

CHAPTER-V
VOLUNTARY ADOPTION OF ENVIRONMENTAL DISCLOSURES
AND STAKEHOLDERS' EXPECTATIONS

The present chapter is devoted to analyzing the second and third objectives of the study. The second objective examines the current status of voluntary adoption of environmental standards and environmental information reporting. The third objective measures the expectations gap between the information provided by preparers and information expected by the users. The present chapter is based on the premise that quite central to effective implementation of accountability is the requirement for understanding the needs of the stakeholders. This ensures the completion of the whole circle of accountability. Therefore, it is important to include the expectations of the environmental stakeholders. The preceding chapter indicated that the business have been a major contributor to welfare of society in the form of charity or donations since extended past. With time, various laws and regulations played their role in institutionalizing the social welfare contribution of an organization by making it mandatory. The legal regulations acted like a stick (in the phrase 'carrot and stick') to create a fear (Küskü, 2007) of penalties, fines and bad image among corporate so that they implement it without fail for the fear of sanctions or punishment. The *first part* of the chapter therefore analyzes the importance of mandatory laws and their compliance. However, in the wake of enormity of environmental degradation, it is important that voluntary actions play a dominant role than merely providing general donations and complying with mandatory regulations. The need of the hour is to take voluntary actions that can render maximum benefit to justify the legitimacy of corporate existence. The outcome of voluntary actions is in the form of environmental report that showcases environmental activities of a corporate entity and delivers the message that the corporate is responsive to the plaguing needs of the society (legitimacy theory). The *second part* of the chapter therefore looks into prevailing voluntary standards and reporting of environmental information.

The first two parts become the background for the researcher to examine empirically the perception of preparers and users regarding voluntary adoption and reporting. The empirical results are presented in the *third part* of the chapter.

The present chapter caters to second and third objectives because they are considered to be mutually interconnected. To fulfill the second objective, voluntary adoption and reporting practices needed to be evaluated from both the preparers and users perspectives. The third objective attempted to find out if there exists any difference of opinions of the preparers and users groups again regarding factors of relevancy and sufficiency of information provided. Therefore, both the objectives were considered the perceptions of both the preparers and users to fulfill the objectives. Important policy guidelines can be implemented only when both the preparers and users perspective are analyzed.

The last section provides the summary of the chapter.

5.1 Mandatory environmental compliance

This section provides a glimpse of various laws, regulations and standards relating to environmental protection prevalent in India and despite their presence, critically analyses the need for voluntary adoption of environmental standards and requirement of disclosure of environmental information. Mandatory compliance refers to laws and regulations enforced by the state or centre on the polluting concerns uniformly and violation of which attracts penalties, fines etc. voluntary strategies differs from organization to organization as it depends on personal choice or level of awareness of the organization.

However, both the types are equally important for protection of the environment. A brief outline is presented in the following paragraphs. In addition, various other important topics related with mandatory aspects such as Supreme Court views, institutions and instruments of environmental protection are also discussed in brief to provide an overall idea of environmental protection.

Environmental concerns demonstrated in Indian constitution and other legislations

To begin with, the presence of environmental concerns at mandatory level is visible from the fact that it is promoted by the Constitution of India. The Constitution is supreme law of our country and is one of the longest in the world (Sinha et al., 1954). It lays down the

framework in which a society is governed. It defines basic political principles, procedures, powers, duties, fundamental rights, directive principles for its citizen. Notably, Indian government became the first of any country to change its constitution to protect its environment. Environment Protection was given the *constitutional status* by the Constitution (42nd Amendment) Act, 1976, to strengthen the Stockholm Declaration on Human Environment, 1972, that imposed duties both on State and citizens for protection and improvement of environment (Diwan and Piyush, 1992).

The two specific articles of Indian Constitution are produced as under:

1. Indian Constitution – Article 48a: The Directive Principles of State Policy enforces duty upon the State to work towards the protection and improvement of the environment and for safeguarding the forest and wildlife of the country (42nd amendment w.e.f. 3rd January 1977).
2. Indian Constitution – Article 51-A (G): It shall be the duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for living creatures (42nd amendment w.e.f. 3rd January 1977).

Besides the ‘environment’ has been specifically covered under various Acts, which are produced as under:

1. The Environment (Protection) Act, 1986 is the umbrella legislation which gives authority to the Central Government to take initiatives towards protection and improvement of environmental quality. Further the government should ensure effective control and reduction of pollution from whatever possible sources. The central government is empowered to prohibit or restrict the establishment or conduct of operations of any industrial facility if they violate environmental norms.
2. Specialized Acts relating to Water Pollution, Air Pollution, Noise Pollution, Factories Act etc, are aimed at prevention, control, and abatement of pollution.
3. Disaster Management Act amended in 1987, Public Liability Insurance (PLI) Act, 1991, that imposes on the owner the liability to provide immediate relief in respect of death or injury to any person or damage to property resulting from an accident while handling any of the notified hazardous chemicals;

4. Acts relating to Forest Conservation, Wildlife protection, Biological Diversity provide for conservation of diversity, and sustainable use of resources.
5. The National Forest Policy of 1988 was formulated to ensure environmental stability and maintenance of ecological balance while protecting the interests of the local people.

India is also a signatory to majority of Multilateral Environmental Agreements (MEAs) on Nature conservation, Hazardous material, Atmospheric emissions, and Marine environment. There are over 500 active agreements/MOUs etc. to which India is signatory.

The following paragraphs show the importance accorded to environment in Planning process of India.

Environmental significance in Indian planning process

Indian economy was nurtured by five year plans for rapid growth to take place after independence. Each plan had a growth target and earmarked budget specific for each target. The environment concern started from the **fourth plan** (1969-70, 1973-74) (Sankhyan and Radha, 2002) at an elementary level. The **fifth plan**, emphasized poverty reduction along with minimizing environmental pollution. The Minimum Needs Programme for instance, focused on meeting the minimum needs for welfare of society as elementary education, rural health and sanitation, nutrition, drinking water, housing, slum improvement with care for environment in rural areas. The **seventh plan** also carried forward the idea of sustainable development in harmony with the environment. The **eighth plan** emphasized on provision of safe drinking water and primary health care facilities, including immunization accessible to all the villages and the entire population and complete elimination of scavenging. The **ninth plan** envisaged environmental sustainability of development process through social mobilization and participation of people at all levels, including NGOs for information dissemination. (Planning Commission, India, Ninth plan). The **tenth five year plan** endorsed the view that all aspects of economic and social life have sensitivity to environment. It laid out Action Plan for controlling pollution in rivers and lakes, stressed on optional use of natural resources, and adoption of pollution prevention and cleaner technology projects,

conservation of Bio-diversity in ecologically sensitive areas and initiated the setting up of an International Institute on Science and Technology for Tropical Areas to handle climate change related issues.

The targets of the **eleventh plan** monitored equitable access of natural resources. The socio-economic targets in the environment and forests sector were: To increase forest and tree cover by 5 percentage points, to attain WHO standards of air quality in all major cities by 2011–12, To treat all urban waste water by 2011–12 in order to clean river waters, To increase energy efficiency by 20 per cent by 2016–17, the underlying goal was to provide equitable access to those who are denied this currently. It recognized the need to have environment protection at the core/centre stage of all policy formulation. **Twelfth five year plan** aimed for inclusive growth through increase in green cover (satellite imagery) by 1 million hectare every year during the Twelfth Five Year Plan, adding 30,000 MW of renewable energy capacity, reducing emission intensity of GDP in line with the target of 20 per cent to 25 per cent reduction over 2005 levels by 2020. (Planning Commission Reports, GOI).

Supreme Court views on environment

The courts are the horizontal institution of accountability (Akpanuko & Asogwa, 2013). The Supreme Court of our country advocated sustainable development imperative in its various judgments that illuminates the forthright importance given to Environment. For instance, in Vellore Citizens Welfare Forum (supra) the Apex Court upheld that:-

“We have no hesitation in holding that “Sustainable Development” as a balancing concept between ecology and development”

Again, Maneka Gandhi V Union of India case (Sankhyan & Radha, 2002, p-219) carried forward the essence of Article 21, wherein environmental degradation was considered to be violative of the fundamental right to life in India.

Institutional bodies for environment preservation

Under Government of India the task of looking after environmental affairs rests with the Ministry of Environment and Forests (MoEF) established in 1985. It is the apex administrative body for regulating and providing environment policy frame work for the country. It is also the nodal agency in the country for the United Nations Environment Programme (UNEP). The State department of environment, Central and State pollution

control boards, the Botanical and Zoological Survey of India, the Forest Survey of India, the National River Conservation Authority (formerly, Central Ganga Authority), the National Afforestation and Eco-development Board, the Indian Council for Forestry Research and Education, the Wildlife Institute of India, the National Museum for Natural History, etc, are the Ministry's partners in carrying out environmental protection activities. The Central Pollution Control Board (CPCB) works at the Central Level. It is the statutory authority which is primarily responsible for prevention and control of industrial pollution. The State Pollution Control Boards (SPCB) are required to carry out the pollution control tasks at the state level while reporting to CPCB. Other ministries involved with environmental protection include Ministries of External Affairs, Environment and Forests, Agriculture, Water Resources, Finance, Industries, Rural Development, Commerce, Non Conventional Energy Sources, Finance and the Planning Commission.

India also has the Bureau of Indian Standards (BIS) which is the national standards body of India that formulates standard on environmental management.

Environmental instruments

In addition to the Acts, there are market-based instruments primarily devised for the abatement of industrial pollution like there are income tax exemption, depreciation allowance, tax exemption on capital gains are allowed for moving the business from congested urban areas to other areas, excise and custom duty exemptions are given to accelerate the use of environmentally friendly raw materials, soft loans are arranged for the adoption of clean technologies to treat pollution at source. Other aids are usage of remote sensing and geographical information systems in natural resource management and environmental protection.

According to Morgera, 2009, various environmental management instruments operating in India are:

- **Environmental impact assessment (EIA):** In EIA, impact of new projects on environment is assessed with critical input from public hearings and should be approved by MoEF. EIAs are applicable to new projects to assess the risks associated with commissioning of the said projects, mitigation of environmental problems, various alternatives available. It is only when, a

project clears the impact assessment requirement which means that the new venture will not have deleterious impact which is non-remediable, that it is given a green signal to establish.

- **Forestry clearance:** The forest clearance requires a payment of afforestation charges before establishment of the project.
- **Consent to establish (CTE) and consent to operate (CTO):** These are provided by SPCBs on the basis of positive results attained from examination of potential environmental impacts and pollution control installations.

5.2 Voluntary environmental standards and certification

Voluntary environmental standards adoption suggests that a business performs over and above the regulatory minimum (Dahlsrud, 2008). In other words, adoption of standards is a voluntary corporate initiative and the third party evaluations certify that the standards have been complied with and thereby ensure its credibility. According to Rasche & Daniel, 2006, Standards represent predefined rules for organizational behaviour advanced by company, external stakeholder or an independent third party institution. Standards are established targets, permissible limits of substances in products; and discharges into air, water, and land. Standards can be classified as principles and labels. Labels like Eco-mark certifies that specified products with particular features are produced in accordance with predefined procedure. Principles on the other hand are values or value system providing guidance to overall actions.

The importance of voluntary standards arises from the fact that though worldwide there has been a tremendous growth in the number of laws, regulations, and penalties in the area of environment, however, developing countries are facing difficulty in controlling pollution because laws and rules are inadequate in coverage as well as in terms of supportive mechanism and resources to enforce legislation to protect the environment (Adams & Zutshi, 2004). Therefore, voluntary adoption of environmental standards is of utmost importance.

Standards can be of following types:

Table 21: Types of Standards

SN	Types of Standards	A brief explanation of the standards
1	Certification Standards	Certification Standards establish rules of conduct and organizations are awarded a certificate of compliance
2	Performance Standards	Performance Standards provide dos and don'ts such as providing safety equipments, training, non discriminating behavior
3	Process Standards	Process Standards prescribes procedures to be followed to maintain accountability.
4	Application based standards	Application based standards cater to a particular domain such as social targets (SA8000), Environmental standards (ISO 14001), Economic standards (ISO 9000)
5	Focus based standards	Focus based standards narrow on a particular field of application like accounting, accounting and auditing, Accounting, auditing and reporting (GRI)
6	Global Standards	Global standards are meant for global applications and not restricted by regional boundaries (EMAS)
7	Regional Standards	Regional standards are applicable to a particular region
8	Local Standards	Local standards are meant to be observed locally
9	Generic Standards	Generic standards are applicable to all industrial units
10	Industry wise Standards	Industry wise standards are fine-tuned to match the requirements of a particular industry like chemical, cement or red, green and orange industrial groups
11	Firm specific standards	Firm specific standards are self drawn commitments of a firm to establish high standards of performance

(Adapted from Rasche and Daniel, 2006)

Following are the different types of standards prevailing in developing countries.

Table 22: Types of Standards prevailing in Developing countries

SN	Types of Standards	Explanation of the standard
1	Ambient Environmental Quality Standards	Ambient environmental quality standard that specifies pollutants in the ambient air, water or land
2	Effluents or emission Standards	Effluent or emission standard specifies maximum effluent limits within a time frame
3	Technology based standards	Technology based standards lays down a particular technology for a firm to adopt
4	Performance standards	Performance standard prescribe a measure for the performance and the firm can adopt suitable means to satisfy the measure
5	Process standards	Process standard is applied to a manufacturing process that must meet a particular effluent criteria

(Adapted from Rasche and Daniel, 2006)

There are various standards prevalent in India, a few are produced as follows:

Bureau of Indian Standards (BIS)

A number of voluntary standards and certificates are aimed at enhancing the competitiveness of products on environmental grounds. Firms submit the details of product along with their impacts on environment before the certificate is guaranteed.

Bureau of Indian Standards (BIS), is the National Standards Body of India which came into existence, through an Act of Parliament dated 26 November 1986, on 1 April

1987. It formulates standards, provides certification on Product/Systems, Laboratory Service besides other international activities.

Ecomark scheme

The eco-labelling scheme known as 'Ecomark' was launched the Government of India in 1991, to increase consumer awareness, and for easy identification of environment-friendly products. The product is examined in terms of the main environmental impacts during production, usage and disposal.

ISO – International Organization for Standardization

ISO series, published in 1996, prescribes the standards for establishing efficient and effective environmental management systems (EMS). It covers environmental auditing, labeling, performance evaluation, life cycle assessment as well. It allows the management to set environmental goals, respond compatibly to environmental regulations, understand and fine-tune to social pressures, effectively control environmental responsibility, manage internal costs, enhancing product's image, company image, identifying areas of environmental importance in quality or health and safety etc., maintaining competitive edge all along and handling environmental risks as well. ISO 14000 provides guidance to Environmental Management Principles, ISO 14010 provides guidelines on Environmental Auditing, ISO 14020/23 deals with environmental labeling, ISO 14040/43 deals with Life Cycle Assessments, ISO 14060 deals with Environmental aspects in Product Standards.

AccountAbility (AA1000) assurance standard

It is an accountability standard primarily focusing on accountability, auditing and reporting on social and ethical issues. It consists of principles and standards to be followed during planning, accounting, auditing, reporting; involves essential aspects of embedding these principles within the organizational framework and the basic cornerstone of its principles is involvement of stakeholder at every stage and being accountable to them.

Global Reporting Initiative (GRI)

It is a project of CERES (Centre for Environmental reporting and Environmental standards). It is focused on corporate sector. Its objective is to bring about uniformity in standards prevailing globally and pertaining to sustainable reporting just as been done with financial reporting standards. It endeavours to produce environmental report which is globally acceptable for in multiple industries as well as tailor made reports applicable to specific industries.

Eco-Management and Audit Scheme (EMAS)

This scheme was initiated by the Council of European Union (EU) in 1993. The core value of EMAS is to enable continuous improvement in the environmental performance of companies. It requires publication of environmental statements by companies operating in European Union.

Environmental awards

A review of websites of a majority of Sensex companies as on April 16th, 2009 was undertaken to identify certain other agencies contributing Environment related awards for extra ordinary work, as taken from ACC annual report are as under:

- ***Indira Priyadarshini Vrikshamitra Award*** - The Ministry of Environment and Forests presents this award for “extraordinary work” carried out in the area of afforestation
- ***FICCI Award*** - Federation of Indian Chambers of Commerce and Industry (FICCI) presents the award for innovative measures for control of pollution, waste management & conservation of mineral resources in mines and plant
- ***Subh Karan Sarawagi Environment Award*** - The Federation of Indian Mineral Industries presents the award for successful implementation of environment protection measures
- ***Drona Trophy*** - Indian Bureau of Mines presents this award for extra ordinary efforts in protection of Environment and mineral conservation in the large mechanized mines sector

- **Rajya Sthariya Paryavaran Puraskar** - Madhya Pradesh Pollution Control Board presents this award for outstanding work in Environmental Protection and Environment Performance.
- **Corporate Wellness Award** – presented by CII (Confederation of Indian Industry) (e.g. L&T)

Though a number of regulations and standards exist but research and world wide reports indicate not so exceptionally favourable compliance or adoption rate in Indian concerns. For instance, a study conducted by WWF on Indian Corporate adherence to environmental standards throws valuable light on the present state of affairs. The following table is excerpted from WWF report on Indian corporate entities' adherence to environmental focused standards and is produced as follows.

Table 23: Adherence to Environmental Standards and Guidelines within Legal framework

Proportion of Companies	Breaking Laws	Lower the Standards	Following the Standards	Going beyond the Standards	Suggest New Standards
Very Few	23%	19%	10%	55%	76%
Few	11%	21%	49%	28%	11%
Many	51%	49%	37%	13%	9%
Very Many	15%	11%	4%	4%	4%
Total	100%	100%	100%	100%	100%

(Source: Saqib et al., 2007, Report on Indian companies in the 21st century. WWF Publication)

The table brings out that in Indian context there are significantly high as represented by 'many' respondents (51%) who think that they have broken many laws at some point of time or have lowered the prescribed standard (49%). At the same time, ironically, there are just hardly a few who claim themselves to be 'going beyond the standards (55%) or 'establishing new standards' as represented by 'very few' number of times.

Regarding voluntary compliance, WWF report (India in 21st century) presents a breakup of various schemes adhered to by Indian corporate entities which are supposedly environment friendly scheme as presented below:

Table 24: Adherence to various Environment Friendly Schemes

Schemes	Overall Percentage of respondents	Break up of overall percentages		
		ICT	Finance	Energy
Eco-Mark	7%	--	33%	67%
Bhagidaari Scheme	4%	--	--	100%
Corporate Social Responsibility (CSR)	49%	26%	39%	35%
“ISI” Mark	26%	40%	20%	40%
ISO 14001 certification	47%	36%	20%	44%
Equator Principles	14%	27%	73%	--
Forest Stewardship Council certification	3%	33%	--	67%
Clean Development mechanism or carbon trading	16%	20%	20%	60%

(Source: Saqib et al., 2007, Report on Indian companies in the 21st century. WWF Publication)

It is apparent from the table that CSR leads the show in following various environmental schemes at followership of 49%. ISO certification comes next at 47%. The least positions are held by schemes such as Forest Stewardship Certifications (3%), Bhagidaari Scheme (4%) and Eco-Mark scheme (7%). However promising is the fact that nearly 1/6th (16%) of respondents are aware of Clean Development mechanism such as carbon trading.

5.3 Voluntary adoption and disclosures

The outcome of voluntary adoption is in the form of a report that lists the activities of the corporate entity and presents the facts transparently to various report readers after examining their specific requirements. For the purpose of present study also, the idea of corporate environmental accountability encompasses environmental performance, reporting and demands auditing to provide assurance of truth in performance. Environmental accountability is complete only when the related information is released to its users.

Hence, Environment reports are important and they are a means for portraying the management philosophy towards environment and its environment friendly initiatives in a written form because the community expects companies to act in a socially and environmentally responsible manner (Lothian, 1994; Tinker and Neimark, 1984). More specifically, Environmental reporting means incorporating environmental issues into corporate reports. It includes both voluntary and mandatory disclosures by corporate entities on the impacts, risks and liabilities of its activities on the environment.

The necessity of environmental information disclosure is based on the following benefits observed through research and discussions:

- It helps in discharging environmental accountability
- It forces the board room to reassess their impacts on all the stakeholders
- It enables a firm to transcend beyond financial metrics and incorporate non financial metrics (qualitative growth ie., growth of the society and easing of pressure on biosphere)
- It builds upon the image of the company and represents the ethical side of its existence
- It shows the commitment of the company or business unit in proactively safeguarding the environment
- It sets standards of good performance for other entities to follow
- It allows early detection of probable environmental impacts and corresponding liabilities and estimation of environmental risks, so that steps can be taken to inform the stakeholders about its existence so that they do not remain in dark as in case of Bhopal Tragedy and also show the steps that are taken and would be taken in case of such exigency
- It shields the company from probable legal cases from activists as they develop a soft corner rather than becoming confrontational because the entity has demonstrated a history of compliance and has informed the stakeholders of all types of impacts on environment and steps taken

Environmental accountability reporting approaches

The reporting approaches can be categorized as Qualitative and/or Quantitative approach. Qualitative may relate to company description of environmental activities, impacts etc, written environmental policy, EMS (Environmental Management System) description, compliance with legislative requirements, community dialogue or discourse, risk management.

Quantitative approach stand for quantitative figures or numbers pertaining to environmental expenditures, emissions, raw materials, recycle, environmental

performance indicators and so on. Various alternatives available to the corporate for selecting the ‘place’ and ‘type’ of disclosure are presented as follows:

Table 25: Options available for Place and Type of Environmental disclosure

	Place of disclosure
1	Disclosure in annual report
2	Disclosure in footnotes to annual report only
3	Disclosure as a separate report (GRI or else) (published or on web) only
4	Disclosure in annual report and separate report (published or on web)
	Type of disclosure
1	Detail narrative in paragraphs only
2	Detail narrative with monetary facts of current year
3	Monetary facts in detail and comparison with previous years
4	Comparative monetary details and future prospects

Indian concerns relating to corporate environmental reporting

Mandatory environmental accountability reporting is compulsory reporting on environmental issues in a prescribed format. It is currently practiced in developed countries at an extended level. For instance, in Netherland and Denmark environmental reporting is mandatory; the SEC of USA requires quoted companies to disclose information on environmental expenditures and liabilities. But in India, the regulatory framework governing corporate disclosure in India includes the Companies Act 1956 and the Securities and Exchange Board of India (Amendment)

Act 2002. The Companies Act 1956 after several amendment is now known as the Companies (Amendment)/(Second Amendment) Act 2002. The Companies Act requires the preparation of annual accounts of companies as per accounting standards issued by the Institute of Chartered Accountants of India (ICAI). However, till 2012, there was no requirement under either the Indian Companies Act or Accounting Standards (ASs) to disclose environmental information baring section 217(1) (e) of the Companies Act.

Environmental reporting in India: Section 217(I)(e)

- Section 217(1)(e) of the *Companies Act, 1956* requires that every company shall, in the report of its board of directors, include the following information:
 - A. Conservation of energy:
 - (a) energy conservation measures
 - (b) any additional investments and proposals being implemented for the reduction of energy consumption
 - (c) impact of the measures at (a) and (b) above, for the reduction of energy consumption and the consequent impact on the cost of production of goods
 - (d) total energy consumption and energy consumption per unit of production
 - B. Technology absorption:
 - (e) efforts made in technology absorption.

Recent Endeavour: Business responsibility reports

Ministry of Corporate Affairs, Government of India, came out with a set of principles under the title of 'National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of Business' in July, 2011 and came with a reporting format titled 'Business Responsibility Report'. The main thrust area was to promote the adoption of nine core principles for disclosures as part and parcel of business practices. It also put forth a structured reporting format which would highlight the steps taken by the companies in implementing said principles.

Main highlights of the report are:

- Business should conduct and govern themselves with ethics, transparency and accountability
- It should provide goods and services that are safe and contribute of sustainability throughout their life cycle
- It should respect the interests of and be responsive towards all stakeholders whether disadvantaged, vulnerable and marginalized

- It should respect, protect and make efforts to restore the environment
- It should support inclusive growth and equitable development

Besides the report distinctly indicates that it should be cited whether a policy exists and cite reasons for non existence of policy.

Changes in Companies Act, 2013

The suggested guidelines have been incorporated within Companies Act, 2013 and have obtained a legal status. Section 135 of the Act has been devoted to implementation of these guidelines. It provides that companies having a networth of Rs.500 crore or more, or turnover of Rs.1000 crore, or a net profit of Rs.5 crore or more during any financial year shall constitute a Corporate social responsibility committee. The committee should comprise of three or more directors, including one or more independent director. The board's report should have reference to composition of committee. The responsibilities of the committee shall be to formulate the policies along with carry out of activities as specified in Schedule VII. The activities are as follows:

- Eradication of hunger and poverty,
- Promotion of education,
- Promoting gender equality and empowering women,
- Reducing child mortality and improving maternal health,
- Combating human immunodeficiency virus, acquired immune deficiency syndrome, malaria and other diseases,
- Ensuring environmental sustainability,
- Employment related with vocational skills,
- Social business projects,
- Contribution to the Prime Minister's National Relief Fund or any other fund set-up by the central government or the state governments for socio-economic development and relief, and funds for the welfare of the scheduled castes and Tribes, other backward classes, minorities and women
- Such other matters as may be prescribed

Further, under section 166 (2) of 2013 Act, it is required that the board acts in good faith in order to promote the objects of the company for the benefit of its members as a whole,

and in the best interest of the company, its employees, the shareholders, the community and also essentially for the protection of the environment.

In addition, as per section 135 of 2013 Act, these companies are also required to spend at least 2% of the average net-profits of the immediately preceding three years on CSR activities. In case such amount is not spent adequate explanation for the reasons should be given in the director's report.

Changes in SEBI listing requirements

In line with these guidelines, the Securities and Exchange Board of India also made certain changes in reporting of listed companies in the direction of 'ESG' (Environmental, social and governance) disclosures. It was mandated that 'Business Responsibility Reports' (BR reports) should become a part of annual reports for the listed corporate entities. SEBI introduced Clause 55 in the Equity Listing Agreement that required top 100 listed entities based on market capitalization at BSE and NSE as on March 31, 2012 to include BR reports as part of annual reports. Other listed entities can chose to disclose BR reports on voluntary basis. However, those entities which have been submitting sustainability reports to overseas regulatory agencies or stakeholders on some internationally accepted reporting framework are exempted from such requirement but they still have to submit the sustainability report along with the mapping of principles of BR reports with their disclosures. The provisions were effective from financial year ending on or after December 31, 2012.

The above discussion suggests that the government is taking due care in incorporation of environmental concerns on mandatory grounds. What is left to be seen as to how corporate takes up the issue. Hence, the next section is devoted to examination of corporate entities response to the matter of voluntary adoption and the potential of mandatory governmental efforts.

5.4 Empirical results relating to voluntary adoption

In Indian case, the dilemma is that the quantum of reporting contents and depth of reporting varies from company to company and it suffers from lack of relevance and sufficiency for the purpose of intended users, this lacunae leads to absence of credibility on the information supplied by the preparers which has come up as a major subject of

research and indepth analysis. Voluntary adoption of environmental efforts is crucial today. In the present research, the researcher wanted to intensively examine the perception of corporate managers and in some areas the perception of environmental NGOs regarding the state-of-the-art of adoption of environmental standards and disclosure that fulfill accountability. The overall theme was broken down into the following sub-areas:

- Current drivers of Voluntary Adoption and Disclosure
- Effectiveness of Mandatory Compliance vis-a-vis Voluntary efforts
- Expected Place and Type of Disclosures in Future
- Motives of Voluntary Adoption and Comparison of responses of corporate and ENGOs regarding the motives of voluntary adoption
- Hurdles faced by Corporate Managers in voluntary adoption
- Internal and External Remedies for motivating voluntary adoption

5.4.1 Current drivers of voluntary adoption

The first area is to identify the major factors of voluntary adoption of environmental standards among corporate entities. The key factors identified for the purpose of study are called as drivers of voluntary adoption. The current scenario of environmental concern is influenced by numerous factors. These factors vary from country to country and from time to time. Numerous literature reviews and discussions narrowed down my prepared list of factors to a few selected drivers of adoption. Based also on the pilot study, the following key factors as shown in Table 26 were retained and multiple choices was offered to respondents to select more than one influencing variable. These drivers are the determining factors and vital to consider by policy makers in drafting any rule or policy in the area. The table of percentage responses is produced along with pictorial representation in the form of Figure 16.

Table 26: Distribution of Responses on drivers of Adoption

(N = 45 MGRs)

Current Drivers of Voluntary Adoption	Frequency of selection	Percentage of responses
Legal Regulations	80% (f=36)	42.9%
Industry Norms	62% (f=28)	33.3%
Shareholders' Demands	20% (f=9)	10.7%
Personal Criteria	11% (f=5)	6.0%
Stakeholders demands	9% (f=4)	4.8%
Time Availability	4% (f=2)	2.4%
Total	186% (f=84)	100%

The column titled as 'frequency of selection' shows the number of times the particular driver has been selected by corporate managers as the current driver of voluntary adoption. The 'legal regulations', as the current driver, was selected 36 times as compared with 'time availability' which was selected just twice. The least frequency of selection of the factor of 'time availability' suggests that time is not considered as a hindrance in voluntary adoption which is a positive approach expected from corporate managers.

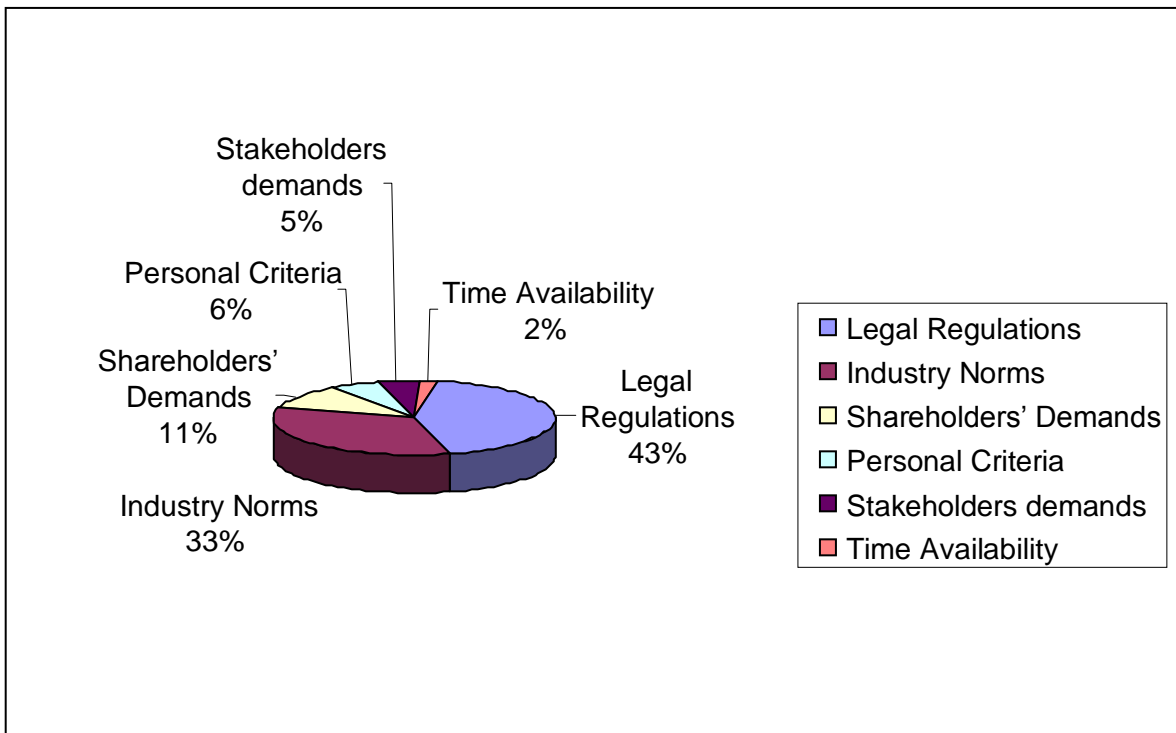


Figure 16: Corporate Response over current drivers of voluntary adoption

Table 26 and Figure 16 represent the percentage distribution of responses on the factors of time, industry norms, shareholder, legal requirement, personal criteria and stakeholder demands. It was observed that still 'legal requirements' manages to snatch the highest score (43%) in influencing the adoption and disclosure activities of a concern. Followed closely by 'Industry Norms' (33%), it is not a bewildering concept keeping in mind the developing nature of our industry and amount of corruption prevailing where it is considered just adequate not to be a leader or laggard but to play on even field with that of competitors. There are many factors behind holding this kind of sentiment which needs another research to be taken in future. Shareholders' demands also play a vital role (11% of responses). Shareholders were considered quite important as well which is supported by clear common sense as they provide the reason for managers to work and availability of rich literature suggesting the importance of shareholders in maneuvering strategic choices in their favour.

Quite interestingly, stakeholders' pressure for voluntary adoption could score only 5% of the responses, which points out at the current weak position of stakeholders in posing their demands for high accountability, coinciding with the fact that NGOs are not considered an important audience.

Ironically, mediocre response was received for the alternative of 'Personal Criteria' (6%) which is amongst the crucial factors in determining advancement towards environmental activities. It needs to be enforced among managers that they regard themselves as holding an important place to make a company environmentally friendly.

5.4.2 Effectiveness of mandatory regulations vis-à-vis voluntary efforts

As described in the beginning of the chapter, there is no deficiency of legal rules and laws in India. In other words, there are numerous laws and rules but they lack the teeth due to many ponderable reasons as reviewed through literature survey. In such a scenario it is essential to have companies come up on their own to take up the issue of social concerns. Keeping this background in mind, it was considered appropriate to examine the comparative status of voluntary efforts in comparison with mandatory factors to understand the prevailing state of affairs. Table 27 examines the perception of the corporate entities in this regard.

Table 27: Current proportion of Mandatory and Voluntary efforts**(N = 45 MGRs)**

Statement	Response Criteria	Frequency	Percentage
Proportion of mandatory and voluntary disclosure	Both are same	3	6.7%
	Voluntary efforts/disclosure is more	9	20%
	Mandatory disclosure is more	33	73.3%
	Total	45	100%

It is apparent from the table that corporate managers also echo the same point that the efforts put in by organizations are largely determined by the presence of mandatory factors. About 73% of respondents (see Table 27) feel that ‘Mandatory’ pressure defines the state-of-affairs regarding environmental responsiveness. Essentially, it also conveys the understanding that there is negligible presence of voluntary efforts exceeding mandatory regulations.

As a corollary to above comparison, the future potentiality of each of them was also enquired. The results are assimilated in the following table. The output suggests that a high percentage feels that governmental mandatory rules can enhance it further (57.8% - Table 28) given the Indian scenario. On the other hand, potentiality of ‘corporate voluntary efforts’ was neither denied not totally claimed as a high percentage response was yielded at the scale factor of ‘May or may not’ (46.7% - Table 28).

Table 28: Potential of Mandatory efforts in comparison with Voluntary efforts**(N = 45 MGRs)**

Statements	Response criteria	Percentage
Only Government mandatory rules can improve Voluntary Adoption and disclosures further	Definitely yes	57.8% (n=26)
	Prob. Yes	11.1% (n=5)
	May or may not	4.4% (n=2)
	Prob. Not	6.7% (n=3)
	Not at all	20% (n=9)
	Total	100% (N=45)
Only Corporate voluntary efforts can improve further	Definitely yes	15.6% (n=7)
	Prob. Yes	20% (n=9)
	May or may not	46.7% (n=21)
	Prob. Not	13.3% (n=9)
	Not al all	4.4% (n=2)
	Total	100% (N=45)

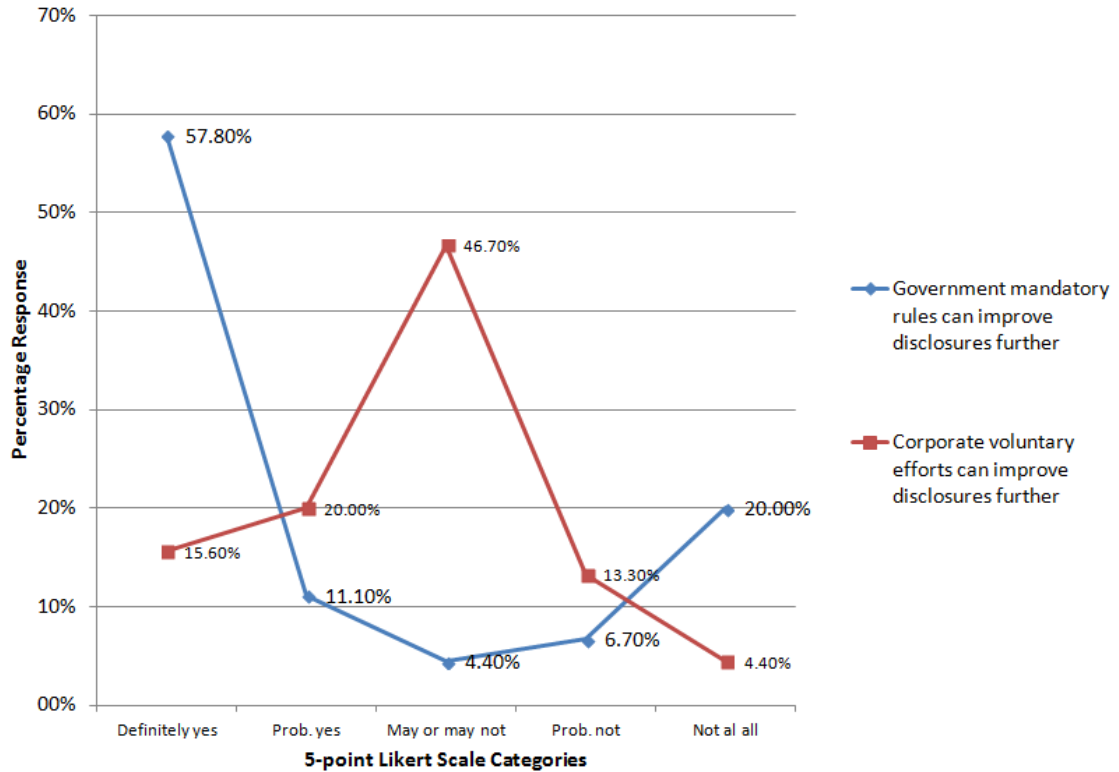


Figure 17: Comparison of mandatory (Government) efforts and voluntary (corporate) efforts

Figure 17 depicts the comparative presentation of the corporate responses. It shows pictorially that there is widest span of difference in potentiality of mandatory in comparison with voluntary efforts. It suggests strongly the call for Governmental action and demonstrates the presence of dilemma regarding the efficacy of individual efforts and lack of individual effort in solving the environmental issue.

5.4.3 Expected place and type of disclosures in future

Interestingly and coincidentally, the response of corporate on two counts of probable place as well as type of disclosures goes a great lot in determining their future actions. The next Table 29 displays the corporate response on their preference for place and type of disclosures in future.

Table 29: Corporate response on Expected Place and Type of Disclosure

(N=45 MGRs)		
Criteria	Method	Responses
Place of disclosure	Separate report	4.44% (n=2)
	Annual report	60.00% (n=27)
	Both annual and separate report	35.56% (n=16)
Type of disclosure	Narrative in paragraphs	2.22% (n=1)
	Narrative with monetary facts of current year	6.67% (n=3)
	Comparative monetary facts with previous years	62.22% (n=28)
	Comparative monetary facts with future prospects	28.89% (n=13)

As evident from the above Table 29, a great density of respondents (60%) cited that environmental information should form part of Annual report which is normally read and disseminated as a comprehensive and all inclusive information report to all the users. Equally important was their response on ‘Type of disclosure’ where the corporate were unanimous in addressing the issue by citing ‘Comparative monetary facts with previous years’ (62.22%) which is a great and welcome feature for Indian corporate.

5.4.4 Motives of voluntary adoption

In the current sub-section, various aspects related to what motivates a manager to adopt environmental pro-posture voluntarily would be studied. Various empirical as well as theoretical literatures gathered to understand the motives and problems faced in the pursuit resulted in putting together a host of motives (Table 30) commonly understood to prevail and a few hurdles (Table 32) commonly presenting a daunting task. Corporate responses were gathered on a five point Likert scale.

Table 30 presents various motives in the decreasing order of mean value calculated from the responses received, so that an easy insight into the order in which the motives are perceived to be dominant player in comparison to others.

Table 30: Corporate response on Perceived Motives of Voluntary Adoption

Minimum Value = 1 (Distant Motive)

Maximum Value =5 (Near Motive)

N = 45 MGRs

Motives of Disclosure	Close Motive (4+5)	Neutral (3)	Far Motive (1+2)	Std. Dev.	Mean
Regulations compliance	77.80% (n=35)	11.10% (n=5)	11.10% (n=5)	1.180	4.29
Internationalisation	77.80% (n=35)	4.40% (n=2)	17.80% (n=8)	1.365	4.00
Employee awareness	60.00% (n=27)	11.10% (n=5)	28.90% (n=13)	1.561	3.71
Media image	57.80% (n=26)	8.90% (n=4)	33.30% (n=15)	1.657	3.40
Identifying environmental problems	37.70% (n=17)	42.20% (n=19)	20.00% (n=9)	1.154	3.38
Handling future risk/liability	51.10% (n=23)	4.40% (n=2)	44.50% (n=20)	1.510	3.36
Ethical duty	31.10% (n=14)	42.20% (n=19)	26.70% (n=12)	1.156	3.07
Gaining support of stakeholders	37.80% (n=17)	31.10% (n=14)	31.10% (n=14)	1.086	3.04
Stakeholders right to information	28.90% (n=13)	48.90% (n=22)	22.30% (n=10)	0.853	3.00

It is evident from the table, that ‘regulation compliance’ variable receives the highest score of 78% approx. in terms of possible motive of disclosure (Mean 4.29, SD 1.180), while notably ‘stakeholders’ are recognized as least influential as they formed their place at the lowest part of the ladder displaying mean scores of motives in descending order. Contemporarily, the stakeholder’s right to information (Mean 3.00, SD 0.853) garnering support of 29% approx., should have been considered important but responses have not turned out to be as expected. As such, the stakeholder position needs to be strengthened vis-a-vis the corporate.

The data is also presented with the help of following figure to understand the relative positioning of mean response values in respect to various motives.

Minimum Value = 2 (Mean value)
 Maximum Value = 5 (Mean Value)

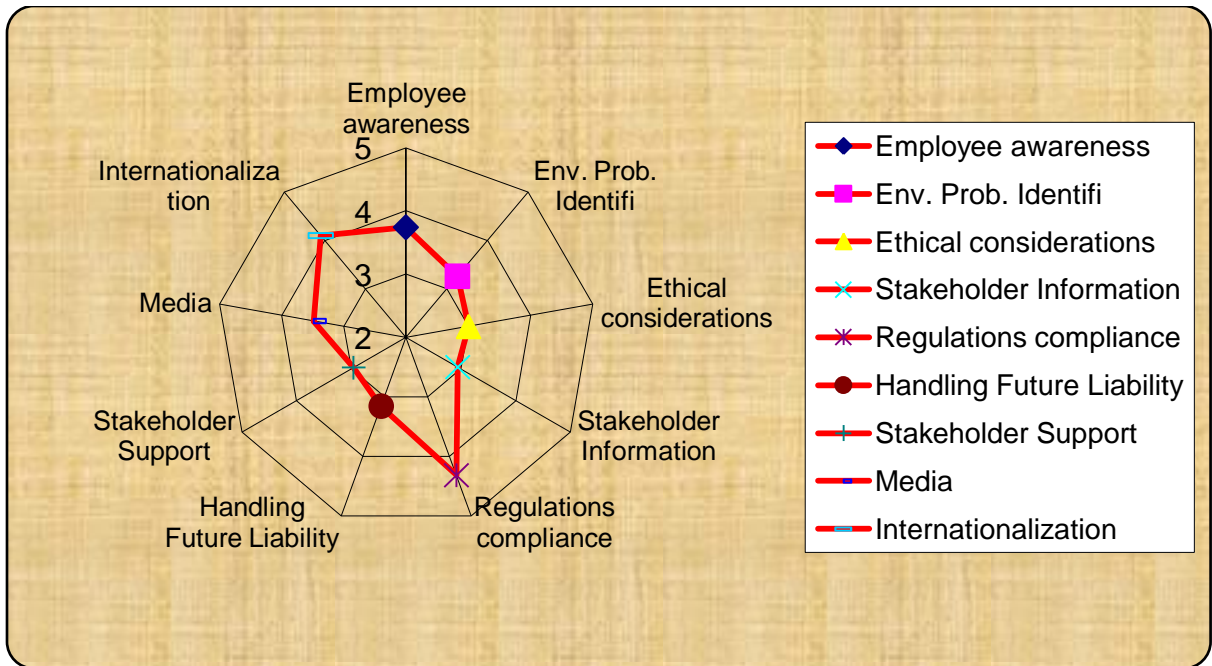


Figure 18: Corporate Perception of Organizational Motives of Disclosures

The Figure 18 displays various nodes reflecting the mean score of various corporate motives. The mean value represented in the centre is 2, the first circle from inside stands for mean of 3, the second circle from centre represents mean of 4 and the last or the outermost rim represents mean of 5. The nodes near to the outer rim form the ‘Near Motive’ for following or taking up pro-environmental activity. In the above figure, the motives of ‘Regulations compliance’, ‘Internationalization’ formed the near motives of voluntary adoption. Similarly, the nodes near the centre denote that they are considered a ‘distant motive’, because they lie at a distance from the outer rim. The motives of ‘stakeholder support’, ‘stakeholder information’, ‘risk minimization’ and ‘ethical considerations’ are the cases of distant motives as depicted on the chart.

Comparison of responses of corporate and ENGOs regarding the motives of voluntary adoption

In comparison with the views of corporate entities regarding motives or voluntary adoption, the views of members of ENGOs was gathered to evaluate the difference in perception. The results are presented in the following table and the next figure.

Table 31: Comparative analysis of motives (ENGOS and Corporate)

(N = 45-MGRs, 46-Members of ENGOS)

Motives	Category				Absolute Difference
	Members of NGO		MGRS		
	Mean	Std Deviation	Mean	Std Deviation	
To raise environmental awareness	2.24	1.645	3.71	1.561	1.47
Protection of environment as an ethical duty	2.43	1.500	3.07	1.156	0.64
Serving stakeholders right to information	1.93	1.183	3.00	.853	1.07
Complying with environmental regulations	3.50	1.166	4.29	1.180	0.79
Safeguarding future liabilities	3.44	1.007	3.36	1.510	0.08
Creating a public image	3.47	1.031	3.40	1.657	0.07
Gaining support of stakeholders	2.87	.810	3.04	1.086	0.17

Minimum Value = 0 (Mean value)
 Maximum Value =5 (Mean Value)
 (45-MGRs, 46-Members of ENGOS)

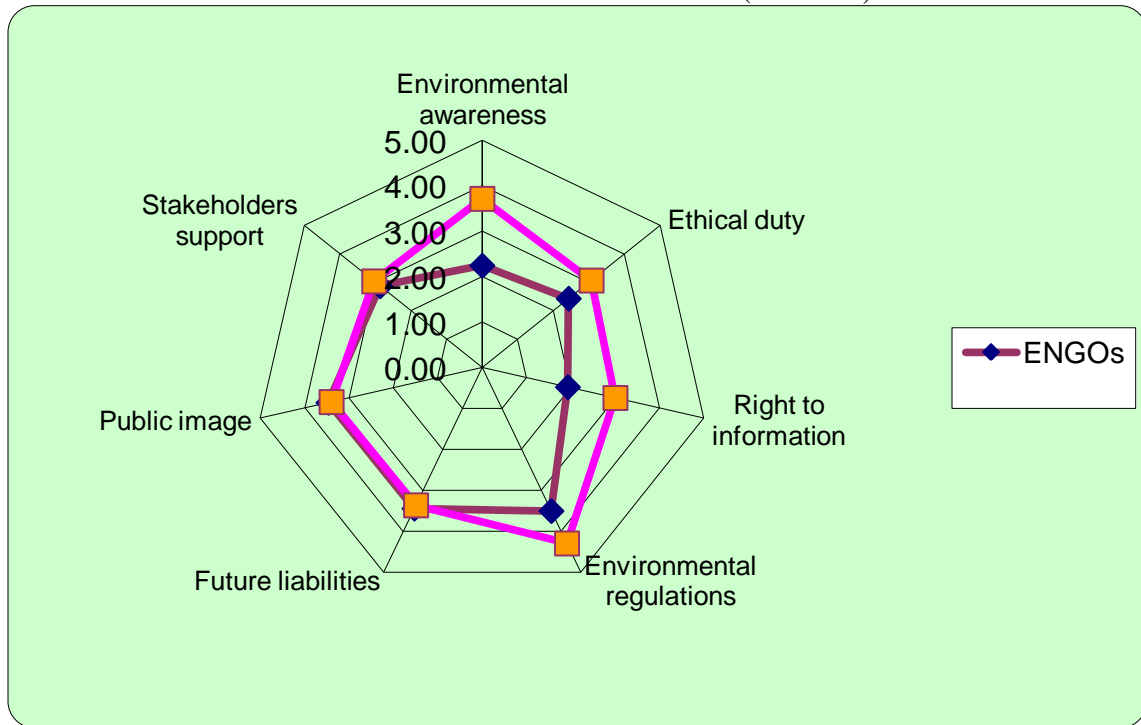


Figure 19: Corporate and ENGOS perception of Motives of Corporate voluntary adoption

Table 31 and Figure 19 depict the comparative positioning of the perceived motives of disclosures between Corporate entities and ENGOS. It reveals difference in mean scores of corporate and ENGOS aggregate scores of different considerations regarding motives that influence the adoption of voluntary disclosures. Analyzing corporate mean scores, produces the results that ‘Complying with environmental regulations’ (Mean 4.29, S.D. 1.180) are perceived as the highest motivating factor influencing the disclosure. Next,

score is demonstrated by the need for ‘Environmental Awareness’ (Mean 3.71, S.D. 1.561). The last pedestal is held by ‘Creating Public Image’. While, an analysis of ENGOs also reveals a similar view, where they consider disclosure as guided by largely due to the need for ‘Complying with environmental regulations’ (Mean 3.5, S.D. 1.166) while creating a ‘Public Image’ assumes next importance at mean of 3.471 and S.D. 1.031. On the other hand, ‘Stakeholder right to information’ is perceived as the last objective of disclosure. Interestingly, highest absolute difference (in the last column in table above) reveals that large difference exist for the variable that motive is ‘to create environmental awareness’ (1.47). While members of ENGOs consider it as least important motive, the preparers suggest it second most important motive.

5.4.5 Hurdles experienced in voluntary adoption

The present section discusses the corporate managers’ perception regarding obstacles experienced during voluntary adoption. For the ease of analysis, the data is reproduced as shown in Table 32 under three categories namely, Agree, Neutral and Disagree. Again, various obstacles are listed in the decreasing order of mean.

Table 32: Corporate response on perceived difficulties in voluntary adoption

Minimum Value = 1 (SD)
Maximum Value =5 (SA)
N = 45 MGRs

Difficulties Encountered	Agree (SA+ PA)	Neutral	Disagree (PD+ SD)	Std. Dev.	Mean
Understanding Environmental Consequences	93.33% (n=42)	2.22% (n=1)	4.44% (n=2)	0.837	4.60
Implementation of plans	93.33% (n=42)	2.22% (n=1)	4.44% (n=2)	0.839	4.58
Environmental accounting	73.33% (n=33)	15.56% (n=7)	11.11% (n=5)	1.057	4.13
Setting of plans as per objectives	86.67% (n=39)	4.44% (n=2)	8.89% (n=4)	0.903	4.04
Regulation compliance	75.56% (n=34)	8.89% (n=4)	15.56% (n=7)	1.297	4.00
Internal monitoring	66.67% (n=30)	13.33% (n=6)	20.00% (n=9)	1.229	3.89
Managing negative attitude of company	73.33% (n=33)	13.33% (n=6)	13.33% (n=6)	1.205	3.84
Understanding economic benefits of environmental policies	73.33% (n=33)	8.89% (n=4)	17.78% (n=8)	1.029	3.82
Maintaining continual improvement	64.44% (n=29)	15.56% (n=7)	20.00% (n=9)	1.013	3.56
Drafting environmental policy	66.67% (n=30)	13.33% (n=6)	20.00% (n=9)	1.160	3.53

(5= Strongly Agree - SA, 4= Probably Agree-PA, 3=Neutral, 2=Probably Disagree-PD, 1=Strongly Disagree-SD)

Minimum Value = 0 (mean value)
 Maximum Value =5 (Mean Value)

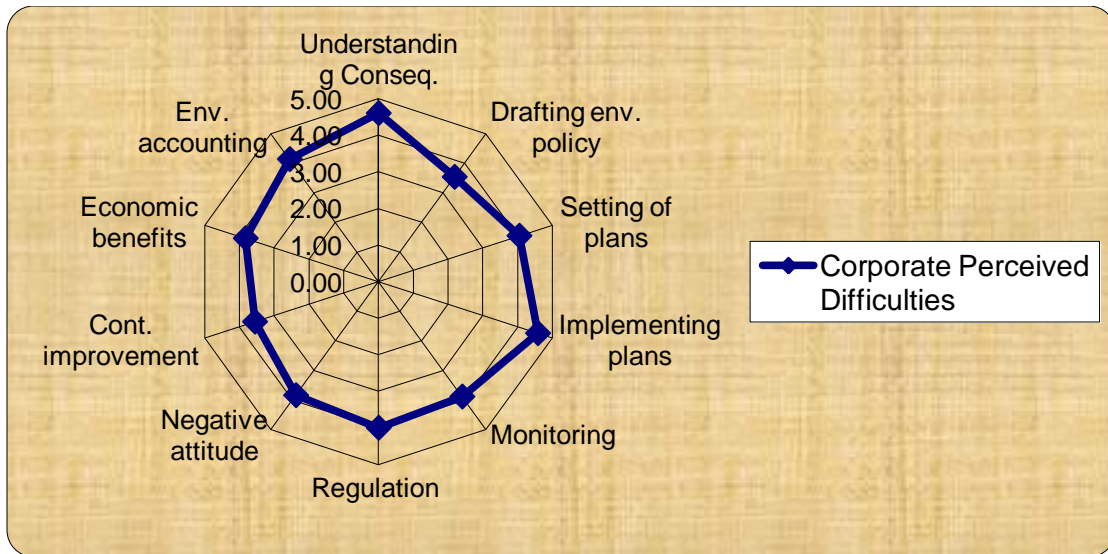


Figure 20: Corporate perception of difficulties encountered in voluntary adoption

Table 32 represents the percentage distribution of corporate respondents over 5-point Likert scale measuring responses from ‘Strongly Agree’ to ‘Strongly Disagree’ (5 through 1) in decreasing value of mean. Highest difficulty is felt in understanding that corporate activities does direct and indirect harm on the environment (Mean 4.60, SD 0.837), while ‘Drafting environmental policy’ is not considered as contributing to any difficulty (Mean 3.53, SD 1.160) this can be due to the fact that corporate are increasingly demonstrating their environment attitude towards publishing their environmental policy in India preferably on the website as realised after looking at the websites of the respondent companies. Interestingly, ‘Regulations and its compliance’ scores quite less, as expected, (Mean 3.82, SD 1.273) because dealing with numerous regulations is considered as a routine procedure by the respondents. This could be because regulations in India are not that stringent and requires just submission of report based on self evaluation and demonstrating ones intent. Further, no legal action can be taken on the non performance as per expressed intent.

The concern of ENGOs was evaluated (rank measure from 1 to 6 where ‘1’ is the highest lack factor and 6 being the least lacking factor) and the results are presented in the following table:

Table 33: ENGOs perception of reasons behind lack of proper disclosure

(N = 46- Members of ENGOs)

Reasons of lack of disclosures	Overall Rank	Proportion	Mean	Standard Deviation
Lack of general interest on industry side	1	50.00% (n=23)	5.30	0.916
Lack of proper scrutiny	2	28.26% (n=13)	4.54	1.601
Lack of stakeholders pressure	3	8.70% (n=4)	3.13	1.746
Lack of explicit guidance	4	6.52% (n=3)	2.91	1.208
Lack of training to measure environmental costs and liabilities	5	4.35% (n=2)	2.63	1.404
Lack of incentives to record in detail environmental liabilities and assets	6	2.17% (n=1)	2.48	1.110

The above table reveals that the ‘Lack of general interest on industry side’ (Mean 5.30, S.D. 0.916) assumed the prime position of most important factor leading to lack of proper disclosure. While ‘lack of proper scrutiny’ assumed second most important reason (Mean 4.54 SD 1.601). Interestingly, the variables relating to ‘training to measure environmental costs and liabilities’ and ‘incentives to record in detail environmental liabilities and assets’ assume the last two positions indicating that they are relatively unimportant impediments to disclosure.

5.4.6 Internal and external remedies for motivating voluntary adoption

The researcher was motivated to gather the opinion of managers on the main factors that would work as enablers and enhance the adoption of environmental concern voluntarily. The evaluation was based on both external and internal factors. Table 34 presents a descriptive analysis of percentage responses of corporate managers towards various motives arranged in decreasing order of the mean value of response under two categories, i.e., namely external and internal factors. External factors prevail outside the boundaries of the company over which the corporate has lesser control, whereas, internal factors operate within the boundaries of the company and are absolutely within the control of the company.

Among external factors, major emphasis was received by Governmental Schemes like tax rebate, subsidies, exemption at 98% (Mean 4.78, SD 0.471). Next in importance was the remedy of ‘Punitive action by environmental agencies’ cited by 78% approx. of respondents (Mean 4.27, SD 1.232); quite interestingly, ‘Stronger ENGOs force’ received the lowest response of 53% approx. (Mean 3.87, SD 0.944) among external remedies.

As apparent from the table, among internal factors, ‘top management support’ (Mean 4.76, SD 0.570) acquired the first and foremost choice. Next in importance was ‘written environmental policy statement’ (Mean 4.22, SD 0.974). While ‘Environmental NGOs’ involvement in decision making received the greatest response on negative side (17.78%) to become an effective instrument to enable voluntary adoption of corporate accountability and environmental information disclosure.

Table 34: Potential remedies for motivating voluntary adoption

Minimum Value = 1 (DN)
Maximum Value =5 (DY)
N = 45 MGRs

Main Remedies	Yes (DY+ PY)	Neutral	No (PN+ DN)	Mean	Std. Dev.	t-test value
External Remedies						
Tax relief, funding and other governmental environmental promotion schemes	97.78% (n=44)	2.22% (n=1)	0.00% (n=0)	4.78	0.471	28.144
Punitive actions by environmental agencies against defaulters	77.78% (n=35)	11.11% (n=5)	11.11% (n=5)	4.27	1.232	7.985
Levy of Environmental taxes	84.44% (n=38)	8.89% (n=4)	6.67% (n=3)	4.24	0.957	10.123
Compulsory Adoption of ISO 14001 for EMS	80.00% (n=36)	13.33% (n=6)	6.67% (n=3)	4.22	0.927	10.296
Corporate Environmental Ratings	77.78% (n=35)	11.11% (n=5)	11.11% (n=5)	4.18	1.154	8.01
GRI to be made compulsory	86.67% (n=39)	11.11% (n=5)	2.22% (n=1)	4.18	0.716	12.902
Stronger ENGOs force	53.33% (n=24)	44.44% (n=20)	2.22% (n=1)	3.87	0.944	7.581
Media exposure of defaulting companies	64.44% (n=29)	26.67% (n=12)	8.89% (n=4)	3.69	0.9	6.625
Internal Remedies						
Top management support	97.78% (n=44)	0.00% (n=0)	2.22% (n=1)	4.76	0.57	23.002
Written environmental policy statement	77.78% (n=35)	17.78% (n=8)	4.44% (n=2)	4.22	0.974	9.791
Performance evaluation and rewarding of employees on environmental benchmarks	55.56% (n=25)	40.00% (n=18)	4.44% (n=2)	3.87	0.968	7.395
Undertaking environmental issues on routine decision making	51.11% (n=23)	37.78% (n=17)	11.11% (n=5)	3.62	1.093	5.046
Higher and active involvement of ENGOs in decision making	62.22% (n=28)	20.00% (n=9)	17.78% (n=8)	3.49	1.058	4.368

(5= Definitely Yes – DY, 4= Probably Yes-PY, 3=Neutral, 2=Probably No-PN, 1=Definitely No-DN)

The last column provides a t-score summary of statistical significance of the responses towards main remedies. The t-score demonstrates statistical significance at assumed mean of 2.8. Governmental schemes and funding (i.e., governmental role)

received the highest 't' value at 28.144, underlying that still mandatory factor implies major force in adoption of environmental proactive strategies.

5.5 Empirical results relating to disclosure of environmental information

The society also needs a transparent disclosure of environmental activities undertaken by the corporate. Notably, corporate entities now-a-days disclose a wide variety of information related to the environmental performances in their annual reports, standalone reports; or web based reports. But the question is whether the present status of disclosure does really fulfill the accountability of corporate towards environment? Accountability is truly fulfilled or accomplished when there is no distrust about the corporate activities related disclosure among the stakeholders. Various studies conducted in developed countries reveal that the users (stakeholders) of those reports feel the presence of hidden motives behind corporate disclosures which impact the credibility of such disclosures.

For the purpose of present section, the researcher first accumulated perceptual data of corporate managers as 'preparers' of managers and disseminators of information. Since, the context concerned the 'Environment', therefore, the research revolved around environmental information in a significant proportion. Secondly, perceptions of members of ENGOs were gathered as the 'users' of environmental information. Next, important conclusions were drawn by placing in comparison the views of both the preparers as well as the users on various issues relating to reporting of environmental information. This process highlighted the gap in the understanding of both the groups which presents the potential for cooperative existence of both the groups by ironing out the differences.

The steps adopted for gathering the views of preparers (corporate) and users (ENGOs) are as follows:

- Examining preparers perception about information that readers are primarily interested in
- Examining preparers perception about ENGOs as users of environmental information (EI)
- Examining preparers and users perception on information sought and supplied

5.5.1 Preparers' perception of type of information mostly read by users

The first question that stemmed from their understanding was what corporate preparers of environmental information think about current environmental information readership. Interestingly significant information was then sought from the preparers. The researcher enquired about what the preparers think about the readership of various kinds of information that are disclosed by an organisation. The first column in the following Table 35 depicts various variables of information disclosed. The responses were gathered and analysed over five point Likert scale, however, for the ease of understanding the data is reproduced on three categories of 'large extent', 'neutral' and 'lesser extent'. The responses are presented in the following table along with their descriptive statistics.

Table 35: Corporate Perception of Disclosure and Readership

(N=45 MGRs)

Readers most interested in	Large extent	Neutral	Lesser extent	Mean	Standard Deviation
Information on operational activities	97.78% (n=44)	2.22% (n=1)	0.00% (n=0)	4.64	0.529
Information on profits	95.56% (n=43)	2.22% (n=1)	2.22% (n=1)	4.84	0.562
Information on occupational health and safety	77.78% (n=35)	17.78% (n=8)	4.44% (n=2)	4.31	0.996
Information on competitive strategies and positions	86.67% (n=39)	6.67% (n=3)	6.67% (n=3)	4.04	0.767
Information on future outlook	95.56% (n=43)	2.22% (n=1)	2.22% (n=1)	4.44	0.659
Information on environment	66.67% (n=30)	22.22% (n=10)	11.11% (n=5)	3.71	0.869

(To a large extent=5, to some extent-4, neutral-3, to lesser extent-2, no existence-1)

The above table is represented with the help of following Figure 21.

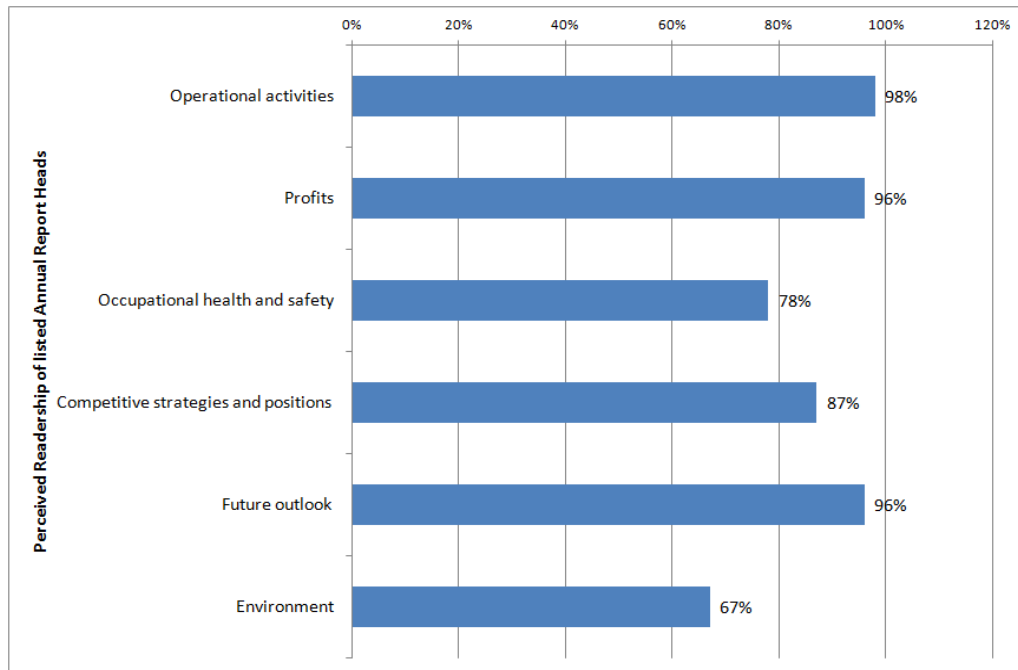


Figure 21: Perceived Readership interest on various categories of information disclosed

As evident from the table and figure, preparers expect large readership of operational activities. Whereas ‘environment’ factor was regarded as least read section in comparison with other information provided. About 22% approx. of respondents are neutral on the supposed readership of environmental information (last row of the above table) and a high response of 11% approx. consider it as the least read section.

The following Table 36 represents correlation between various categories of information disclosed.

Among the six categories, Environmental Readership was scored lowest at 67%, Again to elaborate on what kind of information is desired along with environmental information, it is highly correlated with ‘Competitive strategies and positions’ at significance level of 0.01, the latter is also highly correlated with ‘Future Outlook’ at 0.397 (correlation coefficient at p value of 0.01). Again, a thorough look at the correlation table (Table 36) reveals to alienate the variables of disclosure and readership into two groups. One composed of Profits, Occupational health and safety and Operational activities go together. While the other group, is related to Environment, future perspective and competitive strategies.

Table 36: Correlation between various categories of information disclosed

		Operational activities	Profits	Occupational health and Safety	Competitive strategies and positions	Future outlook	Environment
Operational activities	Correlation Coefficient	1	0.165	0.542**	-0.165	-0.142	-0.259
	Sig. (2-tailed)	.	0.253	0.000	0.253	0.325	0.069
Profits	Correlation Coefficient	0.165	1	0.022	0.180	0.278	-0.072
	Sig. (2-tailed)	0.253	.	0.882	0.211	0.051	0.621
Occupational health and safety	Correlation Coefficient	0.542**	0.022	1	-0.150	-0.320*	-0.066
	Sig. (2-tailed)	0.000	0.882	.	0.300	0.023	0.649
Competitive strategies and positions	Correlation Coefficient	-0.165	0.180	-0.150	1	0.397**	0.410**
	Sig. (2-tailed)	0.253	0.211	0.300	.	0.004	0.003
Future outlook	Correlation Coefficient	-0.142	0.278	-0.320	0.397**	1	0.091
	Sig. (2-tailed)	0.325	0.051	0.023	0.004	.	0.531
Environment	Correlation Coefficient	-0.259	-0.072	-0.066	0.410**	0.091	1
	Sig. (2-tailed)	0.069	0.621	0.649	0.003	0.531	.

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

* Correlation is significant at the 0.05 level (2-tailed).

It means that Environmental activities should indicate future activities unconditionally and competing on strategies incorporating environmental factor which is an important conclusion derived from the correlation table.

5.5.2 Preparers' perception of ENGOs as users of EI

Remarkably, on the measure of dichotomous (Yes/No) category responses on whether according to corporate, ENGOs read Environmental Information disclosed, there are 56% approx positive responses as compared with 45% negative responses. A Binomial test was run on the responses to verify that the difference is significant or not. The Binomial test is a non parametric test that does not assume normal distribution, but is used in data

consisting of two categories. The test was used against hypothesized proportion of .50; which means that the responses are equally divided and there is no significant difference between the proportions (noted from p-value: where small p value (<0.05) indicates that the observed distribution differs from the hypothesized distribution). The observed distribution is however, consistent with a distribution consisting of equal positive and negative positions held with p value at 0.551 (Table 37). This means that corporate are equally divided among the readership for voluntary environmental information suggesting that they feel that ENGOS do not demonstrate high readership.

Table 37: Corporate responses on ENGOS' readership of voluntary environmental information
(N = 45-MGRs)

Statement	Response Category	Frequency	Percentage
Do you think ENGOS read voluntary Environmental information disclosed	Yes	25	55.6%
	No	20	44.4%
	Total	45	
Binomial Test for deviation from test proportion	Test Prop. 0.50	Asymp. Sig. (2-tailed) 0.551(a) (a) Based on Z Approximation	

5.5.3 Communication between Corporate and ENGOS

The researcher gathered the views of corporate as preparers and ENGOS as users of environmental information to examine whether any information is requested by ENGOS and whether corporate responds swiftly to such requests. The questions related to following factors, namely;

- Request for Environmental Information
- Rapidity of Response
- Whether ENGOS lend support to disclosing companies
- Whether ENGOS should be involved in Environmental Decision Making

The gathered information was related with response of ENGOS towards the abovementioned factors to gain a comparative understanding. The results are displayed in the following tables (i.e., Table 38 to Table 41). The tables illustrate the comparative views and the last column marked as 'absolute difference' is calculated as difference between frequency counts of ENGOS and Managers.

5.5.3.1 Request for environmental information

As deduced from the above data relating to drivers of disclosures, the corporate discloses environmental information depending upon the type of driver most prevalent during the time. It can be fuelled further by the presence of hidden or explicit motives or hindered by the presence of hurdles as well. Still the ENGOS may be interested in any specific information relating to environment. The request for environmental information collects the responses of corporate managers regarding the frequency of receipt of such requests seeking further environmental information. This could throw light and suggest the case of urgent demand for full-fledged disclosures. The responses are also collected from ENGOS as they are the originators of such requests. The following table presents the responses of corporate managers and the members of ENGOS.

Table 38: Request for Environmental Information

(N = 45-MGRs, 46- Members of ENGOS)

Criteria	Category		Total	Absolute difference
	Members of ENGOS	MGRS		
Frequently	4.35%(n=2)	6.67%(n=3)	5%(n=5)	1
Occasionally	73.91%(n=34)	44.44%(n=20)	59%(n=54)	14
Never	21.74%(n=10)	48.89%(n=22)	35%(n=32)	12
Total	100%(n=46)	100%(n=45)	100%(n=91)	

χ^2 , df, p-value (8.320, 2, 0.016)

Corporate views: Nearly half of corporate respondents (49% approx) feel that they have not received any request for environmental information from ENGOS during their experience, while 44% approx. felt that they occasionally receive the request for environmental information and it was lowest at 7% approx. response to the option of receiving frequent request for environmental information. This belief was also endorsed by a few managers from whom personal viewpoint were also solicited. Again, a high percentage felt that either they dispense the information within a few days (51% approx.) or within a month (27% approx).

Corporate vs ENGOS: There appears to be overall agreement between both the groups regarding frequency of requests received for disclosing additional environmental information. Both the groups share the same view that there are negligible chances of

receiving (sending) such requests on frequent occasions. Again the groups agreed that requests are received (sent) ‘occasionally’.

The result suggests a further examination of reasons behind lack of such interaction. This could be a case of distrust of corporate that the ENGOs would use it as a weapon against the corporate and again from the ENGOs perspective, they do not trust that they would receive the relevant and sufficient information as asked for.

5.5.3.2 Time variability in responding to requests

The next requirement was to understand the corporate handling of Environmental Information requests received from the stakeholders (ENGOs) in terms of responding or replying to the requests received within a time frame was examined to understand further the value accorded to maintaining positive relationship with stakeholders (ENGOs). Dissemination of asked-for information is of material importance to ENGOs. The responses belonging to both the groups are presented in the following table:

Table 39: Rapidity of Response

(N = 23-MGRs, 36- Members of ENGOs)

Criteria	Category		Absolute Difference
	Members of ENGOs	MGRS	
Never	11.11% (n=4)	0% (n=0)	1
After a month	44.44% (n=16)	8.70% (n=2)	14
Within a month	41.67% (n=15)	26.08% (n=6)	9
Within a few days	2.78% (n=1)	56.52% (n=13)	12
On the same day	0% (n=0)	8.70% (n=2)	2
Total	100% (n=36)	100% (n=23)	

As evident from the above table, comparatively, the results suggest that a high gap exists between what ENGO members feel and what managers feel on the variable of ‘after a month’ and ‘within a few days’; where the former group regards that corporate tend to send the replies after a considerable time while the managers feel the opposite. The general time frame for replying to requests is one month or later in the perception of ENGO members.

5.5.3.3 Support of ENGOs for disclosing companies

In Indian context, the dissemination of information by the corporate entities is assumed to happen only when the corporate feels comfortable about the information disclosed that such information will not be used by the ENGOs against them, as well as, in case of any environmental related problems the ENGOs would use conciliatory means rather than confrontational means against the company. Hence, the corporate perception as well as ENGOs perception was evaluated for the criteria of whether any support is received by the corporate from ENGOs in the happening of such an environmental incident. The responses are presented in the following table:

Table 40: Support of ENGOs for disclosing companies

(N = 45-MGRs, 46- Members of ENGOs)

Response	Category		Total	Absolute Difference
	Members of ENGOs	MGRS		
No	10.87%(n=5)	53.33%(n=24)	31.86%(n=29)	19
Yes	89.13%(n=41)	46.67%(n=21)	68.13%(n=62)	20
Total	100%(n=46)	100%(n=45)	100%(n=91)	

χ^2 , df, p-value (18.891, 1, 0.000)

Corporate views: From the aspect of support received from ENGOs, 53% approx. respondents believe that they do not receive support from ENGOs when a firm discloses environmental information. But the number of responses is not significantly higher than the alternate response of 'No' (47% approx)

Corporate vs ENGOs: While ENGOs are particularly positive of their role and about 89% reaffirmed their positive support to companies that gladly shares their environmental information. The difference is quite high in both the responding groups. This points to need for reconciliation between the opinions of both the parties.

On personal discussion, ENGOs commented that usage of liason is preferable over violent action. It was also found that Managers/directors are involved with NGOs as well. For instance, Phagwara Environmental Association has local corporate leaders as active members of their organisation. This is suggestive of a two way understanding and integrative approach rather than confrontational approach.

5.5.3.4 Involvement of ENGOs in corporate decision making

The last factor of importance, is whether the corporate feels that ENGOs should be involved at the decision making stage relating to environmental issues. It also underlines the value accorded to stakeholders for the same. The responses are presented in the following table:

Table 41: Involvement of NGOs in Environmental Decision Making

(N = 45-MGRs, 46- Members of ENGOs)

Response	Category		Total	Absolute Difference
	Members of ENGOs	MGRS		
No	8.70%(n=4)	42.22%(n=19)	25%(n=23)	15
Yes	91.30%(n=42)	57.78%(n=26)	75%(n=68)	16
Total	100%(n=46)	100%(n=45)	100%(n=91)	

χ^2 , df, p-value (13.538, 1, 0.000)

Corporate views: Participation of ENGOs is perceived positively as approximately 58% of corporate responded in affirmative. However, this score is not significantly higher than opposite score of ‘No’ (42%).

Corporate vs ENGOs: ENGOs on a comparative note, also feel that they should be involved in corporate decision making as 91% approx. said ‘yes’ and only 9% felt otherwise. Hence, both the groups are positive but corporate are somewhat equally divided as appears from their response.

5.6 Empirical results relating to expectations gap

5.6.1 Corporate and ENGOs perception of relevancy of disclosure

The fourth objective was to assess the expectation gap between the ENGOs (as users) and Corporate Managers (as preparers) of environmental information. The researcher identified two factors against which a comparison of views of preparers and users is measured. These factors were identified as i.e., Relevancy and Sufficiency.

Relevancy means whether the environmental information is according to the needs of the users. **Sufficiency** examines whether the environmental information disclosed is complete or less if not more. The reason is that though information may be relevant yet it may or may not be complete. It was considered that for accountability to be complete the

environmental information should not only be transparently disclosed but it should also be relevant and sufficient for the use of the stakeholders.

The researcher derived the variables primarily from perusal of recent research papers, environmental reports, annual reports, GRI index as the literature suggest greater use of GRI now-a-days. The variables were then categorized into three groups, namely;

- Non-financial reporting variables,
- Environmental processes and stakeholder involvement, and lastly,
- Financial reporting variables.

In order to measure and compare the responses of corporate managers and members of ENGOs as independent groups towards ‘Relevancy’ and ‘Sufficiency’ of disclosure variables, first descriptive statistics are calculated followed by independent samples t test applied on the mean scores of both the groups. The following tables from Table 42 to Table 44 are prepared to show the responses on various variables by both the groups i.e., corporate and ENGOs towards ‘Relevancy’ while tables from Table 45 to Table 47 present the combined responses of both the groups on ‘Sufficiency’ of various variables. The same set of variables is listed under relevancy and sufficiency criteria. The combined response indicates the relative relevance and sufficiency of a variable against other variables.

The tables from Table 42 to Table 44 are shown first. They are divided into three categories for the purpose of ease of analysis. The structure of tables can be viewed as:

- The first column depicts the disclosure variables relating to a particular category,
- The next three columns show the combined response which is sum total of responses of both the groups on a particular variable. This total relevancy (irrelevancy) is shown in the next three columns categorized as relevant, neutral and irrelevant to depict the relative importance (irrelevancy) of the environmental variable to be included in disclosure,
- The next two columns depicts simple descriptive results in the form of mean and standard deviation,
- The second last column shows the difference in the responses to a variable on two counts of relevancy and irrelevancy, and

- The last column is meant to depict the comparative difference in the responses of both the groups on various variables.

Table 42: Combined Response on Relevancy of non financial environmental reporting variables

Minimum Value = 1
Maximum Value =5
(N = 45-MGRs, 46- Members of ENGOs)

Environmental Disclosure Variables	Relevant (4+5)	Neutral (3)	Irrelevant (1+2)	Mean	Std. Dev.	Net Absolute Difference
Non Financial Reporting						
Written Environment Policy	86.81% (n=79)	10.99% (n=10)	2.20% (n=2)	4.45	0.860	77
Status of Emergency Management	72.53% (n=66)	9.89% (n=9)	17.58% (n=16)	3.89	1.130	50
Environmental Risks	59.34% (n=54)	32.97% (n=30)	7.69% (n=7)	3.80	0.980	47
Breaches of Environmental standards	78.02% (n=71)	16.48% (n=15)	5.49% (n=5)	4.07	0.854	66
Complaints, penalties and fines	64.84% (n=59)	8.79% (n=8)	26.37% (n=24)	3.89	1.362	35
Media Reports	51.65% (n=47)	39.56% (n=36)	8.79% (n=8)	3.45	0.778	39

(5= Highly Relevant-HR, 4= Probably Relevant-PR, 3=Neutral, 2=Probably Irrelevant-PIR 1=Highly Irrelevant-HIR)

Combined Response: A high percentage of managers and members of ENGOs feel that ‘Written Environment Policy’ is relevant (Mean 4.45 SD 0.860) as evident from highest absolute difference (77). Similarly, ‘Breaches of environmental standards’ was felt relevant by a high percentage of respondents (Mean 4.07 SD 0.854). The lesser number of combined respondents considered ‘Media Reports’ as relevant (Mean 3.45 SD 0.778) which means that media reports should be revised and reviewed to increase their relevancy and authenticity. Lesser absolute difference (35) was observed in the response for environmental disclosure variable of ‘Complaints, penalties and fines’ (Mean 3.89 SD 1.362) which also means that the information provided under this head should be upgraded to improve its relevancy.

Table 43: Combined Response on Relevancy of Environmental Processes and stakeholders involvement variables

Minimum Value = 1
 Maximum Value =5
 (N = 45-MGRs, 46- Members of ENGOs)

Environmental Disclosure Variables	Relevant (4+5)	Neutral (3)	Irrelevant (1+2)	Mean	Std. Dev.	Net Absolute Difference
Environmental Processes and Stakeholders Involvement						
Green Strategies and benefits to community	43.96% (n=40)	41.76% (n=38)	14.29% (n=13)	3.68	1.163	27
EMS installed and benefits realised	48.35% (n=44)	47.25% (n=43)	4.40% (n=4)	3.76	0.958	40
Life cycle analysis and involvement of suppliers and customers	42.86% (n=39)	51.65% (n=47)	5.49% (n=5)	3.48	0.808	34
Research on environment	46.15% (n=42)	30.77% (n=28)	23.08% (n=21)	3.55	1.195	21
Contributions to bio-diversity and carbon emissions	81.32% (n=74)	6.59% (n=6)	12.09% (n=11)	3.99	0.960	63
Information on stakeholders' involvement	26.37% (n=24)	46.15% (n=42)	27.47% (n=25)	3.03	0.900	(1)

(5= Highly Relevant-HR, 4= Probably Relevant-PR, 3=Neutral, 2=Probably Irrelevant-PIR 1=Highly Irrelevant-HIR)

The net absolute difference column in the above table presents that ‘Contributions to biodiversity and carbon emissions’ are considered highly relevant by both the groups (Mean 3.99 SD 0.960). The next high relevancy was accorded to the variable ‘EMS installed and benefits realized’ (Mean 3.76 SD 0.958). Ironically, the variable of ‘Information on Stakeholders’ involvement’ received the least score (Mean 3.03 SD 0.900) which means that efforts are needed to improve the relevancy.

Table 44: Combined Response on Relevancy of Monetary reporting of Environmental Disclosure Variables

Minimum Value = 1
Maximum Value =5
(N = 45-MGRs, 46-Members of ENGOs)

Environmental Disclosure Variables	Relevant (4+5)	Neutral (3)	Irrelevant (1+2)	Mean	Std. Dev.	Net Absolute Difference
Monetary Reporting						
Environmental expenditure and its impact on results	50.55% (n=46)	27.47% (n=25)	21.98% (n=20)	3.64	1.207	26
Efficiency achieved in inputs, recycle, impact on biodiversity	81.32% (n=74)	10.99% (n=10)	7.69% (n=7)	4.10	0.955	67
Details of energy sources utilised and efficiency achieved	52.75% (n=48)	41.76% (n=38)	5.49% (n=5)	3.66	0.846	43
Details of outputs in terms of emissions, discharges and its impact on greenhouse gases	81.32% (n=74)	16.48% (n=15)	2.20% (n=2)	4.36	0.913	72
Statistics of each department published in green terms	46.15% (n=42)	41.76% (n=38)	12.09% (n=11)	3.52	0.959	31

(5= Highly Relevant-HR, 4= Probably Relevant-PR, 3=Neutral, 2=Probably Irrelevant-PIR 1=Highly Irrelevant-HIR)

The above table describes the combined response of both the groups (Corporate Managers and members of ENGOs) on the monetary variables concerned with environmental disclosures. It is apparent from net absolute difference column in the above table that ‘details of output’ is considered highly relevant (Mean 4.36 SD 0.913). High percentage of response also suggests that efficiency achieved in inputs and recycle is considered highly relevant (Mean 4.10 SD 0.955). However ‘environmental expenditure’ received a low net absolute difference indicating the irrelevancy of disclosed variables (Mean 3.64 SD 1.207).

5.6.2 Corporate and ENGOs perception of sufficiency of disclosure

The following tables from Table 45 to Table 47 are prepared to show the responses sufficiency of information provided on selected variables by both the groups i.e., corporate managers and members of ENGOs. For the purpose of critical analysis, the tables can be viewed as:

- The first column depicts the disclosure variables relating to a particular category,
- The next three columns show the combined response which is sum total of responses of both the groups on a particular variable. This total sufficiency (insufficiency) is shown in the next three columns categorized as insufficiency, neutral and sufficiency to depict the relative importance (irrelevancy) of the environmental variable to be included in disclosure,
- The next two columns depicts simple descriptive results in the form of mean and standard deviation,
- The second last column shows the difference in the responses to a variable on two counts of insufficiency and sufficiency, and
- The last column is meant to depict the comparative difference in the responses of both the groups on various variables.

Table 45: Combined Response on Sufficiency of non-financial Environmental Disclosure Variables

Minimum Value = 1
Maximum Value =5
(N = 45-MGRs, 46- Members of ENGOS)

Environmental Disclosure Variables	Sufficient (4+5)	Neutral (3)	Insufficient (1+2)	Mean	Std. Dev.	Net Difference
Non Financial Reporting						
Written Environment Policy	32.97% (n=30)	36.26% (n=33)	30.77% (n=28)	3.08	1.267	2
Status of Emergency Management	30.77% (n=28)	36.26% (n=33)	32.97% (n=30)	2.98	1.115	(2)
Environmental Risks	23.08% (n=21)	18.68% (n=17)	58.24% (n=53)	2.49	1.196	(32)
Breaches of Environmental standards	17.58% (n=16)	53.85% (n=49)	28.57% (n=26)	2.86	0.973	(10)
Complaints, penalties and fines	19.78% (n=18)	29.67% (n=27)	50.55% (n=46)	2.46	1.259	(28)
Media Reports	30.77% (n=28)	18.68% (n=17)	50.55% (n=46)	2.71	1.157	(18)

(5= Highly Sufficient - HS, 4= Probably Sufficient-PS, 3=Neutral, 2=Probably Insufficient-PIS, 1=Highly Insufficient-HIS)

The above table presents the combined responses of both the groups on sufficiency of information provided on various environmental disclosure variables. The last column provides the difference between the ‘sufficient’ and ‘insufficient’ responses. In this case, it shows net difference instead of net absolute difference. Highest negative difference

suggests largely insufficient information provided. In the above table, overall high net difference in almost all the variables suggest that altogether the information provided is considered highly insufficient. Large insufficiency is indicated for the variable of ‘Environmental risks’ (Mean 2.49 SD 1.196). Next variable of ‘Complaints, penalties and fines’ (Mean 2.46 SD 1.259) also indicates high insufficiency. Ironically ‘Written environment policy’ also received almost equal responses on sufficient, neutral and insufficient categories (Mean 3.08 SD 1.267).

Table 46: Combined Response on Sufficiency of Environmental Processes and Stakeholders involvement reporting

Minimum Value = 1, Maximum Value =5
(N = 45-MGRs, 46- Members of ENGOs)

Environmental Disclosure Variables	Sufficient (4+5)	Neutral (3)	Insufficient (1+2)	Mean	Std. Dev.	Net Difference
Environmental Processes and Stakeholders involvement						
Green Strategies and benefits to community	23.08% (n=21)	31.87% (n=29)	45.05% (n=41)	2.88	1.143	(20)
EMS installed and benefits realised	27.47% (n=25)	40.66% (n=37)	31.87% (n=29)	2.85	1.115	(4)
Life cycle analysis and involvement of suppliers and customers	36.26% (n=33)	35.16% (n=32)	28.57% (n=26)	2.99	1.090	7
Research on environment	24.18% (n=22)	47.25% (n=43)	28.57% (n=26)	2.93	1.063	(4)
Contributions to bio-diversity and carbon emissions	27.47% (n=25)	25.27% (n=23)	47.25% (n=43)	2.66	1.157	(18)
Information on stakeholders' involvement	24.18% (n=22)	59.34% (n=54)	16.48% (n=15)	3.00	0.843	7

(5= Highly Sufficient - HS, 4= Probably Sufficient-PS, 3=Neutral, 2=Probably Insufficient-PIS, 1=Highly Insufficient-HIS)

In the case of variables related with Environmental Process and stakeholders, largest insufficiency was felt with regard to ‘Green Strategies’ (Mean 2.88 SD 1.143). Next important variable was ‘Contribution to bio-diversity and carbon emissions’ (Mean 2.66 SD 1.157) in which high insufficiency was felt. High neutral response (59.34%) was received in case of variable of ‘Information on stakeholders’ involvement (Mean 3.00 SD 0.843).

Table 47: Combined Response on Sufficiency of Monetary reporting of Environmental Disclosure Variables

Minimum Value = 1, Maximum Value =5
(N = 45-MGRs, 46- Members of ENGOs)

Environmental Disclosure Variables	Sufficient (4+5)	Neutral (3)	Insufficient (1+2)	Mean	Std. Dev.	Net Difference
Monetary Reporting						
Environmental expenditure and its impact on results	20.88% (n=19)	39.56% (n=36)	39.56% (n=36)	2.60	1.191	(17)
Efficiency achieved in inputs, recycle, impact on biodiversity	30.77% (n=28)	34.07% (n=31)	35.16% (n=32)	2.85	1.144	(4)
Details of energy sources utilised and efficiency achieved	19.78% (n=18)	28.57% (n=26)	51.65% (n=47)	2.46	1.138	(29)
Details of outputs in terms of emissions, discharges and its impact on greenhouse gases	17.58% (n=16)	35.16% (n=32)	47.25% (n=43)	2.52	1.177	(27)
Statistics of each department published in green terms	18.68% (n=17)	20.88% (n=19)	60.44% (n=55)	2.42	1.136	(38)

(5= Highly Sufficient - HS, 4= Probably Sufficient-PS, 3=Neutral, 2=Probably Insufficient-PIS, 1=Highly Insufficient-HIS)

In case of monetary variables of reporting, the information on ‘Statistics of each department published in green terms’ was considered highly insufficient (Mean 2.42 SD 1.136). Information on ‘Details of energy sources’ (Mean 2.46 SD 1.138), ‘details of outputs’ (Mean 2.52 SD 1.177) was also considered relatively lacking in sufficiency as well. Overall high insufficiency was visible for all the variables of monetary reporting.

5.6.3 Expectation gap in relevancy and sufficiency of disclosure

This section shows the results of comparison of the responses of both the groups on the criteria of ‘Relevancy’ and ‘Sufficiency’. To analyse the difference in the mean scores of corporate managers and members of ENGOs regarding ‘Relevancy’ and ‘Sufficiency’ of various disclosure variables, first descriptive statistics were calculated as presented in the preceding sections and then independent samples t test is conducted on their mean scores.

The result along with null hypothesis is presented below:

H_{06} = There is no significant difference in corporate managers and members of ENGOs perception of ‘Relevancy’ of environmental disclosure variables:

$t(89) = -1.709, p=.091, d=.4$ – null hypothesis is accepted

The independent samples t-test was conducted to determine if there was significant difference between the responses of members of ENGOs and Corporate Managers mean scores related to the dimension of ‘relevancy’. There was no significant difference between ENGOs mean 3.68 (SD 0.67) and Corporate mean 3.89 (SD .51); $t(89) = -1.709$, $p = .091$, $d = .4$. It means that both the respondent groups agree on various variables listed as relevant and the negative sign of t test indicate that corporate consider the variables to be more relevant than ENGOs.

H_{07} = There is no significant difference in corporate managers and members of ENGOs perception of ‘Sufficiency’ of environmental disclosure variables:

$t(89) = -3.719$, $p = .000$, $d = .8$ – null hypothesis is rejected

Table 48: t-test results of mean of corporate environmental disclosure variables on the criteria of relevancy and sufficiency

Group 1- Members of ENGOs (46)
Group 2-Corporate Managers (45)

Environmental Disclosure variables	Relevancy			Sufficiency		
	t values	df	Sig. (2-tailed)	t values	df	Sig. (2-tailed)
Written Environment Policy	2.64	89.00	0.01	(2.18)	77.22	0.03
Status of Emergency Management	2.12	84.14	0.04	(4.50)	78.79	0.00
Environmental Risks	(0.65)	85.48	0.52	(2.40)	87.48	0.02
Breaches of Environmental standards	0.77	89.00	0.44	0.24	89.00	0.81
Complaints, penalties and fines	0.29	82.49	0.77	(3.06)	82.31	0.00
Media Reports	0.57	84.30	0.57	(0.46)	89.00	0.65
Green Strategies and benefits to community	(1.00)	89.00	0.32	1.76	89.00	0.08
EMS installed and benefits realised	1.53	79.17	0.13	1.35	89.00	0.18
Life cycle analysis and involvement of suppliers and customers	(1.86)	69.90	0.07	2.61	89.00	0.01
Research expenses on environment	0.79	77.93	0.43	0.65	84.53	0.52
Contributions to bio-diversity and carbon emissions	(0.42)	85.07	0.68	2.84	89.00	0.01
Information on stakeholders' involvement	(1.76)	89.00	0.08	(1.05)	89.00	0.30
Environmental expenditure and its impact on results	2.37	71.87	0.02	(4.00)	89.00	0.00
Efficiency achieved in inputs, recycle, impact on biodiversity	0.20	82.55	0.84	(1.22)	89.00	0.23
Details of energy sources utilised and efficiency achieved	2.02	89.00	0.05	(5.14)	89.00	0.00
Details of outputs in terms of emissions, discharges and its impact on greenhouse gases	(0.67)	89.00	0.51	(2.03)	89.00	0.05
Statistics of each department published in green terms	(2.71)	89.00	0.01	(1.04)	89.00	0.03

Next, independent samples t-test was conducted to determine if there was significant difference between the responses of members of ENGOs and corporate managers' mean scores related to the dimension of 'Sufficiency'. There was found to be significant difference between ENGOs mean 2.58 (SD 1.067) and Corporate mean 3.42 (SD 1.076); $t(89) = -3719$, $p = .000$, $d = .8$. It means that both the respondents agree on various variables listed as sufficient and the negative sign of t test indicate that managers consider the variables to be more sufficient than members of ENGOs.

The table 48 presents the t-test values related to individual items of disclosures. On the factor of relevancy, significant gaps suggesting key areas for improvement between the perception of ENGOs and corporate were found in case of written environmental policy, status of emergency management, environmental expenditure, details of energy sources and statistics of each department where observed p-values was less than 0.05. In rest of the variables, no significant difference was found in the perception of ENGOs and corporate.

On the factor of sufficiency, significant gaps suggesting key areas for improvement were found in the case of all the variables except a few namely, breaches of environmental standards, media reports, green strategies, EMS installed, Research expenses, information on stakeholders, efficiency achieved in inputs.

The observations clearly indicate the specific areas relating to environmental information disclosure which need to be improved for ironing out any gaps in the perception of ENGOs and corporate regarding the relevancy and sufficiency of environmental information disclosed. Removal of 'Relevancy' gaps will enable the corporate managers to ensure that information provided is pertinent to the needs of the users. Again, removal of 'Sufficiency' gaps will ensure the attainment of satisfaction of users. Hence, the utility of information provided will be enhanced which is a corner stone of modern accountable existence.

5.7 Summary

In the present chapter, the second and third objectives were considered. The chapter was specifically focused upon two key areas. The first area was to gain an understanding of the corporate perception towards voluntary adoption of environmental standards. In

purview of this, an analysis of perception of corporate managers was undertaken to understand the prevailing style of adoption, inherent motives, main hurdles and potential remedies. The next area was to ascertain any difference in the expectations of members of ENGOs and corporate managers about the information disclosed.

The examination of respondents attitude brought out 'legal requirements' are the main compulsions that influence the adoption and disclosure activities of a concern, followed closely by 'Industry Norms' as personal discussions suggested that it is considered just adequate not to be a leader or laggard but to play on even field with that of competitors. Quite interestingly, stakeholders' pressure for voluntary adoption could score hardly a few responses suggesting current weak bargaining position of ENGOs as stakeholders in demanding high accountability. Ironically, lackadaisical response was received for the alternative of 'Personal Criteria' as well. It means that the managers need to be given stronger incentives to place personal understanding of right or wrong against industry norms otherwise environment stands to lose in the tradeoff.

Key empirical deductions are:

- Looking at the mandatory clauses it was found that India does not lack in laws and regulations for protecting the natural environment but India needs voluntary efforts more to reach the desirable state of sustainable existence.
- It is apparent from the study that corporate managers feel that at present the efforts put in by organizations are largely determined by the presence of mandatory factors.
- The corporate feel that mandatory regulations have greater potential to improve disclosure in India than voluntary efforts.
- As regards the motivating factors that pull a manager to adopt pro-environmental posture voluntarily, notably 'stakeholders' were recognized as least influential.
- Highest difficulty is felt in understanding the fact that corporate activities does direct and indirect harm on the environment by the employees.
- In the opinion of managers, most effective remedies are Governmental Schemes like tax rebate, subsidies, exemption and punitive actions by environmental agencies; quite interestingly, stronger ENGOs voice was not considered an effective remedy.
- Among internal factors, 'top management support' acquired the first and foremost choice. Next in importance was 'written environmental policy statement'.

The analysis and discussion suggests that Governmental schemes and funding are still preferred means of enforcing environmental proactive strategies. However, in future a self propelling social structure is needed where the stakeholder (ENGOS) position need further strengthening. Non-governmental organisations or Civil society members should voice their interests and spread awareness towards the burning issue. In addition, industries should proactively contribute to saving environmental discharges and energy consumption in their daily operations. Government should create incentives to motivate firms in this endeavour. Further technological innovations should confront headlong the current issue of sustainable development and arrest the downside trend to make world a happy and green place to live in for generations to come.

5.8 References

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