

Impact of Environmental Accounting on the Financial Performance of Indian Companies in Oil and Gas Sector

T. N. Kavitha¹, Dr. M. Sulaipher²

¹ Assistant Professor, Asian School of Business, Trivandrum

² Associate Professor, NI University

Email ID – tn.kavitha@gmail.com

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Abstract

Recently, thanks to enhanced climate change as well as environmental degradation, environment protection has assumed the utmost concern at the international level. There's an expanding strain for the corporate enterprises to think about the environmental consequences of the online business operations of theirs. Being a result, accounting and disclosure of environmental matters have quickly been emerging as a crucial dimension of environment management. Environmental Accounting plays a tremendous role in offering the necessary information on the surroundings to totally different owners at all levels for different reasons. There's a climbing interest in India about topics like environmental growth, corporate social responsibility, and corporate ecological overall performance. They're an after effect of the worldwide calls regarding the accountability of companies of the path of a healthy environment. In this particular paper, an effort has been put forth finding out the level of environmental disclosures contained in the oil as well as gas companies. Good analysis has been carried out to learn whether an organization is sincere in environmental compliances or maybe it's simply statutorily needed disclosures. The result from 300 workers had been used for the goal of the analysis. Additionally, it indicates the scope of additional exploration in this specific place.

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1. INTRODUCTION

If the environment is affected, man's livelihood is impacted as well. If so, a rational being as man is constantly in deep thought of computation regarding how to make optimum use of his environmental assets to better the lives of his. This particular desire drives a male into different activities which include among others: production of services and goods, seeking enough accommodation, urban development, lightweight

water source as well as others. Nevertheless, the continuous environmental tasks to the earth have influenced on the ecosystem, therefore leading to environmental diminution, resource exhaustion, and environmental data misuse. This particular improvement comes all about the thought of environmental accounting that's, keeping the data of environmental tasks to be able to determine if the information generated has a major effect on the performances of oil companies carrying out these activities.

In the dynamic and fast-developing business environment, it's crucial that businesses must concentrate on the non-monetary indicators of theirs. The planet has usually been viewed as a public good for sale in nearly a limitless source and no cost for usage by all that wish it to make use of it. It from the first days of contemporary accounting methods economists have emphasized the limits of utilizing monetary transactions to calculate total economic exercise. With the environment challenges attaining worldwide prominence the idea that environment methods must be seen as capital is definitely gaining value. Thus is an asset to be thoroughly allocated among users. The planet provides both natural resources and non-utilitarian information. Though the natural environment has been mostly ignored in conventional accounts of the planet and economic procedures have been generally viewed as a totally free reservoir and a bottomless trash dump.

1.1 Environment Protection Acts and Regulations in India:

The National Council for Environmental Policy and Planning was set up in 1972 in the Department of Technology and Science to build a regulatory body to take care of the environment-related problems. This particular Council turned into a full-fledged Ministry of Forests as well as Environment (MoEF) in 1985. At existing, the MoEF is actually the apex administrative entire body of the nation for regulating as well as ensuring environmental protection and lays down the regulatory and legal framework for the same. The MoEF, as well as the pollution control boards ("CPCB", i.e. Central Pollution Control Board as well as "SPCBs", i.e. State Pollution Control Boards) in concert, create the administrative and regulatory center of the industry.

Ever since the 1970s, a selection of environmental legislations has been set in position. Several of the key legislations for environment protection are actually as follows:

- The National Green Tribunal Act, 2010
- The Air (Prevention and Control of Pollution) Act, 1981
- The Water (Prevention and Control of Pollution) Act, 1974
- The Environment Protection Act, 1986
- The Hazardous Waste Management Regulations, etc.

In addition, there are many other laws relating to environment, namely –

- The Wildlife Protection Act, 1972
- The Forest Conservation Act, 1980
- Public Liability Insurance Act, 1991
- The Biological Diversity Act, 2002
- Coastal Regulation Zone Notification

1.2 Environmental Accounting

Environmental accounting" - at times called "green accounting", "resource accounting" or maybe "integrated economic as well as environmental accounting" - refers to the modification of the device of National Accounts to integrate the use or perhaps depletion of natural resources. Environmental accounting takes into account all of the expenses of an item, which includes the environmental costs of an economic entity. Environmental accounts offer information which highlights both the contribution of natural resources to the costs and economic well being imposed by pollution or maybe resource degradation. Generally, suppliers publish their yearly reports including a declaration of detailed income, statement of financial position, and statement of changes in the info and financial positions provided in the feet notes in these kinds of reports in income words. In advanced countries, a major number of businesses today disclose the effect of the actions of

theirs on the planet. Environmental costs, as well as the impact of their effect on company's profit, are actually disclosed by financial accounting.

Environmental accounting is actually an issue of accounting that generates reports for both external and internal use; it's turned out to be the problem as well as the focus of company systems to use environmental info in creating a management choice. Environmental problems for example pollution, deforestation habitat for endangered as well as threatened species impacts everybody, but many developing countries. Businesses are actually anticipated to prepare an annual report which shows both quantitative and qualitative info about their performance and operations to be offered to their stakeholders and shareholders. The info content requirement by stakeholders helps in disclosing info about organizational performance as well as report on environmental accounting.

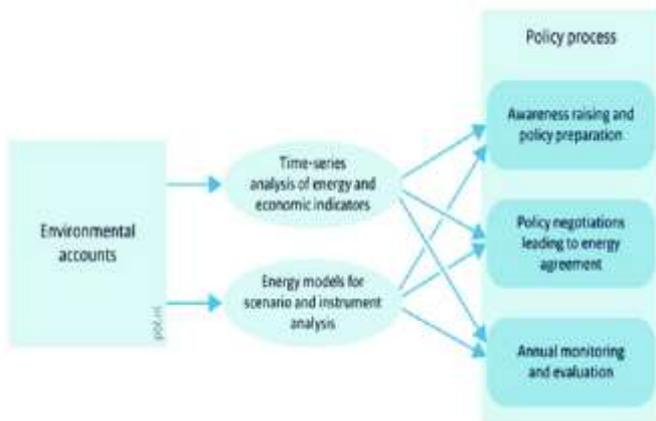


Figure 1: Relation of environmental accounting with policy process in business

The demand for Environmental Accounting has turned out to be the problem as well as focus of nations and conscientious corporate managements, it became one of the primary problems on the agenda of nations plus companies earlier in the 1990s as well as the causes for that were different emanating out of both within as well as outside of the firm and especially at the worldwide level. A great deal of government enhancements, regulations, and laws on environmental protection

were created in a number of nations of the planet as well as Iraq is gradually responding.

1.3 Forms of Environmental Accounting

1. Environmental Management Accounting: Management Accounting focuses on material as well as power flow info as well as environmental price info. This particular kind of accounting could be further classified into 3 subsystems as provided below.
 - a. Segment Environmental Accounting: This's an inner environment accounting application to choose an expense activity or maybe a task relevant to environmental consequences for a particular period.
 - b. Eco Balance Environmental Accounting: This's additionally an internal Environmental Accounting application to allow for lasting environmental management activities.
 - c. Corporate Environmental Accounting: This's a device to inform the public of info that is pertinent compiled in accordance with the Environmental Accounting. It must be known as Corporate Environmental Reporting. Because of this purpose, effect and price (in monetary value) and amount of the environmental conservation tasks of its being used.
2. Environmental Financial Accounting: Financial Accounting concentrates on reporting environmental liability bills along with other important environmental costs.
3. Environmental National Accounting: National Level Accounting concentrates on natural resources, flows and stocks, environmental price as well as externality price, etc.



Figure 2: Some icons used by Companies under environmental accounting

Factors inhibiting the Development of Environmental Accounting

To improve the planet for sustainable growth is necessary and possible. Environmental facets of sustainable growth add an additional dimension as to how you can discuss the advantages as well as costs among & between future generation and current generation. This will make far more sense to determine as well as determine environmental costs. An accounting info product is a crucial part of management info systems. It plays a crucial role in helping to safeguard the surroundings by making polluting production companies be responsible for environmental protection - the way the businesses mirror in the accounts of theirs or even just how they may expose issues, etcetera. Nevertheless, rules that are necessary & regulations are required to defend the earth. Additionally, well-developed accounting guidelines are needed.

1.4 Environmental Accounting, Reporting in Oil and Gas Industry

The oil, as well as gas industry, is actually among the industries with probably the greatest impacts on the planet. Based on the International Energy Agency, energy-related CO₂ (CO₂) emissions are

actually the vast majority of worldwide greenhouse gas (GHG) emissions, while oil, as well as gas, are actually probably the largest source of fuel combustion emissions and accountable for roughly 53 % of worldwide energy-related CO₂ emissions in 2013.

Oil & gas is actually among the industries with the best effect on the planet. The all-round environmental impact of oil businesses on the natural environment is pretty high, as the businesses of the market are able to trigger air pollution as well as water pollution, both of which may be damaging to the natural environment.

Generally, there can easily be negative effects on the environmental at each phase of oil as well as gas development- refining, transportation, production, development, and exploration. Many environmental consequences are actually inherent to oil as well as gas actions- natural resource depletion, air emissions, interference in the territories, biodiversity impacts, and waste disposal, to name only a couple of. Additionally, oil & gas activity has the potential to endanger the occupational wellness as well as the safety of individuals interested in pursuits that are this kind of. Environmental concerns have enhanced globally as petroleum businesses have expanded the activity theirs in new areas of the world. Table one illustrates the environmental impacts of oil & gas operations.

Table 1: Potential environmental impacts of Oil and Gas Company

Activity	Potential environmental impact
Exploration and development	Footprint, noise, light, emissions and discharges, interference, waste, socio-economic, cultural.
Production	Footprint, discharges, wastes, emissions and discharges, light, socio-economic,

	cultural, interactions
Refining	Emissions and discharges, light, noise, waste, water
Transportation	Emissions and discharges, light, noise, waste, water

2. REVIEW OF LITERATURE

Ikpor Isaac M, ItumaEnuma&Okezie B.N (2019) [1] The problem of Environmental degradation has attracted much study interest in the environmental science literature but much is actually left to be carried out in the region of exactly how accounting captures environmental degradation bills in the annual reports in relation to the consequences it's on the renewable financial performance of firms in developing countries particularly Nigeria. This particular paper, therefore, re-examines the outcome of the neglected but crucial issue of Environmental accounting of the context of the way it influences the renewable financial performance of firms in Nigeria. To use information from 10 petroleum businesses operating in the Niger-delta part of Nigeria with a period of forty-eight years (1970-2017) examined throughout the lenses of regular least square regression technique, our finding suggests which environmental operating costs, as well as environmental prevention expenses, have negative and significant impact on the overall performance of oil companies in Nigeria. Nevertheless, we found crucial variations in the correlates of firm's capital expenditure on lasting financial performance. The finding of this particular study thus have crucial implications for policy.

Oyedokun Godwin Emmanuel et al., (2019)[2] Companies are actually anticipated to prepare an annual report which shows both quantitative and qualitative info about their performance and operations to be offered to their stakeholders and shareholders. The info content requirement by stakeholders helps in disclosing info about organizational financial performance as well as reports on environmental accounting. Thus, this

study examined the impact of environmental accounting disclosure on the solid worth of listed manufacturing products businesses in Nigeria from 2007-2016. The ex post facto analysis layout was used in this specific research as the information had been gathered from the person sample business annual financial statement. Multiple regression was utilized to evaluate the impact of environmental accounting disclosure on the firm printer. Environmental accounting disclosure was assessed by nonfinancial indicators, financial signs as well as performance indicators as the firm great is actually calculated by Tobin's Q. By the outcome, it's apparent that non-financial indicators have an optimistic important impact on firm worthwhile performance signs have a damaging important impact on firm worth as well as the financial signal does not have a great effect on firm importance of manufacturing products businesses in Nigeria. Thus, there's a necessity for corporate entities to boost the environmental task methods of theirs as well as disclose adequately the environmental risks of theirs, effect and liabilities on the planet. The study implies that sanctions be set in place to encourage disclosures most particularly non-financial indicators since it's an immediate impact on the firm worth of the manufacturing products businesses in Nigeria.

Dr. Anil Kumar Bansal, NikharGoyal (2018) [3] The company is currently not just restricted to reporting the financial performance of its but additionally recognizing its responsibility and accountability towards the environment out of which it takes a lot of advantages and in exchange offers a lot of hazards. In the previous ten years, there continues to be a massive need for economic and financial info regarding natural and environmental resources. However, there was an inconsistency in switching to environmental accounting practices in businesses. The after-effects of business practices call for the accountability of companies on the path of a healthy environment. In the latest years environmental degradation has been

intense as well as the shareholders are actually acknowledging that the business must follow environmental accounting. However, the approach towards environmental accounting isn't generalized. Legal authorities, regular environment bodies haven't come into a consensus concerning the conceptual framework of environmental accounting and disclosure. In this particular paper, an effort has been put forth finding out the level of environmental disclosures contained in the business. Good analysis has been carried out to learn whether an organization is sincere in environmental compliances or maybe it's simply statutorily needed disclosures. A content examination is completed throughout the reports filed by the businesses to examination is actually carried out to determine the quality as well as the level of disclosures.

Alka h. Shah (2018) [4] Recently, thanks to enhanced climate change as well as environmental degradation, environment protection has assumed the utmost concern at the international level. There's an expanding strain for the corporate enterprises to think about the environmental consequences of the online business operations of theirs. Being a result, accounting and disclosure of environmental matters have quickly been emerging as a crucial dimension of environment management. Environmental Accounting is actually the procedure of identification measurement as well as the interaction of info on the environmentally responsible functionality of a business entity to permit economic choices. Environmental Reporting is actually an extension of environment accounting and this means the incorporation of environmental problems to the corporate annual reports of corporate entities. It denotes involuntary and voluntary disclosures by corporate entities on the effect of the actions of its own environment. The current study aims at documenting as well as analysing Environmental Accounting and Reporting methods of Hindustan Petroleum Corporation Limited (HPCL). An effort has been created in

order to go through the published Annual Reports and Sustainability Reports of HPCL to analyze the disclosure practices of its about the environmental problems and then to look at the earth preservation initiatives taken by HPCL in the previous 2 years i.e. 2016-17 and 2015-16.

Reajmin Sultana (2017) [5] Environmental accounting, as well as reporting, is actually an emerging idea of Bangladesh, though a lot of places of the planet, sometimes created or even building, are actually doing environmental accounting and reporting in the fossil fuel sector of theirs. Fossil energy resources in Bangladesh consist largely of natural gas. This particular analysis is about what data types are actually required & how these will be provided in environmental accounting. It tries to portray drawbacks as well as improvement of Petrobangla Companies in respect of environmental accounting methods & tries to offer ideas for better reporting practices. As there's a sustainability issue of energy sector, the uniquely fossil fuel sector of Bangladesh, as well as the circumstance of contamination of Bangladesh, is great, environmental accounting exercise is crying need to fix these kinds of issues in Bangladesh.

Uwaoma, Ordu and Ironkwe, Promise A. (2016) [6] There's a fantastic deal of potential to result in a number of as well as preventable environmental damage by unchecked Gas and Oil exploration tasks, along with serious health risks which are generally linked to Oil as well as gas exploration recreation resulting from pollution and also the likes. Likewise, the culture, and social and economic structure of indigenous and local communities are likewise generally affected. To compound the issues, it's thought that environmental laws in emerging economies like Nigeria and some are usually inadequate since they're substantively insufficient and/or since they're inadequately enforced. Based on KPMG (2005 Report), it has resulted in calls by academics, practicing lawyers in addition to environmental activists and human rights for transnational oil

companies to voluntarily improve the effectiveness of theirs of countries with inadequate environmental laws. This's currently forced to be carried out in their accounting reporting (KPMG, 2005). This can give rise to sustainability reporting. Accounting, as a set of socially conditioned methods that have different important impacts on the functioning of the society of ours, is actually called upon to help in demonstrating the accountability as well as the integrity of company actions. In line with this particular perspective is actually borne this paper. It appears at the demand for enough Environmental Reporting- both non-financial and financial reporting as well as the value of it's of the market in reaching out to stakeholders. It's anchored on the legitimacy concept of corporate social responsibility reporting whilst significantly evaluating the reporting requirements and what's ordinarily reported in the financial statements of Gas and Oil companies' vis a viz regular disclosure demands. It was discovered that that reporting format has to be consistent and followed to be able to ensure transparency in reporting of business operations. Looking at environmental performance indicators along with reporting formats as well as Normalization components, it's found out that the best problems experienced by the business relating to sustainability performance reporting are actually figuring out how you can calculate, define as well as select proper indicators.

Thabit H. Thabit, Yaser A. Jasim (2016) [7]The disclosure policies of environmental accounting info became a major and influential component to sustain the earth internationally. Lately, the focus was on the environment part attempting to bring down the earth drop happening on planet Earth. The environmental accounting disclosure contributes to raising the planet aware of organizations, also decreasing the dangerous impacts of business processes uniquely on the environment and on society as common. This particular analysis provides an analysis for the job of environmental accounting disclosure to minimize dangerous

emissions from oil refining factories via reviewing the annual financial statements of several oil refining vendors in Kurdistan Region (KRG), by distributing fifty questionnaire forms to a selection of accountants of the sample factories; these forms contain 2 sections, very first component concerns on the key methods which accountant do in the oil refining factory, as well as 2nd component, concentrates on the effect of environmental accounting disclosure for damaging methods to environment, for testing the assumption we utilized (T-test) on the samples. The key results that the analysis refers to will be the constant weakness on environmental accounting disclosure methods of oil refining businesses in Kurdistan (KRG), the annual financial statements have a bit of environment accounting info or even at times nonexistent. A suggestion is actually made through this paper to build environmental accounting disclosure criteria that are ideal for the Kurdistan environment and also increases restrictions on oil refining businesses to go along with the criteria with the required of figuring out a restricted ratio of environment info which should be supplied in annual financial statements.

Dr. Anita Shukla, Nidhi Vyas (2013) [8] In the past decade, there continues to be a massive need for economic and financial info concerning natural resources and the environment. However, there was an inconsistency which civilizing environmental performance is usually advocated as remedying defects of a company's assessment of their own self-interest theirs. Environmental Accounting plays a tremendous role in offering the necessary information on the surroundings to totally different owners at all levels for different reasons. There's a climbing interest in India about topics like environmental growth, corporate social responsibility, and corporate ecological overall performance. They're an after effect of the worldwide calls regarding the accountability of companies of the path of a healthy environment. Thus, Greek corporations have initiated using

methods for much better ecological functionality and reporting them to the public. The present investigation meant to look at India corporations' disclosures about the effectiveness of theirs towards the safety of a healthy environment. In existing years, environmental pollution gets so very acute as well as the stakeholders' awareness of the matter gets extremely significant that environmental accounting has turned into a good department of accounting. Nevertheless, focus on the design as well as acknowledgment of environmental accounting isn't a generalized one. Legal authorities, regular setting bodies along with other regulators can't come to a consensus about the conceptual framework of environmental accounting as well as the disclosure of its. As a result, this kind of revelation isn't obligatory quite voluntary which has no certain design or perhaps structure. With the passage of time, the extra rule is actually coming in a modified format which could lead us to attain a typical structure for knowing environment connected details as well as revelation thereof via financial statements. Nevertheless, this kind of disclosure is actually guided by social responsibility as well as dedication on the part of the entities which do the job as powerful agents for polluting the earth. With this paper, the theoretical basis of environmental accounting, as well as reporting, is actually reviewed with special reference to market as ONGC, BPCL. After the correct research, the researcher has sensed the situation of Environmental accounting methods hasn't been transformed. The Environmental Policy of theirs shows that they're providing completely initiatives for the greater protection of environment but on the flip side, the research results do not reveal the ecological price, liability, and ecological expenditure.

3. NEED FOR THE STUDY

In view of tragic incidents that took place in the recent past, society has begun wondering the business organizations relating to the accountability of theirs towards the environment. It's likewise been

found that the idea of environmental accounting doesn't find a sufficient spot in the annual report of businesses. The disclosures made are actually restricted and it's not mirrored in the financial statements. Hence to conscious among public effect and the market of organizations activities on environment & recommend steps to correct them. The current disclosures are voluntary rather than necessary. Though India has created extensive legislations for environmental protection through environmental accounting legislation stay in the paper.

4. OBJECTIVES OF THE STUDY

1. To understand the emergence of environment accounting in companies.
2. To analyse the present scenario of environmental accounting in Indian companies.
3. To study Environment Protection Acts and Regulations in India.
4. To know the awareness level of employees towards environmental accounting in Indian oil and gas companies.

5. RESEARCH METHODOLOGY

Different methodological approaches are adopted to study about the corporate reports. Most used approaches are positivist and interpretative approaches in accounting.

5.1 Sample size

Total 300 respondents are taken for the purpose of our study. These respondents are the employees working in companies of Indian oil and gas sector.

5.2 Sampling technique

The sampling technique employed in this study was 'stratified random', since the investors can be classified on the basis of (i) age, (ii) income, (iii) profession and (iv) educational qualification.

5.3 Collection of data

For the proposed study, it is intended to collect the required details from both secondary and primary sources

Primary Data

The investigator collected the data, by sending the questionnaire to the companies and investors through mail.

Secondary Data

secondary data is collected from official Government websites, research papers published in various Journals and annual audited reports of oil and gas companies.

5.4 Statistical Tools used

The data collected will be classified with the end goal of investigation. The data is evaluated by using percentages.

6. DATA ANALYSIS

6.1 Demographic profile of respondents

Right after a careful analysis, 260 were discovered total as per the necessity of the questionnaire and these were selected. The sample investors have been classified based on their Age, Profession, Income along with Educational Qualification. The division of the sample investors are detailed in Table 2.

Table 2: Demographic characteristics of respondents

Categorisation	No. of respondents
Age	
30-40 years	98
40-50 years	122
Above 50 years	80
Income	
3-5 lakhs	92

5-8 lakhs	117
More than 8 lakhs	91
Educational Qualification	
Undergraduate	78
Postgraduate	115
Any Other professional degree	107

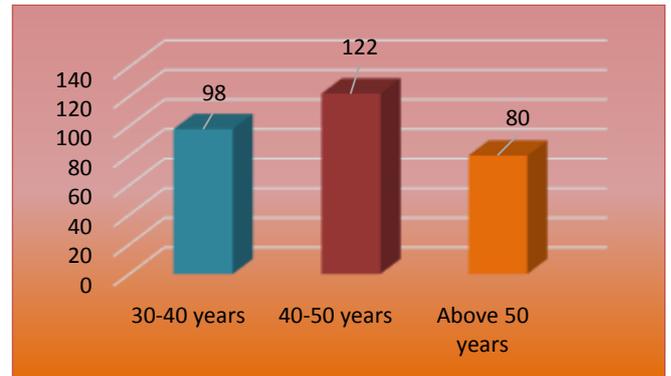


Figure 3: Graph showing age of respondents

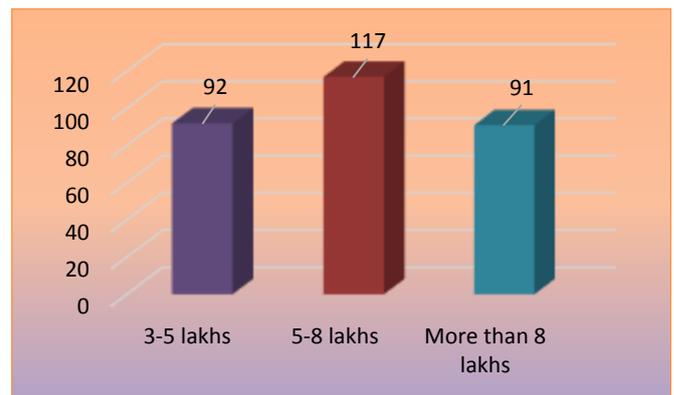


Figure 4: Graph showing income of respondents

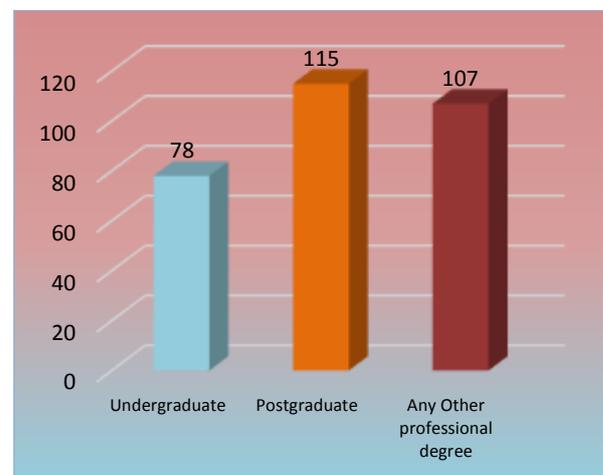


Figure 3: Graph showing qualification of respondents

6.2 Employee’s views on different issues

General awareness of Investors on environmental problems

The general awareness of investors on environmental issues had been evaluated. It's important as it's fundamental to further evaluate the opinion of theirs on environmental reporting by organizations. The respondents had been asked to indicate the environmental issues triggered by industries, about which they're conscious of. These were necessary to select among the provided choices specifically Air pollution, Water pollution, Noise pollution, Ozone depletion, Seal-Level changes, and climate changes. Table 3 provides the details of the general awareness of the respondents regarding environmental problems.

Table 3: General Awareness of Respondents On Environmental Problems

Environmental Problems	Agree	Disagree
Air pollution	290	10
Water pollution	262	38
Noise pollution	243	57
Ozone depletion	220	80
Climate changes	191	109
Sea-level changes	177	123

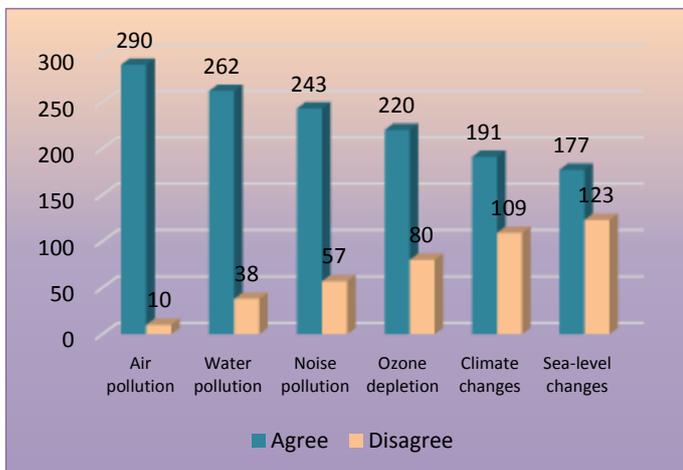


Figure 4: Graph presenting General Awareness of Respondents on Environmental Problems

From Table 3 it could be inferred that almost all (i.e., 290) respondents are conscious of Air Pollution, 290 respondents are conscious of water pollution and 243 of respondents understand about the noise pollution as well as Ozone depletion triggered by the industries 191 of respondents are conscious of Climate changes because of Industrial procedures as well 177 know about sea level differences.

Views on environmental regulation

The awareness of environmental laws, as well as compliance of the respondents, is yet another main criterion. First of all, the analysis identified the distance the investors are conscious of compliance with environmental laws by the businesses. Second, the respondents had been asked whether there are enough authorized norms to guard against environmental damages brought on by the industries. Furthermore, the respondents had been asked whether they believe the environmental laws are strictly adhered to by the businesses. The respondents' views on environmental regulations are actually included in Table 5.31.

Table 4: Views of Respondents on Environmental Regulation

Views on environmental regulation	Agree	Disagree
Awareness of disclosure requirement of companies	239	61
Adherence to environmental regulation	108	192
Sufficiency of legal norms to protect against environmental damages	65	235

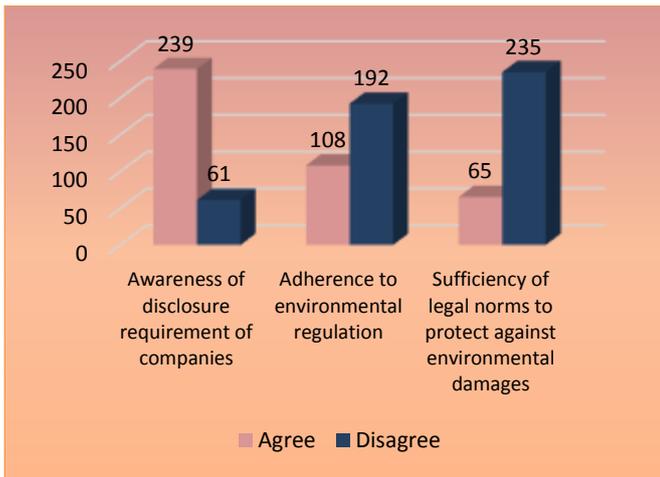


Figure 5: Graph presenting Views of Respondents on Environmental Regulation

From Table 4, it could be inferred that 239 of respondents are actually conscious of the reality that the environmental laws are actually to get complied by organizations. 108 respondents are actually of the opinion which there are actually adequate environmental regulations to be adhered to by the businesses. And only 65 respondents are of a perspective that there are adequate authorized norms to guard against environmental destroys.

Awareness about environmental reporting format

The awareness of respondents on environmental reporting formats is actually offered in Table 5. The respondents had been asked whether they're conscious of any environmental reports printed by businesses, in the title of Corporate Social Responsibility(CSR) report, Sustainability report, Health Safety and Environment (HSE) article and Environmental Reports on the whole. Additionally, they had been asked whether they're conscious of any environmental reporting formats including Global Reporting Initiative, Global Compact as well as Sectoral Guidance.

Table 5: Awareness of Respondents on Overall Form of Environmental Reports

Particulars	Agree	Disagree
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Corporate Social Responsibility	215	85
Sustainability	56	244
Health, Safety & Environment	169	131
Environmental Report	82	218

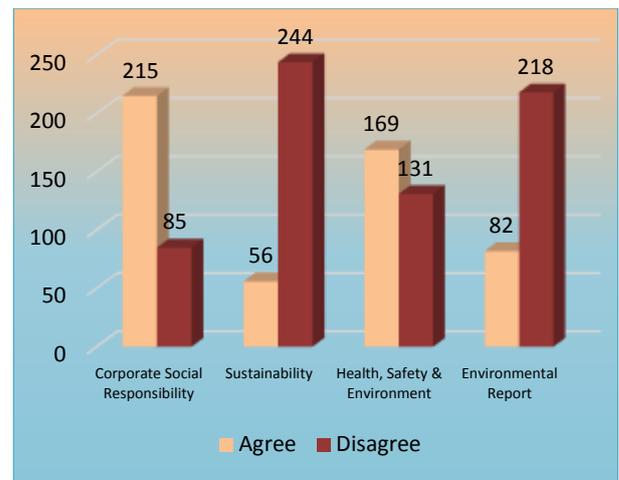


Figure 6: Graph showing awareness of Respondents on Overall Form of Environmental Reports

From Table 5, it could be inferred that 215 respondents are actually aware of Corporate Social Responsibility(CSR) reports, 56 respondents are actually conscious of Sustainability reports, 169 of respondents are actually conscious of Health Safety & Environment (HSE) report. A few Environmental Reports aren't ready in any certain format as well as 82 respondents are conscious of that casual kind of environmental reports.

Overall Opinion on Environmental Reporting

Table 6 interprets from the respondents whether they believe that the businesses are environmentally responsible. From the perspective of theirs, if the businesses are reporting both their disasters as well as accomplishments really. The respondents were additionally asked to provide the opinion of theirs

on the benefits of international accreditation in recognition of environmental measures. They were also asked to provide their own opinion of theirs on if much more environmental regulations will be burdensome on companies

Table 6: Respondents' Overall Opinion on Environmental Reporting

Particulars	Agree	Disagree
Corporate world to be environmentally responsible	280	20
Disclosure of both environmental achievements and disasters	12	288
Importance of international accreditation	278	22
More regulation will be burdensome	84	216

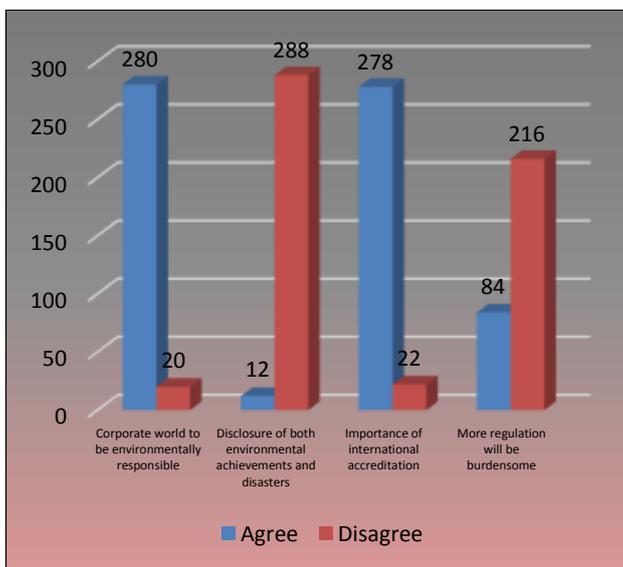


Figure 7: Graph showing Overall Opinion On Environmental Reporting

From Table 6, it could be inferred that 280 respondents would like the corporate world to be

environmentally responsible and 12 respondents just believe that the businesses really disclose both achievements as well as disasters. The 278 respondents are actually of the opinion that international accreditation for businesses in recognition of environmental actions taken by businesses is actually vital. 84 respondents believe more regulations on environmental reporting will be burdensome for businesses.

To analyse the relationship between awareness level of employees and effectiveness environmental accounting in Indian oil and gas companies' correlation test is applied. Results are given in table below

Table 7: Correlation

Correlations		Awareness level	Environmental Accounting
Awareness level	Pearson Correlation	1	-.427**
	Sig. (2-tailed)		.000
	N	300	300
Environmental Accounting	Pearson Correlation	-.427**	1
	Sig. (2-tailed)	.000	
	N	300	300

** . Correlation is significant at the 0.01 level (2-tailed).

Furthermore, the relationship between the two variables is low correlation on the grounds that the outcome is - 0.427. For this situation, awareness level effects on effectiveness of environmental accounting. Be that as it may, since the relationship is low, it likewise demonstrates that awareness level isn't the main factor that effects on environmental accounting. Along these lines, the specialist can close by saying that awareness level can affect environmental accounting.

7.COMPARISION BETWEEN TWO DIFFERENT COMPANIES

The environmental accounting policies and practices of two Indian petroleum companies namely Bharat Petroleum Company Limited (BPCL) and Oil and Natural Gas Limited (ONGC)

are studied and findings are analyzed. Environmental policies and initiatives taken by companies are different from each other. So here we compare both the companies.

7.1 Environmental Performance Indicators

Table 8- Environmental Performance Indicators BPCL

INDICATORS	2015-16		2016-17		2017-18	
	KOCHI	MUMBAI	KOCHI	MUMBAI	KOCHI	MUMBAI
Direct energy Consumption	25.2 million giga joules	36.6 million giga joules	26.38 million giga joules	30.6 million giga joules	31.273 million giga joules	25.06 million giga joules
Indirect energy Consumption	191.7 million giga joules	130.07 million giga joules	282.5 million giga joules	704.47 million giga joules	182.8 million giga joules	266.21 million giga joules
Water Withdrawal/ reused (refineries)	3.11 million KL		3.69 million KL		3.15 million KL	
Green House Gas Emission	183.13 thousand tonnes		176.26 thousand tonnes		159.35 thousand tonnes	

Table 9- Environmental Performance Indicators ONGC

INDICATORS	2015-16	2016-17	2017-18
Total Primary Energy Consumption	1.16 terra joules	1.87 terra joules	1.93 terra joules
Water Usage	25.79 billion liters	26.00 billion liters	24.57 billion liters
Green House Gas Emission	9.11 million tonnes	11.71 million tonnes	12.02 million tonnes.

Greenhouse gas emission:

So far as BPCL is worried, the greenhouse gas emission of its was decreasing by the season. As we are able to see in the season 2015-16 it'd probably the highest emission of 183.13 1000 tonnes, while it decreased to 176.26 1000 tonnes of the season 2016-17 and moreover to 159.35 1000 tonnes in the season 2017-18. On the flip side the greenhouse gas emission of ONGC improved every year. In the

season 2015 16 it was 9.11 million tonnes, which enhanced to 11.71 million tonnes in further and 2016-17 improved to 12.02 million tonnes in on 2017-18. For that reason, we are able to claim that the speed of greenhouse gas emission by ONGC was volatile to the 3 consequent years but on the contrary, the rate of emission of greenhouse gas for BPCL was decreasing continuously

Indirect and direct energy consumption:

With regard to BPCL and the Kochi plant of its, the direct energy consumption discovered to have been increasing every year, from 25.2 zillion giga joules in 2015-16 to 31.2713 in 2017-18. In the Mumbai refinery as we are able to see the direct energy consumption was probably the highest in the season 2015-16 however was on a decline in the consequent seasons. From 36.6 zillion giga joules in 2015-16 to 30.6 zillion giga joules in 2016-17 to 25.6 zillion giga joules in 2017-18. The indirect energy consumption of both the refineries enhanced in 2016-17 and decreased in 2017-18, hence we are able to say the indirect energy consumption is actually volatile to the 3 consequent years.

So far as ONGC is worried the complete primary energy consumption increased through the years. It had been at its extreme loaded with 2017-18 at 1.93 terra joules, that had been a growth from 1.16 terra joules in 2015-16 and 1.87 terra joules in 2016-17.

Water consumption:

As much as BPCL is worried they've used the water that had been currently used earlier by them, saving and recycling on additional use of water, on the additional hand ONGC has used water that is fresh annually, hence in this fashion BPCL is actually preserving the planet resources by recycling the reused water but ONGC isn't preserving the environmental energy sources due to continually utilization of fresh water.

8. CONCLUSION

The results of the study shows that Gas and Oil Companies are completely concern regarding the chief problems of environment which immediately hinder the environmental performance and they completely agree that they need to spend the duty of theirs because of their best by offering complete info regarding environmental associated disclosure, but industries present just a lesser amount of info regarding the environmental-related problems, as well as not offering the info associated with the environmental expenditure as well as

environmental cost. There's additionally a lacking of quantitative info, so there ought to be adequate accounting pronouncements from the regulatory authorities & the info relevant to the environmental expenditure. It hasn't been pointed out in the yearly reports of theirs. There's additionally a deficient of the info regarding environmental similar disclosures in the yearly reports of theirs.

Hence there's a demand for furthered advancement parallel with the improvement of corporate governance as well as the growing public awareness. Good accountability is usually to be infused in the companies for which a defined environmental policy and good environmental accounting treatment is actually the best.

9. DIRECTIONS FOR FURTHER STUDY

Extra study might be guided into areas like the following: (i) an extensive analysis is actually needed, covering a selection of many years to draw legitimate conclusions regarding the underlying trends as well as methods of Environmental Accounting & Reporting methods in India; (ii) it's thought that a comparative analysis of Environmental Accounting & Reporting practices in Asian countries (including Bangladesh, Srilanka, and Pakistan) will shed much more light on Environmental Accounting & Reporting in this particular region; (iii) a study identifying the owners of Environmental Accounting & Examining and reporting the perceptions of theirs regarding Environmental Accounting & Reporting in India might be seen as worthwhile & must have immediate interest of coming researchers as well as (iv) the job, if any, played by the pro bodies in the improvement of Environmental Accounting & Reporting in India must be elucidated.

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