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CORPORATE ENVIRONMENTAL REPORTING IN THE CONTEXT OF RECENT CHANGES IN REGULATORY FRAMEWORK WITH SPECIAL REFERENCE TO INDIA

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ABSTRACT

Environmental Accounting and Reporting is a new addition to the legal jurisprudence. The global state actors have already taken some greening accounting initiatives under the forum of the United Nations Division for Sustainable Development, the United Nations Statistical Division, and the United Nations Conference on Environment and development known as Earth Summit in Rio de Janeiro, Johannesburg Conference 2002, Kyoto convention etc. This study will provide an overview of the environmental accounting and reporting laws and regulation across the countries based on secondary sources. An attempt has been made in this paper to summarise laws and guidelines relating environmental accounting and reporting in some selected countries. We investigate how environmental disclosures vary under environmental laws across the countries. To this end, we investigate Environmental Accounting and Reporting laws and guidelines in India. We found that Environmental Accounting regulation in India is still at nascent stage. In the absence of suitable enforcement mechanisms, real convergence and harmonization is unlikely to happen.

KEYWORDS
GRI, International Integrated Reporting Committee (IIRC) , International Financial Reporting Standards (IFRS), IAS.

1. INTRODUCTION
Worldwide growth of public concern for the natural environment has been one of the most important developments in recent decades. Globalization has helped connect societies and their environmental fates more closely than ever before. At the same time, environmental problems increasingly transcend national borders and pose serious challenges to the health of the planet. The development of more effective environmental laws and legal systems throughout the world has thus become critical to directing economic development and growth onto a path of environmental sustainability.

Guidelines regarding issues on environmental accounting have been issued by many organisations such as Financial Accounting Standard Board's (FASB) Emerging Issues Task Force, Canadian Institute of Chartered Accountants, United Nations Inter- Governmental Working Group of Experts on International Standards of Accounting and Reporting (ISAR).

As regards environmental reporting different organisation such as International Integrated Reporting Committee (IIRC), GRI, FEE, FASB and ISAR also issued guidelines which are of advisory in nature.

1.1 OBJECTIVE OF THE STUDY
The objective the study is to provide an overview of the environmental accounting and reporting laws and regulation across the countries based on secondary sources. An attempt has also been made to examine the need for comprehensive Environmental Accounting and Reporting Laws in India.

1.2. IAS AND IFRS
IAS is International Accounting Standards (IAS) which were issued between 1973 and 2001 by the International Accounting Standard Committee (IASC). On 1 April, 2001, IASC was replaced by International Accounting Standards Board (IASB). Since then International Accounting Standards Board (IASB), based at London - UK is now responsible to issue International Financial Reporting Standards (IFRS) and International Accounting Standards (IAS). IASB is an independent body and consists of members from nine different countries around the globe having variety of functional backgrounds. During its first meeting the Board adopted existing IAS and SICs. The IASB has continued to develop standards calling the new standards IFRS.

International Financial Reporting Standards (IFRS) are Standards, Interpretations and the Framework for the Preparation and Presentation of Financial Statements set and adopted by the International Accounting Standards Board. IFRS has replaced the older term international accounting standard. Many of the standards forming part of IFRS are known by the older name of International Accounting Standards (IAS). IFRS are considered "principles based" set of standards in that they establish broad rules as well as dictating specific treatments. International Financial Reporting Standards comprise:

a) International Financial Reporting Standards (IFRS) - standards issued after 2001.
b) International Accounting Standards (IAS) - standards issued before 2001.
c) Interpretations originated from the International Financial Reporting Interpretations Committee (IFRIC) - issued after 2001.
d) Standing Interpretations Committee (SIC) - issued before 2001. There is also a Framework for the Preparation and Presentation of Financial Statements which describes of the principles underlying IFRS.

IFRS 6 directly deals with extractive industries and IFRIC 5 provides the guidance for decommissioning, rehabilitation and restoration of environment related expenditure. Rights (allowances) to emit pollutant continue to be treated as intangible assets to be accounted for according to IAS 38 (Intangible Assets). Furthermore, it is important to note that a number of other standards provide an indirect support for the recognition, measurement and disclosure of environmental assets and liabilities. IAS 37 (provisions for contingent liabilities and assets) can be linked to environmental liabilities. IFRS 3, IAS 27, IAS 28, IAS 31, IAS 24 and IFRS 8 respectively deal with business combinations, investments in joint ventures and associates, related party disclosures, and specify the reportable segments of a geographically dispersed global company.

Our analysis of IAS/IFRS shows that no international standard is exclusively dedicated to environmental information, but environmental issues are mentioned in several standards and interpretations. They deal directly or indirectly with the recognition, measurement and disclosure of environmental expenses, assets, and liabilities. The debate as to whether to capitalize Environmental Capital Expenditure (ECE) or to expense it rages on. Whereas FASB (1989, 1990) requires that ECE be capitalized considering that they are long-lived pollution abatement expenditure, certain critics however query the rationale considering on their part

that since such expenditures do not result in incremental future economic benefits, ECE should be expensed in current year (CICA 2003). According to Clarkson and Richardson (2004:330), there is a consensus that site remediation costs should be expensed since there are no incremental future economic benefits.
The challenge facing possible international standards, the IASB is that there are not yet agreeable standards on environment costs and particularly, valuation of natural resources inventory for the balance sheet or valuation for depletion or degradation. For example, the International Financial Reporting Interpretations Committee (IFRIC) of the International Accounting Standards Board (IASB:2004) on the emerging Markets for Emission Rights in the European Union released two interpretations – IFRIC 3 Emission Rights and IFRIC 4 which determine whether an Arrangement contains a Lease. No sooner than these releases were made than they were subsequently withdrawn in June 2005. Reasons were:
1. Markets for Emission Rights although developing, but were still thin, and
2. That there was need to comprehensively provide for the development at the appropriate time.
These **standards and interpretations are analyzed in the Appendix 1.**

1.3. KYOTO PROTOCOL
The issues on environment arising from the Kyoto Convention have further implications for need for compliance to regulations for pollution prevention and environmental protection. Besides, it touches on Carbon Allowances for nations and accounting valuation for Carbon Trading among trading nations.
The Kyoto protocol is a 1997 international treaty which came into force in 2005, which has introduced a cap and trade system for the six major greenhouse gasses. In Cap and Trade scheme, governments issue rights or allowances to participating entities to emit specified level of emissions. According to Wikipedia encyclopaedia, emissions trading (or Cap and Trade) is an administrative approach used to control pollution by providing economic incentives for achieving reductions in the emissions of pollutants. A central authority (usually a government or international body) sets a limit or *cap* on the amount of a pollutant that can be emitted. Companies or other groups are issued emission permits and are required to hold an equivalent number of *allowance (or credits)* which represent the right to emit a specific amount. The total amount of allowances and credits cannot exceed the cap, limiting total emissions to that level. Companies that need to increase their emissions must buy credits from those who pollute less. The transfer of allowances is referred to as a trade. In effect, the buyer is paying a charge for polluting, while the seller is being rewarded for having reduced emissions by more than was needed (Wikipedia). The issues on environment arising from the Kyoto Convention have further implications for need for compliance to regulations and for pollution prevention and environmental protection.
Many companies in worldwide have started establishing system for reducing carbon dioxide emissions in the atmosphere. Many related accounting issues have arisen due to carbon trading which must be answered by accounting bodies.

1.4. ENVIRONMENTAL REGULATORY FRAMEWORKS IN SOME SELECTED COUNTRIES
In several countries, various regulations impose corporate reporting requirements on environmental issues. This section explores the regulations on mandatory environmental reporting for companies in some selected countries.
As contained in Environmental Management Accounting, IFAC (2005:79), the European Commission in 2001, adopted a recommendation on recognition, measurement and disclosure of environmental issues in the annual accounts and reports of companies. This recommendation was to enable for reporting of high levels of environmental issues in annual accounts and reports of companies. Although EC recommendations were voluntary, but European Countries in 2003, have made the reporting of environmental issues in annual accounts and reports mandatory.
DENMARK
In Denmark, green accounting and corporate reporting environmental issues are increasingly pursued. System of National Accounts is not the focus of this study though, but attention will be on corporate financial accounting reporting and managerial accounting for internal management. According to EMA in IFAC (2005:79), Green Accounting in Denmark requires EMA material accounting in companies. Companies therefore, require in their reports the following:
- data on consumption of water, energy and raw materials
- significant types and volumes of pollutants emitted to air, water and soil;
- significant types and volumes of pollutants in production processes, waste or products.

NORWAY
The Enterprise Act of 1989 in Norway requires that Board of Directors' Report should include information on the levels of pollution emission, contamination and details on the measures undertaken or planned in the pollution prevention activity (Roberts, 1992; Salomone and Gallucio 2001). The accounting Act (1999) requires that all companies includes more detailed environmental information in Director's reports in annual financial reports from 1999 onwards.
AUSTRALIA
Australia is seen to have a mix voluntary-regulatory framework on environmental disclosures. Local standard-setters have not issued any specific standards or guidelines on environmental accounting and disclosure. However, the issue of liability recognition is dealt with in the Statement of Accounting Concepts (SAC) 4: *Definition and Recognition of Elements of Financial Statements* and the issue of the disclosure of relevant and reliable information is dealt with in SAC 3: *Qualitative Characteristics of Financial Information*. In addition, the notable Section 299(1) (f) of Corporations Act 2001 requires that a directors' report for a financial year must:
If the entity's operations are subject to any particular and significant environmental regulation under a law of the commonwealth or of a state or territory – give details of the entity's performance in relation to environmental regulation (Yusuf and Lehman 2006).
In general, Australia has an extensive suite of environmental legislation that can affect corporations by way of restricting or regulating their business practices that may have impacts on the environment by creating assessment, compliance and reporting measures. Among them are Environmental Protection and Biodiversity Conservation Act 1999, Renewable Energy (Electricity) Act 2000, Australian Forestry Standard 2002 and numerous State government's enactments and enforcement strategies (Lehman, 2006)
Climate change has been a key driver of the sustainability agenda along with National Greenhouse and Energy reporting system (NGER) and the Carbon Pollution Reduction Scheme (CPRS) by the Australian Government and revision of Australian securities exchange (ASX) Principle 7, which now include the consideration of sustainability – related issues as a material business risk (KPMG International Survey of Corporate Responsibility Reporting 2008).
FRANCE
Environmental and social reporting is mandatory in compliance with "Law No. 2001-420 related to new economic regulations (Art.116)" (May 2001), for publicly –quoted companies, starting with data for the 2002 financial year (KPMG International Survey of Corporate sustainability Reporting 2002).
In France, a concept of "Ecological Balance Sheet" has been developed, which concerns the relationship between an enterprise and the environment (Pramanik A K. 2007). The ecological balance sheet contains information about the acquisition and utilisation of equipment used to reduce pollution, recycled by products and reduced energy and raw materials consumption. The regulation entitled "Nouvelles Régulations Economiques" (New Economic Regulations) was enforced in 2002. This regulation states that all listed companies have to provide information on the environmental impact of their operations in their annual reports.. The Second Grenelle Act of 2009, applicable from 2011, extends environmental reporting to any polluting activity initiated by companies with more than 500 employees. The mandatory disclosures cover both financial and non-financial information, and refer to the environmental impact of a company's operations (air, water, emissions, energy, materials), as well as to the firm's commitment to environmental protection, remediation and limitation of adverse consequences of economic activities on the natural environment (Barbu and Dumontier, 2012).
GERMANY
In Germany, there is no specific regulation on environmental disclosure. However, the National Institute for Standard-Setting (Deutche Institut Fur Normierung) issued in 1997 a memo entitled "Leitfaden für Umweltberichte" (Guidelines for Environmental Reports to the Public). This guide, later repealed, established the minimum amount of information to be included in corporate environmental reports (Barbu and Dumontier, 2012).

SWEDEN

Annual Act (Amendment) 1999 requires the companies to have environmental permits or must notify the environmental authorities, have an obligation to include a brief disclosure of environmental information in the board of director's report.(KPMG International Survey of Corporate sustainability Reporting 2002)

In November 2007, the Swedish Government was the first government in the world to publish mandatory guidelines for sustainability reporting for all state owned companies. These "guidelines" for external reporting by the state owned companies states that GRI guidelines are to be used for sustainability reports. Moreover, the guidelines states that the sustainability report shall be subject to assurance by a third party (KPMG International Survey of Corporate Responsibility Reporting 2008).

USA

In the U.S., few financial accounting standards address disclosure of environmental activities/liabilities. During the 1990's, the primary accounting standards addressing environmental issues included Statement of Financial Accounting Standards (SFAS) No. 5, "Accounting for Contingencies" and requirements associated with disclosure of asbestos remediation costs (Emerging Issues Task Force (EITF) 89-13 Accounting for the Cost of Asbestos Removal) and other remediation expenditures (EITF 90-8 Capitalization of Costs to Treat Environmental Contamination) In the early 1990's, the U.S. Securities and Exchange Commission (SEC) became worried about the lack of disclosure of environmental issues in financial statements. The SEC issued Staff Accounting Bulletin (SAB) 92, which increased the disclosures required in the Management Discussion and Analysis section of financial reports submitted to the SEC, (i.e., for publicly traded companies).2 The additional disclosures required under SAB 92 include enhancements to Item 103, which requires the corporation to describe its legal proceedings (this includes administrative and legal activities, pending and contemplated, that could affect the corporation or subsidiaries); Item 303, which requires a discussion of any known trends or any known demands, commitments, events, or uncertainties that are likely to affect the registrant's liquidity in a material way; and Financial Reporting Release 36, which requires disclosure when management is unable to determine that a material effect is "not reasonably likely" to occur (Jorgensen and Soderstrom,2006)

US regulator and lawmakers have focussed their attention on sustainability. In USA, the Securities and Exchange Commission requires disclosure on legislative compliance, judicial proceedings and liabilities relating to the environment in Form K-10. In Chicago, an exchange has traded carbon offsets since 2003. In late 2008, 10 north eastern US state opened the nation's first market for trading greenhouse gas permits, with buyer demands for "allowance" four times the existing supply. Seven western states plan a similar system in 2012 (KPMG International Survey of Corporate Responsibility Reporting 2008).

MALAYSIA

Currently, environmental reporting is a total voluntary exercise in Malaysia. However, the Malaysian Accounting Standard Board (MASB) has incorporated standards that explicitly encourage greater disclosure of environment-related information. Para 10 of Financial Reporting Standard (FRS) 101: *Presentation of Financial Statements* (formerly known as MASB 1) stated that:

Many enterprises present, outside the financial statements, additional statements such as environmental reports and value added statements, particularly in industries where environmental factors are significant and where employees are considered to be an important user group. Enterprises are encouraged to present such additional statements if management believes they will assist users in making economic decisions. FRS 137 (formerly known as MASB 20): Provisions, Contingent Liabilities and Contingent Assets in Para 20 recognized environmental obligations such as penalties or clean-up costs for environmental damage and decommissioning costs of an oil installation as potential business provisions. Furthermore, the appendix section provides examples of circumstance, among others like contamination land, offshore oilfield (the decommissioning costs) and legal requirement to fit smoke filters (Yosuff and Lehman 2006).

CANADA

The securities commission requires public companies to report the current and future financial or operational effects of environmental protection requirements in an Annual Information form. In 1994, Canadian Institute of Chartered Accountant (CICA) published a research report on Environmental cost and Liabilities to guide the organisation on various environmental reporting issues. CICA also approved an accounting standard on remediation costs, which has been passed by the Canadian Standards Committee (Pramanik A. K. 2007)

UK

In the UK, the Companies Act of 1985 forced all listed companies to publish an annual operating and financial review (OFR) that had to include information on significant corporate environmental impacts. These disclosure requirements were extended to large non-listed companies by the Companies Act of 2006, which imposes disclosure of key environmental performance indicators in the Business Review section of annual reports. However, the Companies Act gives managers considerable discretion in the information to be disclosed, which potentially undermines the integrity of the reported information (Williamson and Lynch-Wood, 2008)

UK Companies Act 2006 requires that: 'a director of a company must act in the way he considers, in good faith, would be most likely to promote the success of the company for the benefit of its members as a whole, and in doing so have (amongst other matters) regard to the impact of the company's operations on the community and the environment'.

In particular, a director must make decisions concerning the company's compliance with the Companies Act requirement to report on environmental issues. This requirement is part of the need to include a business review within the directors' report, 'Unless the company is subject to the small companies' regime, the directors' report must contain a business review'.(ICAEW)

In UK, The Institute of Chartered Accountants in England and Wales (ICAEW) in 2009 published a report on "Environmental issues and annual financial reporting". This report shows how the existing accounting and reporting framework, including the business review, is already capable of generating useful information about environmental performance, one of the key dimensions of sustainability. The UK accounting standards most likely to be relevant to the treatment of environmental issues are those concerned with valuation, provisions and transparency of presentation.

- In the case of tangible fixed assets such as land, plant and machinery, impairment often arises from an incident of contamination, physical damage, or non-compliance with environmental regulations. In such circumstances, the carrying amounts are reduced to the value in use or realisable value (IAS 16/FRS 15).
- IFRS 3 *Business combinations* and FRS 7 *Fair values in acquisition accounting* require identifiable assets or liabilities acquired in a business combination to be measured at their fair value at the date of acquisition, which should, if appropriate, reflect environmental impacts.
- Intangible assets, which include greenhouse gas emission allowances, are subject to an impairment test on their carrying value if they exceed the recoverable amount from use or realisation (eg, through trading) (IAS 38/FRS 10).
- Issued in 2004, IFRIC 3 *Emission rights* required an entity to account for emission allowances as intangible assets, recorded initially at fair value. Actual emissions give rise to a liability for the obligation to deliver allowances to cover those emissions (or to pay a penalty). When allowances are awarded by government for less than fair value, the difference is treated as a government grant. IFRIC 3 was withdrawn by the IASB in June 2005, as the accounting proved to be controversial due to the mismatch in the standards dealing respectively with intangibles, provisions and government grants.
- In December 2007, the IASB started its work on a new project on emission allowances. Despite its withdrawal, IFRIC 3 remains a valid, but illogical, interpretation of existing IFRS. However, its withdrawal means that, under the hierarchy for selecting accounting policies under IAS 8, other accounting models are acceptable. In addition to the method in IFRIC 3, two alternative methods of accounting for emissions are: cost of settlement approach based on initial market value; and cost of settlement approach where provision is only made for the cost of buying emissions rights not covered by allowances.
- Possible liabilities that give rise to a provision include waste disposal, pollution, decommissioning and restoration expenses. There may also be liabilities arising from participation in a specific market, such as vehicle production or the manufacture of electrical and electronic equipment. A provision is recognised when an entity has a present obligation as a result of a past event, it is probable that a transfer of economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation (IAS 37/FRS 12). It should be noted that the accounting standards on provisions are under review. (ICAEW, 2009).

Apart from these national regulations and guidelines, there are many international bodies who have taken keen interest in corporate environmental reporting aspect and some of these have issued guidelines in this connection. There are attempts to harmonize reporting on environmental issues. Global Reporting Initiative (GRI) however provides the following core environmental indicators - materials, energy, water, biodiversity, emissions, effluents and waste, suppliers, products and services, compliance and transport.

1.5. Global Reporting Initiative (GRI): The GRI is a network-based organization that produces a comprehensive sustainability reporting framework that is widely used around the world. Participants are drawn from global business, civil society, labour, academic and professional institutions. The GRI's core goals include the mainstreaming of disclosure on environmental, social and governance performance.GRI issued its first set of guidelines in 2000, the second in 2002(known as G2 guidelines) and third in late 2006 (G3 guidelines). The GRI has put significant effort into promoting the guidelines around the globe.

GRI is now connecting the program with more traditional standard-setters such as the Securities and Exchange Commission (SEC) and the International Federation of Accountants (IFAC). The GRI is currently drafting the next generation of guidelines (G4) which are widely expected to reflect up-to-date standards that respond to recent changes in reporting and regulation (KPMG International Survey of Corporate Responsibility Reporting 2011).

1.6. International Integrated Reporting Committee (IIRC): The GRI is one of the initiators of the International Integrated Reporting Committee and firmly believes integrated reporting to be the next step in sustainability reporting. The International Integrated Reporting Committee (IIRC) was established in 2010 to achieve a globally accepted integrated reporting framework. The committee enjoys representation from both the financial and the sustainability sectors who work together to develop a framework that brings together financial, environmental, social and governance information in a clear, concise, consistent and comparable format (KPMG International Survey of Corporate Responsibility Reporting 2011).

The concept of integrated reporting has exploded onto the CR agenda over the past three years. At its simplest, 'integrated' reporting reflects the growing practice of including key CR information in a separate section in the corporate financial reporting process.

According to the International Integrated Reporting Council (IIRC*), "Integrated Reporting is a new approach to corporate reporting that demonstrates the linkages between an organization's strategy, governance and financial performance and the social, environmental and economic context within which it operates. By reinforcing these connections, Integrated Reporting can help business to take more sustainable decisions and enable investors and other stakeholders to understand how an organization is really performing".*

Thus, the concept of integrated reporting refers to the integrated representation of material information about an organisation's strategy, governance, performance and prospects in a way that reflects the commercial, social and environmental context within which it operates. It provides a clear and concise representation of how an organisation demonstrates stewardship and how it sustains value.

Prospective framework of Integrated Reporting and its present status

On 12th Sept 2011, International Integrated Reporting Council (IIRC) published its discussion paper "*Towards Integrated Reporting –communicating value in the 21st century*". The discussion paper identified six key elements determining the content of an integrated report and these are mentioned below:

- Organisational overview and business model;
- Operating context, including risk and opportunities;
- Strategic objectives and strategies to achieve these objectives;
- Governance and remuneration;
- Performance;
- Future outlook.

The above key content elements are based on the five guiding principles identified by the IIRC, which are as follows:

- Strategic focus;
- Connectivity of information;
- Future orientation;
- Responsiveness and stakeholders inclusiveness;

A total of 214 responses to the Discussion Paper from organizations and individuals in over 30 countries were received. The IIRC's Pilot Programme is made up to test the principles, content and practical application of integrated reporting and develop the International Integrated Reporting Framework. The Pilot Programme comprises of over 75 businesses across the globe from the corporate to public sectors; and an Investor Network with 25 institutional investors. The International Integrated Reporting Council (IIRC) has planned to publish the world's first Integrated Reporting Framework by the end of 2013.

1.7. UNCTAD: United Nation Conference for Trade and Development (UNCTAD), an intergovernmental body and the principal organ of United Nations General Assembly in the field of trade and development, plays a positive and pioneering role in the matter of environmental accounting. As its part, Intergovernmental working group of expert on International Standard on Accounting and Reporting (ISAR) was formed in 1982 and has issued number on recommendation on Environmental Accounting and Reporting.

1.8. The **International Standard Organisation (ISO)** has developed an extensive range of standards. Among those ISO 14000 series is directly related to the environment. The voluntary criteria of ISO 14001: *Environmental Management Standards* (EMS) represents an international consensus on what constitutes best practice about environmental management systems. ISO 14001 assists organizations to improve their performance and make a positive impact on business results. ISO 14001 accredited companies are obliged to develop their mission, targets, policies and procedures that continuously monitor the effects of their operations against the natural environment.

2. ENVIRONMENTAL ACCOUNTING AND REPORTING STANDARD IN INDIA

Various laws have been enacted during the time of late Prime Minister Indira Gandhi. During her tenure the Water (Prevention and Control of Pollution) Act was passed in the year of 1977 to prevent water courses both surface and underground from pollution. Again in 1981, another act was enacted to prevent air from pollution, which came to be known as Air (prevention and control of pollution) Act, 1981. After the Bhopal gas tragedy, more comprehensive and well formulated act was passed which is known as Environment (Protection) Act, 1986. Environmental clearance from various Government authorities has now taken as the core phase in project clearance. With increasing global concern over the protection of the environment, India too has set up a Union Ministry of Environment with the object of coordinating among the states and the various ministries, the environmental protection and anti-pollution measures.

There are legislations in India for environmental protection from industrial pollution. There are regulations for direct control of effluent/emissions discharge by industrial units besides indirect control, such as reduction in the resource consumption, and incentives for introduction of clean technologies. The major environmental legislations presently existing in the country include (Tiwari, 2001):

a) Water (Prevention and Control of Pollution) Act 1974.
b) The Air (Prevention and Control of Pollution) Act 1981.
c) Environmental (Protection) Act 1986.
d) Hazardous Wastes (Management & Handling) rules 1989.

THE WATER (PREVENTION AND CONTROL OF POLLUTION) ACT 1974

The main purpose of this Act is to prevent and control the pollution of water. Along with this objective, it also tries to maintain or restore wholesomeness of water and to constitute Pollution Control Boards for the aforesaid purpose.

THE AIR (PREVENTION AND CONTROL OF POLLUTION) ACT 1981

The Air (Prevention & Control of Pollution) Act was enacted by the Parliament in 1981.

This is an Act to provide for the prevention, control and abatement of air pollution, for the establishment, with a view to carrying out the aforesaid purposes, of Boards, for conferring on and assigning to such Boards powers and functions relating thereto and for matters connected therewith. Under Section 19 of this act

the whole of National Capital Territory of Delhi has been declared as air pollution control area by the Central Government. Under this section the government approved fuels to be used in the air pollution control area.

THE ENVIRONMENT (PROTECTION) ACT 1986

This legislation consists of 26 sections and is divided into four chapters. This is an Act to provide for the protection and improvement of environment and for matters connected therewith. By protecting and improving environment, it aims at prevention of hazards to human beings, other living creatures, plants and property. This was enacted to supply the deficiencies of Water Act and Air Act which had failed to produce the desired effect (Tiwari, 2001).

HAZARDOUS WASTES (MANAGEMENT AND HANDLING) RULES, 1989

In exercise of the powers conferred by Sections 6, 8 and 25 of the Environment (Protection) Act, 1986, the Central Government has made the rules relating to 18 categories of hazardous wastes and their management and handling.

Some other legislations indirectly related with environmental issues prevailing in the country are:

a) The Forest (Conservation) Act, 1980.
b) Constitutional provision (Article 51A).
c) The Factories Act, 1948.
d) Public Liability Insurance Act, 1991.
e) Motor Vehicle Act, 1991.
f) Indian Fisheries Act, 1987
g) Merchant of Shipping Act, 1958.
h) Indian Port Act
i) Indian Penal Code.
j) The National Environment Tribunal Act, 1995
k) Environmental Impact Assessment Notification, 1994
l) Environmental Impact Assessment (Public Hearing) Notification, 1997
m) Bio-medical waste (Management and Handling) Rules, 1998
n) Noise pollution (Regulation and Control) Rules, 2000

All new projects require environment clearance approval from both the Union Ministry of Environment and Forests and the corresponding State Govt. department of environment. Guidelines have been issued and all such projects are expected to obtain environmental and anti-pollution clearance before they are actually set up. A Central Pollution Control Board (CPCB) has also been set up. Wherever cases of violating of standards of water or air pollution have been detected, show cause notices have been issued to industrial units and all such units are being kept under constant surveillance (Chauhan. M, 2005).

The Ministry of Environment and Forests is the apex body in India which is responsible for planning, promotion, coordination and overseeing of Environmental programmes in India. The CPCB have identified seventeen categories of industries (large and medium) as highly polluting industries.

In order to minimize the global environmental problems, India has made the production and abatement technology mandatory (Chakrabarti and Mitra, 2005).

NOTIFICATION BY MINISTRY OF ENVIRONMENT AND FORESTS

(a) **A Gazette Notification** on Environmental Audit had been issued by the Ministry of Environment and Forests on 3.3.1992, since amended vide Notification GSR 386(E), dated 22.4.1993.

(b) **Applicability:** The Notification is applicable to any person carrying on an industry, operations or process which requires -

• Consent to operate by or under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 or under Section 211 of the Air (Prevention and Control of Pollution) Act, 1981 or both; or

• Authorisation under the Hazardous Wastes (Management and Handling) Rules, 1989 issued under the Environment (Protection) Act, 1986.

(c) **Reporting Requirements:** As per the Notification, an Environmental Statement shall be submitted to the Pollution Control Board.

(d) **Contents:** The Environment Statement of the concerned industry should provide information on –

• Water and Raw Material Consumption,
• Pollution Generated,
• Nature of Hazardous Wastes, Solid Wastes and Disposal Practices, and
• Impact of Pollution Control Measures on conservation of natural resources.

The National Environmental Policy (NEP) 2006, approved by the Ministry of Environment and Forest recommends the use of the use of "standardized environmental accounting practices and norms" in preparation of statutory financial statements for large industrial enterprises, in order to encourage greater environmental responsibility in investment decision-making, management practices, and public scrutiny.

- **Reporting requirements as to Environmental Statement in the Directors' Report of Companies.**

Under the Companies (Disclosure of Particulars in the Report of Board of Directors) Rules, 1988, every Company is required to disclose particulars relating to –

(a) Energy conservation measures taken;
(b) Additional investments and proposals, if any, being implemented for conservation of energy
(c) Impact of the measures at (a) and (b) above, for reduction of energy consumption and consequent impact on the cost of production of goods;
(d) Total energy consumption and energy consumption per unit of production as per Form A (in respect of 21 specified industry groups e.g. Textiles, Fertilisers, Aluminium, Steel, Sugar, Tea, Paper etc.)
(e) Efforts made in technology absorption, adaptation and innovation as per Form B.

Moreover, Companies Bill 1993 and 1997 proposed the amendment of section 173 to require the board of directors to report the measures taken for protection of environment in such manner as may be prescribed by the authorities (Pramanik A. K. 2007).

- **Disclosure Requirements under Companies Act, 2013:** Section 134(3)(m) requires the Board of Directors to include in their Annual Report, inter-alia, the prescribed particulars in respect of – (i) conservation of energy and (ii) technology absorption.

Section 166(2) of the Companies Act 2013 requires that a director of a company shall act in good faith in order to promote the objects of the company for protection of the environment.

When the Companies Act 2013 is examined from an environmental point of view, a number of insights can be made such as;

- Activities relating to ensuring environmental sustainability should be incorporated by companies in their Corporate Social Responsibility Policies (Schedule VII).
- Director should report the details about the policy developed and implemented by the company on corporate social responsibility initiatives taken during the year [Section134 (3) (o)]
- Every company having net worth of rupees five hundred crore or more, or turnover of rupees one thousand crore or more or a net profit of rupees five crore or more, shall ensure that the company spends, in every financial year, at least two per cent of the average net profits of the company made during the three immediately preceding financial years, in pursuance of its Corporate Social Responsibility Policy [Section 135 (5)]. Further if the company fails to spend such amount, the Board shall, in its report made under clause (*o*) of sub-section (*3*) of section 134, specify the reasons for not spending the amount.

The disclosures required under the Companies Act have a minimum scope but constitute a starting point for voluntary disclosure by Companies. However, considering the inadequate level of environment related disclosures in the Corporate Annual Reports, the possibility and constraints of inclusion of the Environmental Statement in the Directors Report should be judged by the user.

The economic reforms started by Government of India during early 90s, have paved way to rapid economic development and accelerating the process of industrialization. As the industrialization is also creating more environmental problems such as pollution, companies have started providing information about their environmental performance and policies owing of increased accountability. At the same time, there has been a growing awareness internationally on the

disclosure of environmental performance, particularly from those firms that have a direct and substantial influence on the environment like manufacturing, power generation, mining etc, to provide information regarding the environment implications of their operations. Multinational Companies of European Union, United States of America (USA) and Japan are strengthening their global presence in India. These international companies bring in their responsible good practices thereby helping Indian companies to set higher international disclosure standards. Environmental awareness among different Indian stakeholders gets strengthened with advancement in communication technology.

But the level of environmental disclosures in corporate annual report is not an encouraging level. The status of voluntary environmental disclosures in annual report of the Indian companies is not satisfactory. Current financial accounting framework in India is not comprehensive enough to deal with various issues such as environmental costs and liabilities, environmental risk involved in the investment etc. Neither the company law nor the accounting standard/ guideline issued by the Institute Of Chartered accountant Of India (ICAI) any accounting and or disclosures norms for the environment related issues in the annual report. The regulatory framework governing corporate disclosure in India includes the Companies Act 1956 and the Securities and Exchange Board of India (Amendment) Act 2002. However, neither the company law nor the accounting standards/guidelines issued by Institute of Chartered Accountants of India (ICAI) prescribes disclosing norms for the environmental related matters in the corporate financial statements. In such a case, poor environmental performance may bind them to non-disclosure or less disclosure (Pramanik et al., 2007). Therefore, Indian companies disclose environmental information on a voluntary basis.

Accounting bodies in India must settle the accounting related issue on carbon trading arisen due to Kyoto protocol agreement. Despite the fact that the environment policy related Carbon trading has entered India, the accounting standard setters have yet to come up with a standard or guideline to account for such activity. There is again no requirement by the Companies Act, 1956 about reporting requirements on the environment cost and liabilities. However, there is limited disclosure requirement on environmental issues by listed companies as required by Stock Exchanges. Even the Securities and Exchange Board of India (SEBI) has not issued any specific guidelines about the investors' protection measures for the environmental losses and liabilities.

3. SUMMARY AND CONCLUSION

Environmental accounting and reporting in most of the countries is still voluntary in nature including India. Some of the countries introduce mandatory reporting requirements on environment for companies. Several financial reporting regulations worldwide require companies to disclose known future uncertainties and trends that may materially affect financial performance. It has been observed from the study that the international and national accounting standard setters have generally chosen to avoid dealing directly with the topic of environmental issues in financial reporting. Some professional accounting bodies and International Organisations have issued guidelines on environmental accounting and reporting. GRI and IIRC initiative made the environmental reporting an important part of corporate accounting and reporting system worldwide. However, only a few international accounting standards exist on environmental issues. It is worth mentioning that UN ISAR have given various important recommendations on some specific issues on environmental accounting.

Most of the organizations in India are now trying to be environmentally friendly not only to avoid penalty and other costs associated with environment but also for availing the greater benefits that corporations may attain in the forms of effective decisions made on the basis of information provided by accountants on environmental issues. The accounting profession in India has tremendous potential to support industry in developing environmental and sustainability solutions. The ICAI should develop separate standards/guidelines on Environmental issues and accounting related issues in Carbon Trading. It should develop sustainability reporting framework which needs to be consistent with the Intergovernmental Panel on Climate Change (IPCC) principles, GRI and IIRC. A more integrated form of reporting should be developed, in which key environmental, social and sustainability indicators are offered.

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APPENDIX

APPENDIX 1: LIST OF STANDARDS (IAS/IFRS) OR INTERPRETATIONS (IFRIC) RELATED TO ENVIRONMENTAL ISSUES

STANDARDS

- ✓ IAS 1 *Presentation of Financial Statements* prescribes the basis for presentation of general purpose financial statements. Their objective is to provide information about the financial position, financial performance, and cash flows of an entity that is useful to a wide range of users in making economic decisions. For this reason, financial statements provide information about an entity, including environmental assets, environmental liabilities and environmental expenses. At the same time, IAS 1 contains several remarks on additional information and reports issued by companies, to provide their stakeholders with a comprehensive view of their environmental and social impacts. Entities are encouraged to produce such reports, whenever managers consider that they are useful in shaping the external users' opinions and actions.

- ✓ IAS 2 *Inventories* is relevant whenever highly polluting industries, such as mining, recognize their waste as assets with a residual value. This standard requires such waste to be recognized as inventories only if additional costs were to be incurred to convert the waste products into marketable goods.
- ✓ IAS 8 *Accounting policies, changes in accounting estimates and errors* prescribes the criteria for selecting and changing accounting policies, together with the accounting treatment and disclosure of changes in accounting policies, changes in accounting estimates and corrections of errors. The standard doesn't contain a direct mention of environmental elements but these prescriptions are applied, for example, when the company changes the estimates of environmental provisions or it corrects material errors in accounting of environmental costs and liabilities.
- ✓ IAS 10 *Events after the Balance Sheet Date* describes the steps to be taken by any entity when disclosing relevant events occurring after the balance sheet date. Such events, which may carry an environmental impact, should be described in concert with the causes that had generated them before year-end.
- ✓ IAS 12 *Income taxes* prescribes the accounting treatment for income taxes. The general principle of this standard is that deferred tax liabilities and assets should be recognized, with some exceptions, for the taxable/deductible temporary differences. For example, when the carrying amount of an environmental asset is bigger than its tax base, results include a taxable temporary difference and a deferred tax liability.
- ✓ IAS 16 *Property, plant and equipment* indicates that some fixed assets may be acquired for safety or environmental reasons. The acquisition of such elements, even in the absence of future economic benefits, may be necessary for the uncompromised use of other operating fixed assets. In this case, it is clear that the acquisition of environmental assets is outside the scope of the general definition of an asset. This derogation is based on the fact that future economic benefits may be compromised in the absence of certain environmental assets, even though the latter are only accessories to the main operation. As an example, the Standard presents the case of a chemical plant which is forced to introduce new substance manipulation processes to conform to current legal obligations; the operational improvements are capitalized as environmental assets, since the firm would not be able to produce and sell its chemicals without these processes. IAS 16 also requires the incorporation of future dismantling and decommissioning costs into the value of the fixed asset. These costs are estimated at the beginning of the asset's useful life, and are assimilated to a provision in compliance with IAS 37. Future expenses with dismantling and site restoration may also be derived as a consequence of the continuous use of an asset whose environmental impact is not negligible. However, PriceWaterhouseCoopers (2004) considers that, whenever environmental degradation is outside the industrial parameters for the use of a certain asset, the supplementary expenses should be incurred immediately.
- ✓ IAS 20 *Accounting for Government Grants* contains an implicit reference to the initial distribution of emission rights and their recognition in the financial statements.
- ✓ IAS 32, IAS 39, IFRS 7 and IFRS 9 on *financial instruments* are linked to the present and future risks emerging in such cases as hedge accounting, the measurement of environmental derivatives, and the treatment of other financial elements occurring as a result of environmental impacts.
- ✓ IAS 36 *Impairment of Assets* can be applied whenever a company's environmental assets are suffering impairment, either as consequence of a contamination, physical accident, loss of contractual rights or depletion of mineral resources.
- ✓ IAS 37 *Provisions, Contingent Liabilities and Contingent Assets* presents several details on the recognition and measurement of provisions and contingent liabilities and contingent assets. A provision is a liability whose value and date of payment are uncertain and which is recognized whenever: (a) the company has a current obligation (e.g. of an environmental nature) from a past event; (b) an outflow of future economic benefits is to be expected in this circumstance; and (c) a good estimate can be provided for this obligation. Unlike ordinary liabilities, the standard defines a constructive obligation as an uncertain liability imposing the recognition of a provision. For example, a company conducts its extractive operations in a country with no environmental legislation. However, the company has published its environmental policy, which states that any remediation expenses arising from polluting activities will be supported by the firm. In case such incidents occur, the company has a constructive obligation and an implicit provision for the best estimate of these future expenses. However, the standard does not provide any details on the type and magnitude of an event that is deemed to trigger a constructive obligation. A contingent liability is: (a) a possible obligation that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the entity; or (b) a present obligation that arises from past events but is not recognized because: (i) it is not probable that an outflow of resources embodying economic benefits will be required to settle the obligation; or (ii) the amount of the obligation cannot be measured with sufficient reliability. For example, when a lawsuit or other legal measure has been taken against the company, environmental cleanup and protection responsibility generate a contingent liability if the monetary impact of new regulations or penalties on the company is uncertain. An entity should not recognize contingent liabilities in the financial statements but should disclose them, unless the possibility of an outflow of economic resources is remote.
- ✓ IAS 38 *Intangible Assets* is linked to the recognition and measurement of environmental assets such as development expenses or emission rights, either received as a subsidy or acquired from the market.
- ✓ IAS 41 *Agriculture* is a specialized standard with no mention of environmental elements, but targeting a sector with a highly sensitive environmental profile. This standard introduced fair value accounting for all biological assets. The fair value measurements may imply monetizing the environmental contribution of biological assets. For example, the development of markets in forest carbon credits will impact forest valuation and hence financial reporting.
- ✓ IFRS 3 *Business combinations* specify the financial reporting by an entity when it undertakes a business combination. It provides that identifiable assets and liabilities acquired in a business combination should be evaluated at their fair value. Consequently, all environmental liabilities assumed in business combinations (such as environmental liabilities associated with the retirement of tangible long-lived assets) must be measured at their acquisition-date fair value.
- ✓ IFRS 6 *Exploration for and Evaluation of Mineral Resources* is linked to extractive activities, which are widely acknowledged as environmentally-sensitive. The standard is a guide to the recognition of exploration expenses, including the recognition of mineral resources as assets. It also imposes the recognition of any dismantling and relocation obligations as a result of the exploration of mineral resources.
- ✓ IFRS 8 *Operating segments* establishes certain disclosure elements to be provided in the annual reports of large companies. Diversified firms sometimes own an operating segment having a clear connection with environmental services and environmental protection, such as clean energy, urban services, decontamination services, recycling, green technologies, etc.

INTERPRETATIONS

- ✓ IFRIC 1 *Changes in Existing Decommissioning, Restoration and Similar Liabilities* presents several details on the recognition and measurement of liabilities generated by decommissioning and dismantling activities, such as the closure of a chemical plant, the restoration of sites after extractive activities or the removal of heavy equipment.
- ✓ IFRIC 3 *Emission Rights* provides that a cap-and-trade scheme gives rise to three elements: an asset for the allowances held, a government grant for the value of the allowances at the date of receipt, and a liability for the obligation to deliver allowances equal to emissions that have been made. Due to the pressure exerted by the business community and the disapproval from the European Commission, IASB decided to withdraw IFRIC 3 in 2005. Considering that no new interpretation has been issued, the recognition of emission quotas has remained a controversial problem. Adopting the methods applicable under US GAAP is a viable solution, as IAS 8 allows use of accounting policies from other standard-setters if no specific international standard exists.
- ✓ IFRIC *5 Rights to Interests Arising from Decommissioning, Restoration and*
- ✓ *Environmental Funds* discusses the integration into the accounting process of all these rights. The purpose of decommissioning, restoration and environmental rehabilitation funds is to segregate assets to fund some or all of the costs of plant decommissioning (such as a nuclear plant) or certain equipment (such as cars), or in undertaking environmental rehabilitation (such as rectifying pollution of water or restoring mined land).
- ✓ IFRIC 6 *Liabilities Arising from Participating in a Specific Market – Waste Electrical and Electronic Equipment* clarifies when certain producers of electrical goods are required to recognize a liability under IAS 37 for the cost of waste management relating to the decommissioning of waste electrical and electronic equipment supplied to private households (Barbu and Dumontier, 2012).

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