

Environmental Accounting and Reporting Practices of Major Industrial Units in Assam

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Abstract

The issue of environmental protection and sustainable development of natural resources to preserve the fragile ecological balance for future generations is of vital importance. Now industries are also increasingly realising their role in environmental protection and sustainable development. In continuation with other parts of India the growth of industries in Assam has also been guided by the necessity of increasing production. For protection of environment and sustainable development, different industries of Assam are committed to abide by environmental norms and various conditions stipulated by the Government of India. This paper is an attempt to analyze the environmental accounting and reporting practices followed by the major industrial units of Assam. The study is mainly based on primary data collected from the selected companies under the major industry groups with the help of a schedule. The industries identified for the study are paper & pulp, cement, oil refinery, petroleum and natural gas, petrochemicals, fertilizers, coal, plywood and tea industries. It was observed that the high polluting industries were better in voluntary environmental disclosure than the low polluting industries. The reasons behind the poor environmental disclosure practices may be its voluntary nature, poor environmental performance, and due to lack of awareness on the part of company's management towards environmental protection.

Key words: Environmental protection, Sustainable development, Environmental disclosure practices.

Introduction

In recent years, environment issues such as environmental degradation, deforestation, overexploitation of natural resources, soil erosion, problem of solid waste management, industrial pollution, global warming, greenhouse gas

emissions etc. have become a matter of great public concern all over the globe. Now, business houses are also increasingly realising their role in environmental protection and sustainable development. In this regard, a new emerging concept of accounting has

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developed worldwide known as 'Environmental Accounting.' It has become an important branch of accounting which involves a process of identification, measurement and allocation of environmental costs and benefits, environmental assets and liabilities and finally converts them in monetary terms.

The issue of environmental protection and sustainable development of natural resources to preserve the fragile ecological balance for future generations is of vital importance. Assam, the largest economy in the North East region of India, is the most industrially advanced state in the region by virtue of its comparatively favourable geographical location and the availability of reasonable infrastructure facilities. The state has moved towards inclusive growth by a balanced pattern of industrial investment. The Industrial Investment Policy was initiated in 2008 to create conditions for income and employment generation in the state. The Policy identified some specific sectors which offer tremendous potential for income and employment generation in Assam. It is worthwhile to mention here that there are refineries, paper mills, coal and cement industry in the public sector which is functioning profitably in the State. However, the state faces severe environmental degradation and resource depletion, which threaten opportunities for sustainable economic growth.

Related Research Studies

Bebbington et al. (1994) conducted a survey on 1000 top UK companies

(listed on the *Times 1000*). The survey was based on a questionnaire sent to finance directors of those companies. The study found that accountants were aware that environmental issues would affect their practice in the future and perceived that this impact falls within the role of the accountant and they felt themselves as the appropriate individuals to innovate in this area. Pradhan and Bal (2002) conducted a study based on the primary data collected from a sample of eighty (80) corporate managers. They found that responses from the corporate managers were positive and are fully aware of the environmental issues and strongly agreed on the disclosure of Corporate Environmental Policy, Environmental Audit Report, quantifiable future goals and targeted environmental issues, disposal of toxic or hazardous substance and on environmental spending. Patra (2003) conducted a case study of TISCO for the financial years 1995-96 to 1999-00 to examine environmental accounting and reporting practices and found that the company launched environmental management programmes and spent on an average, an expenditure of ₹ 25 crore per annum towards prevention of pollution and welfare purposes. Financial data have not been separately disclosed in the financial statement under the head "Environmental cost and expenditure". Sahay (2004) conducted a study on questionnaire survey of top 250 Indian companies ranked by sales as reported by *The Economic Times* in 2003 to investigate their environmental disclosure

practices. The author observed that environmental reporting is not properly maintained and non-comparable and these reports were mainly used as marketing tool. Mitra et al. (2009) conducted an empirical study to establish a relationship between environmental management and business strategy and focused upon six primary indicators (viz., environmental policy, regulatory compliance of standards pertaining to air pollution, release of liquid effluents, generation of solid and hazardous wastes and noise pollution, EMS certification under ISO 14001: environmental audits and environmental cost management) that influence a business unit's environmental pro-activeness.

Objective and Methodology

The study was conducted mainly on selected industries of Assam identified as pollution prone. The industries identified are paper & pulp, cement, oil refinery, petroleum and natural gas, petrochemicals, fertilizers, power, coal, plywood and tea industries. The objective of the study is to analyze the environmental accounting and reporting practices of major industrial units of Assam.

The study is based on primary data collected from the selected companies under the industry groups. Thirty questions were framed in the schedule with the help of the schedule used in related literature. Questions were mostly open-ended and structured to enable the

respondents to answer their view independently and other questions were closed-ended with yes/no. These questions are divided into two categories, namely, Environmental awareness information disclosures, and Environmental accounting and reporting information disclosure. Each of these questions is treated as variables/parameters for fulfilling the objectives of Environmental awareness information disclosures, and Environmental accounting and reporting information disclosures.

The study was conducted mainly on thirteen major industrial units of Assam. The industries identified are: paper & pulp (1 unit), cement (2), oil refinery (2), petroleum and natural gas (3), petrochemicals (1), fertilizers (1), coal (1), plywood (1) and tea (1) industries. The units of study undertaken are: Hindustan Paper Corporation Ltd. (Cachar Paper Mill), Cement Corporation of India Ltd. (Bokajan Cement Factory), Barak Valley Cements Ltd., Indian Oil Corporation Ltd. (Bongaigaon Refinery Ltd.), Numaligarh Refinery Ltd., Oil India Ltd., Oil and Natural Gas Corporation Ltd. (ONGC), Gas Authority of India Ltd., Assam Petrochemicals Ltd., Bhrmaputra Valley Fertilizer Corporation Ltd., Coal India Ltd (North Eastern Coal Fields), Kitply and Goodricke Group Ltd.

Results and Discussion

The classification of sample units of different industry groups is shown in Table 1:

Table 1: Industry-wise Classification of Sample Units in Assam

Industry	No. of sample units	% of Total
Cement	2	15.38
Fertilizer	1	7.692
Oil Refinery	2	15.38
Pulp and Paper	1	7.692
Petrochemicals	1	7.692
Coal	1	7.692
Petroleum And Natural Gas	3	23.08
Plywood	1	7.692
Tea	1	7.692
Total	13	100

Source: Field Survey

The table shows the industry-wise classification of 13 sample units in Assam. Out of 25 sample units, 13 units have responded the questions in the schedule favourably and the remaining 12 sample units did not respond, despite visits to their units respectively. Finally, the analysis of corporate environmental performance in Assam is based on 13 industrial units

which were under nine industry groups of Assam. Of the above sample companies, 10 (77%) belonged to public sector and the remaining 3 (23%) companies belonged to private sector. From the schedule obtained from the sample units, an analysis of the responses received from the respondents against specific questions is presented in Table 2:

Table 2: Environmental Performance by Selected Industrial Units in Assam

Items	Units (N=13)	Units (%)
Treatment of wastes by the sample companies, i.e., disposal and recycling	10	76.93
Developing CDM by the sample companies	5	38.46
Implementing WMP by the sample companies	11	84.62
Environmental statement	13	100
Compliance with environmental laws	13	100
Complaints received from local authority	2	15.38
Adopting EMS in terms of 14001	9	69.23
Obtaining ISO 14001 certificates	7	53.85
Having environmental manager	9	69.23

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Adopting green technology	6	46.15
Making capital expenditure for green technology	3	23.08
Measurement and reporting of environment related costs, benefits etc.	9	69.23
Separate provisions or contingent liabilities for managing environmental risks	6	46.15
Making Environmental risk reserves	6	36.63
Adopting environmental audit	9	69.23

Source: Field Survey

Treatment of wastes: It was observed that 61.54% of industrial units dispose off the wastes. These wastes were disposed either by dumping in the ground or by discharging in the river. Also, it was found that 15.38% of industrial units recycle wastes, i.e. recycling is done by only one industry. Other units were not recycling their wastes, they only disposed it off.

Developing Clean Development Mechanism (CDM): It was found from that 38.46% of units developed CDM while 61.54% of units have not developed till now. This is not encouraging.

Waste Management Plan (WMP): It was observed that implementing WMP by the units was very encouraging. Over 84% of the units replied that they have adopted WMP; only two units did not have any WMP.

Environment Statement: In response to Question of submission of Environmental Statement to the State Pollution Control Board (SPCB) regularly, all the companies mentioned that they submit fees & E. S. regularly. In replying to this question, all the companies answered that they have not been penalised or fined by

SPCB for violation of code of conduct during all the five years, i.e., from 2007-08 to 2011-12.

Compliance with environmental laws/regulations: On both the questions of compliance with Environmental laws/Regulations and Section 217(1) (e) of the Companies Act, 1956, it was found that compliance was 100%. This shows that if companies are required by law to publish any vital information relating to the level of environmental management, compliance of the same becomes automatic.

Complaints received from local community: In response to the question against complaints received from local community regarding damages caused to the environment due to operations of their business and what preventive measures they have taken. Out of 13 selected industrial units under the industry groups, only 15.38% of the companies responded that they have received complaints. One unit even have taken preventive measures by removing the damages, paid compensation and inducted corrective measures whereas 84.62% of companies responded that they had not received any complaints.

EMS in terms of ISO 14001: It was found that 69.23% of units have adopted EMS in terms of ISO 14001.

Obtaining ISO 14001 certificates: It was observed that 53.85 % of units have obtained ISO 14001 certification and 46.15% of units have not obtained till now any ISO 14001 certification for their units.

Having environmental manager: It was found that 69.23% of units have an environmental manager and 30.77% of units do not have any environmental manager. In response to question against measures aimed at motivating employees towards EMS, all the sample units replied ‘yes’.

Adopting green technology: It was observed that adoption of green technology by the industrial units was not very encouraging. It was found that only 46.15% have adopted green technology whereas 53.85% have not adopted.

Making capital expenditure for green technology: It was found that only 23.08% of units make capital expenditure for green technology while 76.92% did not incur any expenditure for adoption of green technology.

Measurement and reporting of environment related costs, benefits etc.: The study found that 69.23% industrial units mentioned about accounting policies for measurement and reporting of environment related costs, benefits etc., whereas 30.77% units have not shown any response to this question.

Separate provisions or contingent liabilities for managing environmental risks: It has been observed that only 46.15% of units mentioned about separate provisions or contingent liabilities for managing environmental risks in industrial units of Assam. It indicates that most of the industries have no provisions for managing environmental risks.

Making Environmental Risk Reserves: It was found that only 46.15% of units make Environmental Risk Reserve while 53.85% of the units did not have any Environmental Risk Reserve.

Adoption of environmental audit: In response to adoption of environmental audit by the sample units, it was found that 69.23% of units have adopted environmental audit, and 23.08% of the units did not have environmental audit.

Table 3: Descriptive Statistics of Mean and S.D. for the sample industrial units in Assam

No. of companies	13
Mean	7.73
Standard Deviation	3.39
Range	11
Minimum	2
Maximum	13

Table 3 provides descriptive statistics for the sample units under the study. The study reveals that 13 industrial units have a mean value and standard deviation of 7.73 and 3.39 respectively, and ranged from 2 to 13 points indicating a medium variation in the disclosure level of corporate environmental information in Assam.

Conclusions

On the basis of the above analysis of the environmental disclosure practices of the selected companies of Assam, the status of environmental disclosures such as Waste Management Plan, compliance with the environmental laws, adoption of Environmental Management System in terms of ISO 14001 and measurement aimed at motivating employees towards EMS were found to be the most frequently reported disclosure variables. Whereas the least response was found in case of Clean

Development Mechanism, adoption of green technology, making environmental capital expenditure, separate provisions for environmental contingent liabilities and environmental risks reserves.

However, it was observed that the high polluting industries were better in voluntary environmental disclosure than the low polluting industries. The status of voluntary environmental disclosure was found better in the paper and pulp, oil refinery, petroleum and natural gas.

On the whole, the status of voluntary environmental disclosure of the selected industrial units in Assam was not satisfactory. The reasons behind the poor environmental disclosure practices may be its voluntary nature, poor environmental performance, and due to lack of awareness on the part of company's management towards environmental protection.

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“Live as if you were to die tomorrow. Learn as if you were to live forever.”

~ *Mahatma Gandhi*