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## A STUDY ON ENVIRONMENTAL ACCOUNTING WITH REFERENCE TO MANUFACTURING INDUSTRIES IN INDIA

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### ABSTRACT

Our Vedas says environment should be respected as parent and should be loved as children, But in last few decade we can feel that environment is hampered and harmed at high degrees. Due to continuous rise in population deforestation is done to provide shelter which leads to green house effect and consequently ozone layer depletion. Manufacturing industries throw their waste in the rivers and ocean which pollutes water and those gases which are released by them are polluting the air. To develop industries the concerns need raw material which is provided by the environment. Many laws has been made to protect the environment but there is no such accounting system prepared which can calculate the how much goods and services are taken from the environment and how much is returned back. This research deals with the scope, challenges and prospects of environmental accounting.

*Keywords: Environment, accounting, pollution.*

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### I. INTRODUCTION

Earth has bestowed upon us her blessings by providing us the natural resources so that one can efficiently carry his/her livelihood. The basis of Sustainable Development is to use these resources in such a way that it can be carried forward to the next generation. Hence Sustainable Development means satisfying the needs of present generation without jeopardizing the needs of future generation. In the 19th century well known environmental accidents took place around the world like spread of mercury poison in Japan, high degree of smoke in London, and how can we forget The Bhopal Gas Tragedy, Dec.1984 which created high intensity of chaos in the city and hampered the environment so much so that the future generation also suffered with it.

To ensure the sustainable development, first step with reference to Environmental Aspect was taken by The Club of Roman which initiated a worldwide debate on the topic of 'Economic growth at the expense of natural environment.' Many conferences took place between 1968 to 1972 to discuss upon Environmental issues and to provide corrective measures as well. The World Conference held in Stockholm on Global Environment in June 1972, which ultimately gave birth to a special UN agency named 'UN Environmental Program'. Further 'World Commission on Environment and Development (WCED)' was established which proposed the concept of Sustainable Development in its report named 'Our Common Future' in 1987. After this 'An Earth Summit' was prepared by UN Conference which included Agenda 21. It explained the dos and don'ts to protect the environment with reference to corporate entities.

In view of historical references as above the role of the accountant in present era the role has become more prominent to ensure environmental protection. So that appropriate parameters can be developed to keep an account of natural assets, which led to introduction of Environmental Accounting & Reporting.

## **II. LITERATURE REVIEW**

Dr. Minimol M.C and Dr. Makesh K.G (Feb 2014), did study entitled “Green Accounting and Reporting Practices among Indian Corporates” found the different environmental parameters which the Indian industries follow and level of implementation of it in an industry.

In Jan 2013 Dr. Anita Shukla and Nidhi Vyas did comparative study on to main companies Bharat Petroleum Company Ltd and Oil & Natural Gas Company Limited entitled of “Environmental Accounting & Reporting in India” in which they have disclosed that there is a necessity of environmental accounting. It was an exploratory research based on secondary data.

In Sept-Dec 2012, Vasanth Vinayaga Moorthi, Selvam Murugasen, Lingaraha Kasilingam, Karpagam Venkatraman, and Gayathri Mahalingam, in their Research paper on “Environmental Management Accounting- A decision Making Tools” explained meaning, concept, and tools of Environmental Management Accounting (EMA) and how it can be used.

Manuel Castelo and Branco Catarina Delgado in Oct- Dec. 2009. ,studied the researches made on Social and Environmental Accounting in Southern Europe entitled “Research on social and environmental accounting in Southern European countries”. It explains the variation in percentage of research work done by the researcher individually as compared to in group through content analysis, case study, interview,survey, literature/theory, experimental method.

According to Dr.P. Malarvizhi & Ms.Sangeeta Yadav in May 2008 in their Research Paper titled, “Corporate Environmental Reporting on The Internet- An insight into Indian Practices” explained the condition of Environmental Reporting in different Company. According to survey Indian Company has to focus more on incorporation of environmental costs, its benefits and concerns into mainstream financial reporting through the methods of exploratory research.

## **III. OBJECTIVES**

- To study the Environmental Accounting in Manufacturing Industries.
- To analyze the challenges of Environmental Accounting in Manufacturing Industries in India.

## **IV. RESEARCH METHODOLOGY**

Secondary data will be reviewed initially through university library, journals, and internet search engines. It is an exploratory research which provides insights into and understanding of an issue or situation. This method helps greatly to find out best research design, data collection method and choice of subject.

## **V. MEANING OF ENVIRONMENTAL ACCOUNTING**

Environmental accounting is a division of accounting in which economy as well as environment is considered. It can be effectively implemented in micro and macro level. Under micro level it can be used by industries, corporate, business houses and under macro level in National Economy.

It basically measures the resources used, and communicates the cost incurred by the company or impact of environment on national economic level.

## VI. SUBDIVISION OF ENVIRONMENTAL ACCOUNTING



1. *Global Environmental Accounting*  
It deals in the area of economy and environment on worldwide level.
2. *National Environmental Accounting*  
It deals in the area of environment and economy on country level.
3. *Corporate Environmental Accounting*  
It deals with the cost structure and environmental performance of the company.
4. *Environmental Management Accounting*  
Environmental management accounting is conversion of data collected from financial accounting, and cost accounting and ultimately increasing the material efficiency, reducing the adverse impact on environment and decreasing the cost of environmental protection.
5. *Environmental Financial Accounting*  
It helps to provide information about the company's financial conditions to the external stakeholder like investors, lender and other parties.

## VII. SCOPE OF ENVIRONMENTAL ACCOUNTING



### 1. *Environmental Cost*

Environmental Cost is the cost which is related with the actual or expected exploitation of natural resources due to economic activities. It comprises of environmental operating expenditures and environmental capital expenditure, research and development cost, environment administration and planning, expenditures for corrective measures and recovery measures.

### 2. *Capitalization of Environmental Cost*

Capitalization of Environmental cost is logical only when it increases the life of the business, improves the capacity of the assets of the business, it prevent environmental contamination, and it also improves the quality of the assets.

### 3. *Environmental Liability*

Environmental Liability is an obligation to the party which participates in polluting the environment to pay for damages caused by them to the environment or to compensate the third party who suffered due to their activities.

### 4. *Measurement of Environmental Liability*

Environmental Liability can be quantifiable or non-quantifiable. In case of quantifiable calculation of the exact amount of damage is possible whereas in later case calculation is difficult as it cannot be converted into money terms.

## VIII. SIGNIFICANCE OF ENVIRONMENTAL ACCOUNTING

1. Environmental Accounting helps in generating the data regarding the resources used by the industry in a year.
2. It minimizes the cost by identifying and collecting data with reference to the resources required by the industry.
3. It will slow down the wastage and will manage purchases, cost and sale of material.
4. Through implementation of Environmental Accounting energy and water will be managed cost effectively.
5. It help in decision making ranging from top level management to lower level management to invest in environmental projects.

## **IX. SOME OF THE MAJOR MANUFACTURING INDUSTRIES IN INDIA WHICH MUST FOLLOW ENVIRONMENTAL ACCOUNTING**

- Oil and Natural Gas Corporation
- Gujarat Natural Resources Ltd.
- Reliance Natural Resources Ltd.
- Sesa Sterlite (A Vedanta co.)
- HEG
- Shell (Natural gas, wind mills)
- NTPC (thermal power)
- Suzlon (wind mill)
- Bharat Petroleum

## **X. CHALLENGES OF ENVIRONMENTAL ACCOUNTING IN MANUFACTURING INDUSTRIES**

The challenges which are basically faced by Industries in India for the implementation of Environmental Accounting are:

1. It is not possible to convert all the resources in the environment into quantitative term or monetary term.
2. There is no appropriate method to find out the social value of environmental goods.
3. There is no prescribed format for calculation of environmental resources.
4. The managers are not aware of use of environmental accounting.
5. It involves improper assumptions.
6. Only few industries in India has a legal obligation follow Environmental Accounting.

## **XI. PROSPECTS OF ENVIRONMENTAL ACCOUNTING IN MANUFACTURING INDUSTRIES**

The major prospects of Environmental accounting in India are:

1. The environmental degradation will be controlled and the resources would be used more efficiently leading to lesser wastage and deterioration.
2. A concise evaluation would be possible between the amount of goods and service taken from the environment and paid back to them.
3. General Awareness for preservation of environment will increase.
4. By preparing environmental accounts, it would be possible to disclose the disparity of growth rate between villages or cities or between a village and a city and so on.
5. After the introduction of Liberalization Policy, the rules for extraction of minerals has been liberalized without caring for future, which directly affects the sustainable development of an economy. So, it is necessary for the sake of our future generation to review and restructure the policy.

## XII. CONCLUSION

Though many laws were made to promote environmental accounting since 1991 during liberalization scenario but implementation of those laws were weak. There are no standards for such accounting as for financial accounting in India. Only few companies are bound to show the environmental related matter which is not enough to calculate the environmental degradation. So it is mandatory to make some stringent standards and methods to calculate environmental degradation which is effecting our environment on a daily basis.

With respect to that, company should develop some norms which must be followed by each employee and there must be an independent regulatory body to govern and monitor the activities of the organization and provide them solution in a periodical basis.

## BIBLIOGRAPHY & REFERENCES

- [1] Alok Kumar Pramanik and Nikhil Chandra Shil and Bhagaban Das, (Dec. 2007), “Environmental accounting and reporting With special reference to India”, Munich Personal RePRe Archiye.
- [2] Dr. Anita Shukla and Nidhi Vyas (Jan.2013), “Environmental Accounting & Reporting in India (A comparative study of Bharat Petroleum Company Limited & Oil & Natural Gas Company Limited)”, Pacific Business Review International, Volume 5, issue 7.
- [3] Dr. Minimol M.C and Dr. Makesh K.G (Feb 2014), “Green Accounting and Reporting Practices among Indian Corporates”, Asia Pacific Journal of Research, Volume-1, Issue 14.
- [4] Mirela Camelia Baba, “Advantages of Implementing Environmental Accounting within an Economic Entity”, Directory of Open Access Journals.
- [5] Namitha K Cheriyan, “Environmental Accounting and Reporting: A Theoretical Analysis of Indian Scenario”, the Commerce Pedia Blogspot.
- [6] [www.wikipedia.com](http://www.wikipedia.com)
- [7] [www.sciencedirect.com](http://www.sciencedirect.com)