 CHAPTER IX
RESUME

The role of accounting as an economic information system has changed with the change in the role of corporate entities from merely economic entities to socio-economic entities. The concept that the success of an organisation is dependent on its profitability only is no more valid. These days the success or the failure of an organisation is judged on the basis of its economic performance as well as on the basis of how efficiently the organisation discharge its social responsibilities. The users of annual reports these days are interested not only in the economic information but also in the information regarding those activities of the organisation, which have an impact on the society.

The haphazard use of natural and environmental resources mainly by the industrial concerns has led to a demand of disclosure about those activities of the organisation, which have a bearing on the natural and environmental resources. Accounting information, without an adjustment therein as regards those activities of the organisation, which has a bearing on the natural and environmental resources, is considered as incomplete.
This demand for inclusion of information regarding environmental activities of the organisation has led to the development of a new type of accounting known as environmental accounting. Environmental accounting and reporting is a technique of accounting, which takes care of informational needs of users regarding environmental activities of the organisation.

A lot of research work is being carried on all over the world for the development of this technique. A number of different types of organisations have issued guidelines for environmental accounting and reporting. These guidelines are still recommendatory in nature and have not yet been made compulsory. In India, the Companies Amendment Act, 1988, has made disclosure regarding energy conservation compulsory. Except this one item no guidelines have been issued for environmental disclosure. At present, whatever environmental information is available in the annual reports is mainly voluntary in nature. Environmental reporting practices are more developed in developed countries of the world like Canada, USA etc.

In India, no comprehensive study has been carried out on the status of corporate environmental reporting practices. No study has been carried out to seek the views
of chartered accountants, who are preparers, users as well as auditors of accounts. In this study, we examined the corporate environmental reporting practices and also views of the chartered accountants on various issues relating to environmental accounting and reporting.

Objectives of the Study

The study has been carried out with a view:

1. To examine the status of corporate environmental reporting practices by the corporate sector in India. The status of environmental disclosure was examined both in terms of quantity and quality.
2. To study the factors determining the level of disclosure of environmental information in the annual reports of Indian companies.
3. To study the views of chartered accountants regarding various issues involved in environmental accounting and reporting.
4. To study the relative importance of various items of environmental accounting and reporting.

METHODOLOGY

To study the status of corporate environmental reporting practices, the annual reports of top 250 companies as rated the most valuable companies by Business Today for the year ended 31st March 2005 were selected. However the
the annual reports of 50 companies could not be obtained despite best efforts, therefore the annual reports of 200 companies were considered in this study.

A list of 20 voluntary items of environmental disclosure and 1 statutory item of environmental disclosure was prepared. These 20 items of voluntary nature were classified into three categories i.e. regulatory, accounting and general category. The status of disclosure of these items in the annual reports was examined. A score in the range of zero to three was assigned to an item depending upon its quality of disclosure. The length of environmental disclosure was also examined, line counts was used to measure the length of disclosure.

In order to study the relationship between the company characteristics and the status of environmental disclosure, six corporate characteristics were identified. The six corporate characteristics chosen were the corporate financial performance, the company size, company age, the foreign influence, the outsider's influence and the level of systematic risk involved in the company. Four forms of regression analysis, linear, power, semi log (x) and semi log (y) were used to study the degree of relationship between corporate characteristics and the status of environmental disclosure. The form of regression analysis, which
yielded the best results, was chosen for further analysis. To seek the views of chartered accountants, a list of 500 chartered accountants, from different parts of the country, was prepared from the topographical list of members. A questionnaire was mailed to all these selected chartered accountants. Despite best efforts, only 142 questionnaires could be obtained. These 142 questionnaires were considered for the purpose of this study.

For the analysis of views of chartered accountants the statistical techniques such as percentages, weighted average and factor analysis were used. To calculate the weighted average score, the weights of 2, 1, 0, -1, and -2 were assigned respectively to strongly agree, agree, can't say, disagree and strongly disagree.

FINDINGS AND CONCLUSIONS

The major findings and conclusions of the study are as follows:

CORPORATE ENVIRONMENTAL REPORTING PRACTICES

The status of voluntary environmental disclosure in the annual reports of selected Indian companies was found to be very poor. The total score of all the companies came out to be only (586) 6.10 per cent.
The number of disclosure companies was found to be 114 (57 per cent) among all the 200 companies. These 114 disclosure companies also include the companies, which disclosed environmental information in one line only. A few companies in which the status of environmental disclosure was found good were BSES, Hindalco Industries, Hero Honda Motors and Reliance Industries.

We examined the status of disclosure of twenty voluntary items of environmental information. Out of these items, waste management item was reported by the maximum 70 (35 per cent) companies, whereas the least reported item was found to be penalties. It was reported only by 1 (0.5 per cent) company.

The level of disclosure in the high polluting industries was found to be high as compared to the low polluting industries. Among the high polluting industries, the status of environmental disclosure in the annual reports of Fertiliser and Chemical, Pharmaceutical and the Electricity group of industries was found better.

So far as the length of disclosure of voluntary environmental information is concerned, it was found to be very less. The total number of lines of disclosures by all the companies came out to be only 375. The average number of lines of disclosure per company turned out to be only
1.88. The company wise length of disclosure varied from a minimum of 1 line to a maximum of 105 lines.

The companies have used different sections for environmental disclosure in their annual reports. The Director's Report Section was used by the largest number of companies. Only 12 (6 per cent) companies used the separate environmental section, 37 (18.5 per cent) companies used more than one section for environmental disclosure.

The status of disclosure of statutory environmental item was found to be better as compared to the voluntary items. Whereas 114 (52 per cent) companies disclosed the voluntary items, the statutory items was disclosed by 160 (80 per cent) companies.

A large majority of the companies reported environmental disclosure in descriptive terms. Very few companies maintained a separate account head for the disclosure of environmental expenditure. The environmental expenses were merged with the overhead or miscellaneous accounts.

DETERMINANTS OF ENVIRONMENTAL DISCLOSURE

The financial performance and regulatory disclosure score association was found significant at five per cent level of significance. The main reasons for such a result may be that the compliance with the environmental
laws and winning the environmental performance awards was a costly affair and only the companies with good financial performance can afford to resort to these activities. Therefore, the null hypothesis that the financial performance is not significantly associated with the regulatory environmental disclosure stands rejected. NP was found to be positively associated and NPR was found to be negatively associated with the regulatory environmental disclosure score. The main reason for negative association between the NPR and the regulatory environmental disclosure seems that the companies were maintaining high net profit ratio at the cost of natural and environmental resources. In other words, the companies were not incurring the environmental expenses, which in turn lead to a high NPR.

It was found that the financial performance has nothing to do with the accounting environmental disclosure score. Therefore, the null hypothesis that the financial performance has nothing to do with the accounting environmental disclosure score stands accepted. At present very few companies maintain separate account heads for the capital and revenue environmental expenditure. This low level of accounting for environmental expenses seems to be the cause for such a result.
The financial performance and the general environmental disclosure score association was found significant at one per cent level of significance. NP was found to be positively associated and NPR was found to be negatively associated with the general environmental disclosure score. The main reason for such a result may be that the most of the disclosure variables included in this category were more for the development of environment than its protection and only good financial performers can think to promote the cause of environment.

The financial performance and the total environmental disclosure score association was found significant at one per cent level of significance. Therefore, the null hypothesis that the financial performance is not significantly associated with the total environmental disclosure stands rejected. The main reason for such a result may be that to undertake and report the environmental developmental and protection activities is a costly affair and only the companies with high profitability can afford to do this. Secondly, only the efficient management can pursue the proactive social policy. The more profitable the company, the more efficient the management, hence better environmental performance. NP was found to be positively associated
and NPR was found to be negatively associated with the total environmental disclosure score.

The association of financial performance with the length of environmental disclosure was found to be significant.

The association of the company size with the regulatory environmental disclosure score was found to be significant at one per cent. Therefore, the null hypothesis that the company size is not significantly associated with the regulatory environmental disclosure stands rejected. At individual level association of assets and sales with the regulatory environmental disclosure score was found significant. It was found that the market capitalisation has nothing to do with the regulatory environmental disclosure score.

The company size and the accounting environmental disclosure score association turned out to be significant. Therefore, the null hypothesis that the company size is not significantly associated with the accounting environmental disclosure stands rejected. The sales were found significantly associated with the accounting environmental disclosure score.
The company size and the general environmental disclosure score association was found significant at one per cent level. Therefore, the null hypothesis that the company size is not significantly associated with the general environmental disclosure stands rejected. At individual level, the assets and the sales association with the general environmental disclosure was found significant, while the market capitalisation was found to do nothing with the general environmental disclosure score.

The association of company size and the total environmental disclosure score was found significant at one per cent level. The $R^2$ value of 0.1674, conveyed that the company size could explain 16.74 per cent of the variation in the dependent variable. At individual level, the association of the assets was found to be significant at one per cent level. The association of the sales was found significant at one per cent level. The association of market capitalisation was found to be insignificant.

The company size and the length of the environmental disclosure association was found positively significant at one per cent level. At individual level assets and the sales association with the length of environmental disclosure was found significant. Market capitalisation
contributed nothing towards the length of environmental disclosure.

On the whole, the company size was found to be significantly associated with the quality and quantity of the environmental disclosure. The main reasons for such a result may be that the bigger companies have more stakeholders. The more the stakeholders, the more the company is under pressure to meet their informational needs.

The company age was found positively associated at one per cent level with the regulatory environmental disclosure score, while it was found negatively associated with accounting environmental disclosure score. The association of the age with each of the general environmental disclosure score and the total environmental disclosure score and the length of environmental disclosure was found significant at one per cent level. This conveyed that the quality of environmental disclosure was better in old companies. The main reason for such a result seems that only the experienced management can sense the need of the hour. The more aged the company, the more experienced the management and hence better environmental performance and disclosure.
It was found that the higher the foreign influence involved in a company, better is the level of each category of environmental disclosure, except environmental accounting disclosure. Foreign influence has nothing to do with the environmental accounting disclosure score. The main reason for such a result seems that may be the foreign customer is more aware of the importance of natural and environmental resources and deals only with the environmental friendly organisations.

Systematic risk (beta) was found negatively associated with each category of environmental disclosure. This conveyed that as the degree of systematic risk in a company increases, it would lead to deterioration in the level of regulatory, accounting, general and total environmental disclosure and also the length of environmental disclosure will be adversely effected. The main reason for such a result seems that the more the risk involved in company, the more cautiously the management will work and avoid disclosure of extra information.

Outsider's influence has contributed nothing towards the level of environmental disclosure. Outsider's association with each category of environmental disclosure was found insignificant in each of the four forms of
regression analysis. The main reason for such a result may be that the creditors in the developing economies like India are concerned only with the economic performance of the company and have nothing to do with the social responsibilities of the company. Secondly, the Indian companies try to maintain the secrecy and avoid the disclosure of information even when the stake of the outsiders is high in the company.

On the whole, the level of environmental disclosure was found positively associated with the financial performance, age, size, foreign influence and negatively associated with the systematic risk (beta).

PERCEPTIONS OF CHARtered ACCOUNTANTS

Most of the respondents strongly felt the need for environmental accounting and reporting. Around 30 per cent of the respondents strongly agreed with the need for environmental disclosure. Another around 58 per cent agreed with the need for environmental disclosure. In both the practising and service occupations, more than 90 per cent of the respondents expressed their positive attitude towards environmental accounting and reporting. From this we can conclude that there was an urgent need for the corporate environmental disclosure.
Majority of the respondents strongly felt the need that environmental disclosure should be made mandatory. Around 30 per cent of the respondents strongly agreed while another around 50 per cent of the respondents agreed for the mandatory provision. The respondents in the age group of 35-40 years more strongly felt that the environmental disclosure should be made mandatory as compared to the respondents in the other age groups. The practising respondents more strongly recommended it as compared to the in service respondents. Therefore, there is a need to make environmental disclosure mandatory. It will help the organisations in realising their responsibility towards the effective use of natural and environmental resources. It will also help the society in identification of bad environmental performers. Once the bad environmental performers are identified, they can be punished.

The respondents equally favoured the environmental disclosure in the annual reports and separate environmental reports. 79 (50 per cent) of the respondents required the environmental disclosure in the annual reports and the same number of respondents required it in the separate environmental reports. The preference of practising and in service respondents differed. Whereas a majority of the practising
respondents favoured annual reports, more of the in service respondents were found to be in favour of separate environmental reports.

A separate Section on Environmental and Balance Sheet were found to be the most preferred sections for environmental disclosure among the respondents. Around 27 per cent of the respondents favoured each of these sections. Whereas, a large majority of the practising respondents were in favour of separate section, a greater number of in service respondents favoured the balance sheet for environmental disclosure.

A vast majority of the respondents required that the disclosure of emissions to air, water and land should be in quantitative terms. Hence there was a need to develop some accounting procedure for the disclosure of these items. A greater number of the respondents required that the items such as recycling, waste management, energy conservation, legislative compliance, product design, natural resource conservation, rehabilitation policies, environment management system, environmental audit, health, safety and environment, land contamination, corporate environment policy, environmental accounting policy, proceedings, fines and awards should be disclosed in descriptive terms. However
a vast majority of the respondents required that the items such as environmental research and development, environmental capital expenditure, environmental revenue expenditure and environmental contingent liabilities should be disclosed in quantitative as well as descriptive terms.

The majority of the respondents required that there should be separate disclosure sections for those voluntary environmental disclosure items which can be quantified and which can't be quantified. Around 29 per cent of the respondents strongly recommended the separate disclosure section and another 40 per cent expressed their positive attitude towards the separate quantitative and descriptive disclosure sections. On the whole, the separate disclosure sections were preferred, but practising respondents of the age groups of upto 30 years and 49-50 years preferred the combined quantitative and descriptive disclosure.

Around 90 per cent of the respondents felt that the guidelines for environmental accounting and reporting should be issued. The positive weighted average of 1.18 and 1.21 respectively of the practising and the in service respondents conveyed that both were in favour of such guidelines. Guidelines regarding disclosure of environmental
information will guide the organisation regarding the matter involved in environmental accounting and reporting and also will help in improving the skills of environmental disclosure. Environmental disclosure guidelines will also ensure uniformity in corporate environmental reporting practices.

The majority of the respondents required that the professional Accounting Bodies should issue environmental disclosure guidelines. 35 per cent of the respondents favoured the Professional Accounting Bodies. This may be because of the reason that the practising respondents were the fellows of the Professional Accounting Body and they favoured their own organisation. The views of the practising and in service respondents differed. The practising respondents preferred the Professional Accounting Bodies and the in service preferred guidelines from the Department of Company Affairs.

The majority of the respondents considered the environmental disclosure as an opportunity. They felt that it will ensure effective use of natural resources, create positive image in the mind of public and it will project the organisation as a responsible corporate citizen. Those who consider environmental disclosure as a threat believe
believe that it will create negative image about the company. If the environmental performance is poor it may lead to boycott of the organisation by its customers.

A large majority (93 per cent) of the respondents required that the companies should establish their environmental and report their environmental policies to the public. Both the practising and the in service respondents were found to be in consensus.

The need for the audit of environmental disclosure was felt by the most (98 per cent) of the respondents. Both the practising and the in service respondents preferred the audit of environmental disclosure. It may be because that the audit ensures accuracy of the information and it is better to have either the accurate information or no information than to have the wrong information. Therefore, there was a need to develop some guidelines for the audit of environmental disclosure.

Most (78.91 per cent) of the respondents required that the external auditor should conduct the environmental audit. Both the practising and the in service respondents were found to be of the same view. The main reason for such a result may be that the management of the company may get the environmental audit report manipulated in its favour if
the internal auditor conducts the audit, as the internal auditor is under the direct influence of management.

A large majority (79 per cent) of the respondents required that the organisations should have a separate environment management department and structure of this department should be disclosed in the annual reports. The positive weighted averages of 0.53 and 0.85 respectively of the practising and the in service respondents conveyed that both were of the same view. As the management of natural and environmental resources is a technical job, everybody cannot do it. Hence, there is a need for the organisations to develop separate environment management departments with technical staff.

The majority of the chartered accountants stated that, as prepares, they would keep the informational needs of local community at number 1, environmentalists at number 2 and suppliers, public administration, shareholders, financial community and customers respectively at numbers 6, 3, 5, 7 and 4. The respondents kept the informational needs of the local community at rank '1'. This may be because of the reason that the local community is the worst sufferer of the poor environmental performance of the organisation.
CONTENTS OF ENVIRONMENTAL DISCLOSURE

The most favoured items of environmental disclosure were found to be the fines under environmental laws, emissions to air, environmental accounting policy and the proceedings under the environmental laws as conveyed by the highest positive weighted averages of 1.40, 1.32, 1.29 and 1.28 respectively.

Comparatively less favoured items of environmental disclosure were found to be environmental contingent liabilities, corporate environmental policy, product design, land contamination, environmental revenue expenditure and environmental capital expenditure as conveyed by the low weighted averages.

On the whole, the respondents favoured the disclosure of each of the contents of environmental disclosure. There was no item which respondents required not to be disclosed.

The disclosure of items of environmental information may be categorised into five categories such as 'Environmental Management and Accounting', 'Environment Protection and Development', 'Environment Pollution', 'Poor Environmental Performance' and 'Good Environmental Performance'.
RECOMMENDATIONS

On the basis of findings and the conclusions drawn from the analysis, the following recommendations can be made:

The analysis of corporate environment reporting practices revealed that the status of environmental disclosure in the annual reports was found to be very poor. It lacked uniformity and self-explanation. So, the environmental disclosure should be made mandatory at least for the high polluting industries. The Institute of Chartered Accountants of India should be given the responsibility to issue the guidelines for corporate environmental disclosure to ensure the uniformity. Rather, The Institute of Chartered Accountants of India should consider the view to issue a detailed accounting standard on environmental disclosure issues.

The Government should amend the Companies Act, 1956 and the environmental laws to ensure adequate, fair and uniform environmental disclosure. The Department of Company Affairs and the Ministry of Environment can play a major role in this regard.

More taxation benefits should be given to industry for the expenditure incurred on the protection and development of natural and environmental resources. For this
purpose the Income Tax Act, 1961, should be suitably amended.

Huge environmental costs are being incurred by industry these days. These costs are either hidden in overhead costs or misallocated, thereby making difficult the management of those costs. It is recommended that the prepares of accounts should be guided regarding the utility of maintenance of separate account heads for these expenses.

SCOPE FOR FURTHER STUDY

This study had limited scope and was carried out in accordance with the objectives given in chapter one due to the paucity of resources and time. However, this study can be extended to cover the following areas of environmental disclosure.

- Need to account for externalities in the accounts
- Refinement of externality evaluation techniques
- Development of environmental cost accounting model for industry
- Adjustment of national income accounts & corporate annual accounts for environmental externalities.
- The effect of environmental disclosure on the financial performance, environmental activities and reputation of the organisation.
- whether the industry is fully availing the environmental taxation benefits.
- Difference between actual environmental activities of the organisation and their disclosure in the annual reports.

CONTRIBUTION OF THE STUDY

The analysis of annual reports reveals the present status of environmental disclosure and the views of chartered accountants show what the status of environmental disclosure should be. In the light of this, suitable steps can be taken to improve the status of environmental disclosure. This study is expected to be of great use to the Government, Environmentalists, Stock Exchanges, SEBI, shareholders, corporate sector, professional accounting bodies, other researchers and the society at large. This study may help the Government in amending the companies act, the Environment Protection Acts, and Income Tax Act etc. This study may help professional accounting bodies in issuing guidelines and standards for environmental disclosure. These guidelines will make the environmental disclosure consistent comparable and reliable. This study may help the management of the companies in changing their environmental disclosure practices in accordance with the expectation of the users. This study may be helpful to other researchers, as it can be
the base for further development of this concept. This study through development of environmental accounting and reporting, may help in the development and protection of natural and environmental resources.