* Vol 10 No. 1, 2020, Pp. 140-164, Emerald Publishing Limited, 2042- 1168, DOI 10.1108/JAEE-12-2018-0137.
- [12]. Putri, et al., (2020). Analyzing the quality disclosure of Global Reporting Initiative G4 sustainability report in Indonesian companies, *Problems and Perspectives in Management Journal*, 17(4), 453-468. LLC "CPC "Business Perspectives", Ukraine doi:10.21511/ppm.17(4).2019.37, ISSN:1727-051. [http://dx.doi.org/10.21511/ppm.17\(4\).2019.37](http://dx.doi.org/10.21511/ppm.17(4).2019.37)
- [13]. Setyorini, C., & Ishak, Z. (2012). Corporate Social and Environmental Disclosure: A Positive Accounting Theory View Point. *International Journal of Business and Social Science*, Vol. 3 No. 9; May 2012 Pp. 152 to 164
- [14]. Staksson, R., & Steimle, U. (2009). What does GRI -reporting tell us about corporate sustainability? *The TQM Journal*. Vol. 21 Issue: 2 Pp. 168-181, Emerald Group Publishing Limited, 1754- 2731. <https://doi.org/10.1108/17542730910938155>
- [15]. Tanimoto, K., & Suzuki, K. (2005). Corporate Social Responsibility in Japan: Analyzing the Participating Companies in Global Reporting Initiative
- [16]. Woźniak, J., & Pactwa, K. (2019). Analysis of the socio environmental policy of selected mining companies on the basis of non-financial reporting, – mineral resources management, 2019 Volume 35 Issue 1 Pages 177–194, DOI: 10.24425/gsm.2019.128206