ENVIRONMENT ACCOUNTING AND ENVIRONMENTAL COSTS

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Abstract—The fierce competition conditions caused from technological developments, rapid increase of the world population and free market model, constant product development and renewal obligation, efforts shown for increasing the employment, wars, accidents and similar incidents, bring the environmental problems together.

Environment accounting which is also called as green accounting is intended to include the information pertaining to environment into the accounting system. In the conventional accounting system, the environmental costs are considered in the general expenses group and were insufficient for ensuring detailed information. The aim of this study is explaining the environment accounting and environmental costs.

Keywords—Environmental Costs, Environment Accounting, Operating and Environment.

I. INTRODUCTION

Today, having industrialization speed up and having the scales of the industry enterprises grown, rapid increase of the world population, development and renewal of the sustainable products caused rapid increase of the environmental problems. Thus, the expectations from the enterprises to carry on activities with a sense of environmental responsibility have increased.

A major part of the impacts of the enterprises on the environment is a function of the production activities. Environmental impacts of the enterprises; vary depending on the product compositions, production processes, capacity levels, supply systems and recycle possibilities.

Enterprise administrations are responsible for production of the products required on the basis of quality and quantity as well as controlling the resources used for the production of these products, the emissions created, management of the wastes and environmentally hazardous substances. The activities which are realized by the enterprises in order to reduce the environmental impacts can be defined as environmental regulations.

The enterprises are obliged to consider not only the results of their activities that they carry out but also their social impacts. To get accounting profession having importance by the changes emerging in economical and technological fields, brought this profession to an efficient position within the society and commercial life. Studies have been started in order to elicit the hazards given by the enterprises on the environment in accordance with the social responsibility term of the accounting, and to determine their impacts, and calculation, classification, tracking and reporting of the costs which may arise; and as result of these studies, the term of "Environment Accounting" has came to the fore [1].

Implementation of the environment accounting by the enterprises and elimination of the problems which are encountered during implementation, shall ensure the increase of the benefit expected from the accounting during the decision making, planning and control phases with regard to both intercorporate and non-operating accounting information users [2].
II. ENVIRONMENT PROBLEMS

Environment problems have reached a point which cannot be restricted only by environmental pollution. However, the biggest factor which causes environmental problems at this point is the increase in the environmental pollution. Environmental problems emerge due to causes such as population increase experienced throughout the world, irregular urbanization, global warming and climate change; and influence the entire Earth. The environmental problems have been examined under four headings, namely, air pollution, water pollution, soil pollution and other environmental problems.

A. Air Pollution

The air pollution is the increase of the contaminants which may be existent in the atmosphere in the form of dust, smoke, odor, water steam; to the extent of a hazardous level to the human and other living creatures as well as the belongings. The air pollution poses a major threat also for the living creatures. The air pollution which poses a threat on creatures and specially on the humans, the inhalation of the hazardous gases which are emitted to the atmosphere, causes health problems and influence the creatures in the psychological aspect. Furthermore, these gases which are emitted accumulate in the atmosphere and trigger the global warming. These impacts do not pose threats not only on a country or a community, but also influence all living species living on the earth.

B. Water Pollution

The water pollution can be defined as having water resources including organic, inorganic, biological and radioactive contaminants in a level to corrupt their use by decreasing the quality. Water is a being which is as important as the air for the living creatures. Water pollution in addition to the air pollution has reached at a point threatening the life of living creatures today. The water pollution is comprised by getting shares from all of the industrial and vital activities. The water has received its part from the environmental pollution as result of the pollution created by the chemical fertilizers and pesticides used in agriculture, existence of the industrial wastes and the living quarters. One of the biggest impacts caused by the water pollution is the loss of water products. Given the importance of how important water and water products are for maintaining the existence of living being, we can adduce that there is no creature which will not be effected from this.

C. Soil Pollution

The soil pollution is essentially the corruption of physical, chemical, biological and geological structure of the soil as result of the human intervention [3]. The human effect which is in interaction with the environment is included also in the soil pollution. Human pollutes the soil by the means of agricultural pesticides, solid wastes, wastes, radioactive wastes that it uses as result of its miscellaneous activities; and also water pollution causes pollution of the soil. Given the living creatures cannot live without being dependent on the soil, it is obvious that the pollution in the soil threats the life of the living creatures to a large extent, together with other pollutions.

D. Other Environmental Pollutions

The noise pollution is also one of the environmental pollutions current today. It is possible to define the noise pollution as a sound pollution. This pollution is caused by the living quarters, transportation activities, construction activities and comes to the forth as a situation influencing the hearing health in a negative way.

Apart from the noise pollution, there are also environmental pollutions and environmental problems causing from miscellaneous causes effecting the lives of living creatures that emerge as result of the human activities and that are in interaction with the environment. We can list these pollutions and problems as chemical pollution, magnetic pollution, light pollution, depleted ozone-layer, decrease of the green zones, decreases in the animal and plant generations, problems experienced depending on the traffic etc.

III. ENVIRONMENT ACCOUNTING

Accounting is in a sustainable interaction with its environment as an open system. In the accounting, the interests of not a certain person and groups, but the entire community has to be looked after in accordance with the social responsibility term [4]. To set forth the theoretical structure of environment
accounting, first the relation between the environment and accounting must be examined and then it must be analyzed whether or not they are in compliance with the environmental qualifications [5].

The environment accounting is an approach which considers the environment through an accounting perspective. In other words, the environment accounting is an approach, through the interaction between the environmental operating activities, which set forth the following and reporting of the determination and monetary sizes of the problems occurring in the environment of the enterprise due to these activities [6].

Some of the definitions concerning the environment accounting that are expressed with various terms such as green accounting, ecologic accounting, environmental accounting in miscellaneous sources are:

- Environment accounting; the accounting of the environmental impacts which might be arisen as result of the use of the environmental sources and the use of the mentioned sources is the implementation of the factors concerning the environment by planning specially in the cost and profit analyses in the applicable accounting systems [7].

- Clark and O'Nell define the environment accounting as an essential name given for the efforts of examining the reciprocal relations between the accounting, accountants and ecology. The activities in this field include the determination, analysis and reporting of the information required for realizing the environmental policies and strategies of the organizations [8].

- Guatam defines the environment accounting as the accounting of the use of environmental sources and the as the accounting of the effects that will emerge as result of the use of these sources [9].

The environment accounting can be defined as "Defining the environment by measuring the negative effects of the environment and predicting them in the accounting system applications" [10].

It is a field of science which contributes to determination of the benefits to be obtained and the costs to be incurred by the enterprises by the means of using the sources available in the nature [11].

The environment accounting is an information system that generates the information which explain the increases and the decreases happening in the sources as result of the activities of the enterprises and which explain the status of the enterprises on an environmental aspect, and which convey these information to the relevant bodies and organizations [12].

Having the information which are generated by the environment accounting considered important by various interest groups and taken into consideration by the decision organs, render the accuracy and reliability of the generated information important. There are any data which are required to be recorded and pursued pertaining to the environment accounting. Environmental assets and environmental costs constitute the most essential factors of these data. [13].

Within this branch of accounting, the environmental information, determination of the environmental problems, the efforts for preventing them (as needed by the social responsibility term) and the pursuance of the activities pertaining to reducing these problems are intended. One of the functions of the environment accounting include regulating the profit/loss calculations and financial information on the ground of the generally accepted accounting principles by taking the environmental factors into consideration [14]. The financial reports which are prepared in this context shall contribute to determining how much effort has been shown in order to protect environment today and in the future and how much cost has been incurred [15].

In order to provide the benefit which is expected from environment accounting and also to get enterprises developed, to get them gain competition advantage and to meet the environmental expectations; The activities of

- Determining and managing the environmental costs in an accurate way,
- Determining the areas in which the environmental performance can be measured and improved,
- Determining the environmental relations and environmental effects of the enterprise,
- Obtaining the environmental information which are required in miscellaneous enterprise decisions,
- Conveying periodically the information concerning the environmental performance and environmental effects of the enterprise to the relevant
IV. ENVIRONMENTAL COSTS

The costs incurred by the enterprises to protect the environment, to maintain the natural life, constitute the environmental costs of the enterprise [17].

Environment accounting information system is required in order to obtain the information that are required in various enterprise decision and to determine the environmental impacts as result of the reciprocal interaction between the environmental responsibility and administration strategies of the enterprises recently. Enterprise administrators require environmental cost data while taking decisions about the product variety and pricing, selection of the production inputs, assessment of the options of the pollution-preventive projects and waste management, in their administration strategies to be determined by considering the environmental compliance. Environmental costs emerge within a very large time space as in connection with many various activities [18].

Recognition of the environmental costs, which may come out as result of all kinds of operating activities, among the other activities of the enterprise, runs counter to the importance term, one of the essential terms of accounting. On the other hand, this situation causes the enterprises to be unable to determine their environmental activities accurately and to ensure environmental control. There is not any unit of account recommended for being able to pursue the environmental costs in the uniform chart of accounts. Having environmental costs proceeded as a period costs by using necessary criterion or proceeded in the relevant active account, may be appropriate [19].

To consider the environmental costs occurred in the enterprise within other cost categories without being subjected to a separate classification, runs contrary to the exact explanation term, an essential accounting term. Because the costs constitute the information which will support the decision making of the enterprise administrators. All enterprise administrators shall require these costs to be categorized separately during the decision making phase concerning the environment and shall make use of them at decision making point [20].

Environmental costs have two dimensions as "private" and "social". The private costs are the costs which are incurred due to the environmental responsibilities of an enterprise and which directly effect the profit/loss status of the enterprise and this cost term is used sometimes as interior costs [21]. The social cost within the understanding framework of environment accounting; is defined as the cost of effects of an enterprise on the environment and community for which it is not held responsible on monetary basis. As social costs include exteriority, they can be defined also as exterior costs [22].

1-Interior Costs
- a-Direct or Indirect Environmental Costs
- Waste management improvement costs
- Environment training costs
- Maintenance-repair cost concerning the environment
- Penal and legal costs
- b-Likely or Concrete Environmental Costs
- Further uncertain improvements or costs
- Cost of raw material input sustainability
- Cost of corruption risk of the natural assets

2-Exterior Costs
- a-Exhaustion of the Natural Sources
- b-Having Wastes Left Outside to Cause Air, Water and Soil Pollution
- c-Waste Removal In Long Term
- d-Negative effects on the Health Balance
- e-Change of the Local and Natural Life Quality

As shown above, the interior costs are about the costs of the environment-sensitive enterprise which they will be obliged to incur in order to get this sensitiveness of them to be reflected on their financial reports and the costs which must be incurred in the event of they encounter an unexpected situation in the future [15].

Exterior costs concern the costs which cannot be accurately calculated, which are imposed on the environment, individual and community by the enterprise [23].

IASC (International Accounting Standards Committee) stipulates to get the proceedings concerning recording the environmental factors to be carried out by the enterprises. In 1993, IASC has
defined the environmental costs in a memorandum concerning the environmental costs and responsibilities as "Includes the costs of the necessary exert of an enterprise for its activities and environmental effects". As it is understood; IASC conducts studies about having environmental costs to be recorded and considered in the accounting accounts.

V. CONCLUSION

Today, the more the sources concerning environment deplete, the more their importance becomes evident and all layers of the community becomes more sensitive. The environment perspective of enterprises changes accordingly as a part of the community. The importance of environment accounting increases day by day in order to satisfy this sensitivity of the community.

In accordance with the social responsibility, one of the essential terms of accounting, the accounting and the accountant is responsible for contributing to provide solutions for the environmental problems.

Once enterprises pursue the environmental costs in detail and present to the bodies separately who need information in their general purpose financial statements, they will fulfill their social responsibility. In parallel to this, it will be in question to get conscious consumers to prefer the products of these enterprises. Accordingly, the sales of the enterprises which fulfilled these steps shall tend to rise in middle term. The outputs or information which may be obtained by the enterprise from such a system, shall facilitate the enterprise administration to take more positive decisions concerning the environment. Thus the environment management system of the enterprise shall be used more efficiently and the increase in the productivity might be in question. As it is seen, the proceedings concerning the environment accounting and environmental reporting in order to decrease or prevent environmental problems should be encouraged and this accounting sub-branch and reporting type should find a field of application in the level of enterprises. In other words, the tasks on the part of enterprises and the community for protecting the environment should be put into practice as soon as possible "voluntarily" or "mandatorily".

REFERENCES


