

A STUDY OF GREEN ACCOUNTING PRACTICES IN INDIAN COMPANIES: A WAY TO SUSTAINABLE DEVELOPMENT

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ABSTRACT

The term green Accounting or Environmental Accounting was used for the first time in the year 1980's by Professor Peter Wood. It is an innovated accounting for the environment & it's wellbeing. It's a totally a dynamic study & Practice. It is soon going to be introduced universally in practice, because of its significance. in addition to prepare profit and loss or its revenue and expenses environmental or green accounting is a growing field that focuses or provides for accounting the environmental impact .The introduction of green accounting reveals the assurance that an enterprise has towards the environment. It deals with 3 P's namely PEOPLE, PROBABILITY & the PLANET. India's former Environment Minister Mr. Jairam Ramesh when in Power insisted for the introduction of Green Accounting Practices in India. Despite the fact that Indian corporate consent to the principles and guidelines with respect to ecological insurance, till now no obvious arrangements are surrounded and detailed at the National, State or even at the organization level, for guaranteeing the degree of consistence to ecological standards.

Keywords: Green Accounting, Green Practices, Sustainable Development.

INTRODUCTION

A very innovative term in respect of accounting is prevailing these days naming Green accounting and environmental accounting. *"It permits the computation of income for a nation by taking under consideration the economic damage and depletion within the natural resources base of an economy"*. It became popular after Professor Peter Wood used this term for the first time in 1980. It is an innovated accounting for the environment & its wellbeing. It is totally a dynamic study & Practice. It is a soon going to become Popular because of its significance. In addition to prepare profit and loss or its revenue and expenses environmental or green accounting is a growing field that focuses or provides for accounting the impact on environment. It is a measure of sustainable income level which will be secured without decreasing the stock of natural assets as whole world is facing problem of polluted environment and depletion of natural resources This study is mainly carried out with the process of protecting the environments natural resources and to find out the practices of corporate sector in context of green accounting.

LITERATURE REVIEW

Mehenna Yakhou in his research Paper concluded that a contextual view of the need for integration of an environmental policy with business policy, and for a multidisciplinary team, is given from a business perspective:

Gray Otte in his article '*GHG emissions accounting*' mentioned that there are certain internal as well as external benefits to the company if they adopted green accounting. The GHG (greenhouse gas) emission accounting involves keeping a track of the emissions, accounting and later reporting them. By implementing the GHG process, there would be development in the communication process between the firms and the suppliers which would, in turn, lead to reductions in the costs. Also, green accounting does have limitations and barriers as well. But the author mentions certain ways through which the company can overcome these barriers.

Burritt (2002) stated that now a days companies recognize the importance of the environmental accounting and it can be ignored from the part of the accounts of the firm and he more emphasized that consider the financial outcomes of the social as well as the environmental accounting along with the existing traditional accounting to reflect the true and fair view of the business.

Lehmann in this study, the author explains about IAR (interpretive accounting research). The main objective of IAR is to understand how the accounting discipline like management accounting might help in overcoming or suppressing issues related to global warming and sustainability considerations. The author also depicts how interpretive accounting research allows people to rethink the structure and strategies towards the natural world.

Harazin this article on '*Relationship between environmental accounting and pillars of sustainability*' explains the challenges regarding sustainable development. The objective of this study was to find out and come to a conclusion whether the social and integration point of view is outside of the environmental accounting concept. At the end of the study, after various literature reviews and primer researches, the author was able to come to a conclusion that environmental accounting cannot be beyond social and integration challenge of sustainability and so, it can be related to pillars of sustainability.

Raju in his research Paper asserts that Practices of environmental accounting in India have not been widespread and there is no clarity and transparency regarding policy frame work for national, state and even at company reporting level due to increase in the awareness of stakeholders and other practices, it is to be a segment of financial reporting in India.

Objectives of the Study

1. To analyze the concept of Green Accounting.
2. To make a brief review of legal framework for Green Accounting in Indian Companies.
3. To make an evaluation of Green accounting practices and offer suggestions.

Need and Importance of Green Accounting

Changes in nature have a negative bearing on the Environment as well as on the economy all in all. Furthermore, changes in the economy have an immediate bearing on the adjustments in any business. It is likewise imperative to take note of that the Gross household result of a nation can be influenced by the ecological and climatic change. Notwithstanding this as individuals become increasingly mindful and aware of Environmental issues, the requirement for adequate and proper corporate exposures is developing even more.

RESEARCH METHODOLOGY

This study is mainly conceptual in nature. The present study is based on secondary data; information has been derived from various websites. Viz website of BPCL and ONGC etc.

Data Collection

The information is collected with the help of websites of relevant companies. The Green Accounting Practices of two Indian Companies naming Bharat Petroleum Company Limited (BPCL) and Oil and Natural Gas Limited (ONGC) are studied and analyzed. The main objective was to elaborate the practices of green accounting. Initial research was carried by going through official websites of two selected companies of Petroleum.

Benefits of Green Accounting

1. Creation of different indicators of sustainable economic wellbeing.
2. Through Green Accounting, nations can observe their economic growth at a sustainable level.
3. Firms can also decide how much of an environmental resource to use and when to use it.
4. Important to the sustainability of environmental resources that do not have a market price.

Green Accounting Practices by BPCL

BPCL is committed to attain the highest levels of sustainable management in health, safety, environment and security performances. To help them achieve their aspirations of sustainable living, they implemented a Health, Safety, Security & Environment Management system in 2007, which was further strengthened in the year 2011. This document reflects the corporate Philosophy, Commitment and dedication towards ensuring a safe, environmentally friendly, healthy and secure workplace for the employees, stakeholders and the community at large (Qureshi et al., 2012).

Bharat Petroleum has recently put in place a Corporate Safety Management System in the year 2018, which is a systematic and structured approach to manage the Occupational Health & Safety Risk associated with their operations to As Low as Reasonably Practicable Level (ALARP Level) in accordance with other business goals, values and policy (source-web BPCL).

BPCL Strategic Safety Objectives

1. Committed to Achieve Goal Zero.
2. No harm to People, Asset and Environment.
3. Design, Operate and Maintain Assets to minimise risks to a level which is As Low As Reasonably Practicable (ALARP).

Climate Change

The oil and gas sector is vulnerable to climate change with its key infrastructure located in the coastal areas. BPCL participated in a study on climate change for Oil and Gas sector through TERI in partnership with MOPNG, MOEF & CC, and other industry members. The study has given suggestions on short-and long-term action to be undertaken by the industry members and provided a way forward to tackle the challenges. The study was carried out to

understand and access climate change risks to the infrastructure of Oil and Gas Sector in India, challenges due to emerging National and International climate policies and to develop a decision-making framework due to climate change risks. Actions have already been initiated by BPCL on the recommendations given in the report (Negash, 2012).

Process Improvement Initiatives

Mumbai Refinery Non-Intrusive wireless corrosion monitoring system of M/s. Emerson has been installed and commissioned for the first time at Mumbai Refinery for critical 7 selected piping loops in FCCU, DHDS, DHT, HCU, NHT-ISOM & CCR plants Wireless corrosion monitoring probes were installed and commissioned for the first time in Mumbai Refinery in CCU & DHDS. The corrosion data is available on DCS for monitoring purpose Risk Based Inspection (RBI) study of CDU4, ARU/RFU & SWS-4 has been completed and output of the study has been used in preparation of work list for the forthcoming M&I During revival of HCU, advanced NDT methods such as Time of Flight Diffraction (TOFD), Phase Array Ultrasonic Testing (PAUT), Automated Backscatter Ultrasonic Testing (ABUT), Long Range Ultrasonic Testing (LRUT) was carried out to assess high temperature hydrogen attack damage, localized corrosion and sulphidation corrosion. The inspection procedures, extent of inspection and inspection records were audited and were found in order Comprehensive health assessment of civil & steel structures of FCCU, CCU, Aeromatics complex were done and recommendations for repairs have been issued. Repair work is in progress Comprehensive inspection of fire proofing as per OISD 164 of steel structures in the refinery have been done. Recommendations were issued and jobs are in progress (Bartelmus, 1996). AIMS (Meridium) Software Upgrade to latest version & implementation of new modules has been initiated. Implementation and software configuration is in progress Provision of Electrical Heat Tracing (EHT) to Bitumen delivery headers viz. VG10 & VG40 for steam saving Reconfiguration of Naphtha splitter in ISOM unit for fuel saving Processing of return kerosene in Diesel Hydrodesulphurization (DHDS) unit and stoppage of return kerosene to Diesel Hydro Treater (DHDT) to increase DHDT feed preheat for fuel saving Reduction of steam consumption in DHT complex by bypassing DHT lean amine cooler APC Implementation in Amine Treatment Units & Sour Water Stripper units (viz. SWS4, DHDS ATU & Old SWS) for steam saving Diversion of Splitter overhead gasses in Continuous Catalytic Reformer (CCR) to furnace burners reducing flaring.

Energy Conservation Initiatives

Mumbai and Kochi Refinery both are certified for Energy Management System, ISO 50001: 2011. Continuous monitoring of energy performance and keeping abreast of latest technologies for energy conservation has helped both the Refineries to achieve robust energy performance during FY 2018-19. KR also focused on optimizing energy consumption in the newly commissioned units post stabilization of IREP units. Bureau of Energy Efficiency under the National Mission for Enhanced Energy Efficiency (NMEEE) has a flagship programmer called PAT (Perform Achieve and Trade). Both the Refineries have achieved the PAT target for FY 2018-19. This program enables consumers that exceed their energy saving targets to trade their issued Energy Saving Certificates (ESCerts) at the Power Exchanges (source website-BPCL).

Green Accounting Practices of ONGC

ONGC has always ensured that it protects and cares for the environment. It demonstrates its proactive environmental management through its integrated Health, Safety & Environment (HSE) Policy formulated in 1983. It continually strives to mitigate the environmental impact that may arise from its business activities such as exploration, drilling & production, by investing in state-of-art technologies, effluent & solid waste management, environment monitoring and reporting, bio-diversity conservation efforts and up-gradation and sustenance of environment management systems.

It has a robust process of internal audit and management review for QHSE management system and regularly reviews its QHSE policy and maps risks. Some notable HSE practices are regular QHSE internal audit, Fire safety measures, regular fire and earth quake mock drill, health awareness program, Material Safety Data Sheet (MSDS), Personal Protective Equipment, implementation of Environment Management Systems (EMS), Occupational Health Safety (OHS), Near Miss Reporting, Governance, Risk management and Compliance reporting. As Health, Safety and Environment were integrated in ONGC's vision and mission; all three aspects are incorporated in new integrated HSE policy (Chauhan, 2005).

Environmental Clearances and Regulatory Compliance

Environmental Clearance is a statutory requirement for the initiation of the any new project or modification in the existing project. As part of clearance procedure Environmental Impact Assessment studies, Disaster Management Plan and Risk Analysis etc are carried out. Competent third party agencies/consultants are hired for carrying out these studies. ONGC has also developed studies for select projects. The environmental clearance application along with these study reports are submitted to MOEF which intern grants environmental clearance along with stipulations to be monitored. These stipulations are conscientiously complied and compliance reports are submitted half yearly before 1st June and 1st December every year to MOEF.

Environmental Management System

Environmental protection is regarded as one of the priority business functions. To achieve and sustain the best environmental management practice, environmental management system is in place which is based on ISO 14001.

Integrated HSE management system (QHSE) based on ISO 14001, ISO 9001 and OSHAS 18001 has been implemented in all installations and facilities. Internal team of about 300 environmental lead auditors and the core team of QHSE contributed in achieving this goal. EMS is based on precautionary principles and takes care of all the significant environmental attributes of the organization (Brown, 1993). QHSE's implementation and maintenance entails achieving levels beyond compliance. Achieving QHSE certification for all installations was the first ever in India by any industry in any sector (source website-ONGC) (Palmer et al., 1995).

Other Green Accounting Practices in India

Understanding the requirement for Companies to turn out to be ethically and socially mindful, the administration of India through the new Companies Act of 2013 made Corporate Social obligation (CSR) obligatory for Companies who fall inside any of the 3 classes referenced beneath:

1. Organizations having total assets of INR 500 crore.
2. Organizations having turnover of INR 1000 crore.
3. Organizations having net benefit of INR 5 crore.

Each such organization that falls in any of the classification referenced above needs to spend at any rate 2% of its normal net benefits of the most recent 3 years on CSR exercises and furthermore needs to uncover in its Board/Directors' Report its rundown of CSR exercises every year. Notwithstanding these Companies in India additionally need to reveal points of interest identifying with preservation of vitality, innovation assimilation and outside trade income and outgo. In spite of the fact that these are barely any key advances that are being taken they are inadequate to meet the regularly expanding needs of natural preservation and insurance of organizations. Bookkeeping guidelines and government rules identifying with Green Accounting (Atkinson & Hamilton, 1996; Farouk et al., 2012).

Environment Protection laws in India

According to Indian Constitution, Article 51A of Directive Principles "*It will be the obligation of each resident of India, to ensure and improve the regular habitat including timberlands, lakes, waterways and natural life and to have empathy for living animals*". Indian Constitution Provides number of laws identifying with Environment Protection. For eg:

1. Factories Act 1948.
2. Prevention and Control of Pollution Act 1974.
3. Forest (Conservation) Act 1980; Air (Prevention and Control of Pollution) Act 1981.
4. Water Biomedical waste (Management and Handling) Rules 1998.
5. Municipal Solid Wastes (Management and Handling) Rules, 2000.
6. Ozone Depleting Substances (Regulation and Control) Rules 2000.
7. Noise Pollution (Regulation and Control) (Amendment) Rules 2002.
8. Biological Diversity Act 2002.

The Department of Environment was built up in India in 1980 to guarantee a solid domain for the nation. This later turned into the Ministry of Environment and Forests (MOEF) in 1985. The EPA (Environment Protection Act), 1986 came into power not long after the Bhopal Gas Tragedy and is viewed as an umbrella enactment as it fills numerous holes in the current laws (Beets & Souther, 1999).

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Environment Protection Laws can be additionally named

1. Directly identified with condition assurance.

2. Water (Prevention and Control of Pollution) Act, 1974.
3. Water (Prevention and Control of Pollution) Act, 1977.
4. The Forest (Conservation) Act, 1980. Act, 1981.
5. The Environment (Protection) Act, 1986.

Indirectly identified with condition assurance:

1. Constitutional arrangement (Article 51A).
2. The Factories Act, 1948.
3. Hazardous Waste (Management and Handling) Rules, 1989.
4. Public Liability Insurance Act, 1991.
5. Motor Vehicle Act, 1991.
6. Indian Fisheries Act, 1987.
7. Merchant of transportation Act, 1958.
8. The National Environment Tribunal Act, 1995.

CONCLUSION

There is a need to make awareness about green bookkeeping/green answering to the associations just as the overall population. The administration must make it obligatory for all the associations to initialize green bookkeeping. Severe moves must be made by the administration if ecological standards are not trailed by the association. The organization must reveal its data with respect to ecological bookkeeping as a piece of its yearly report. There must be a greater amount of severe natural standards and enactment made by the legislature. Every single worker in the association must be made aware of the significance of Green accounting and Ecology.

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