

## Environmental cost management within the sustainable business

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**Abstract:** In the last fifty years, the concept of sustainable development which has important notions for researchers and businesses, without disregarding the needs of future generations, not ignoring the human needs, is a concept that aims to provide the basic needs of all society effectively. Thus, the activities that have been carried out by businesses are becoming more important.

Within the sustainable business, to become an organization environment and human friendly is important. Sustainable business needs protecting the environment which provides the factors of production. In short term, producing and selling goods without concerned with environmental costs makes profit to the business, but in long term, makes disadvantage initially to the business and environment. Throughout the activities of business, taking measures to reduce for harmful effects on the environment during the process of transformation from raw material to final product is a necessity of sustainable business.

In this study, the environmental cost management is analyzed within the activities of business to realize efficiently and effectively, to elevate market value and carrying to future. Moreover, organizational structure, activities and their effects on the environmental costs will be explained in the case that the activities of business to be sustainable and environment friendly organization.

**Keywords:** *Sustainable Business, Environmental Cost Management, Environmental Management Accounting*

### Introduction

Enterprises are required to formulate their vision depending on the concept of sustainability. Activities of enterprises with a sustainable business vision will contribute to the enterprise environment and development of the society in which it operates. However, in order to maintain these activities, environmental factors should be also taken into consideration. Today, assessment and management of environmental costs which constitute one of the major cost items within the scope of the sustainability have great importance for businesses.

Since 1970s that is the beginning of conflict with the objectives of the concepts of economic growth and ecological sustainability; it is understood that economic growth and development is not itself sufficient to ensure the welfare of the community. As a result of environmental problems caused by industrialization it is accepted that environment is a source like other production factors and a value which may become polluted and exhausted over time. Besides, it is understood in this process that using the environment has a cost as well as the costs faced by businesses while using any source (Çelik, 2007).

### Sustainability and Sustainable Development

Sustainability is a dynamic concept which does not have a generally accepted definition in the literature yet. In recent years, it attracts more interest from some certain parts of the society including especially academics, businesses and their environments (Roosa Stephen, 2010:81). However, sustainability is a concept involving all parts of society.

The rise of greenhouse gas emissions that emerged with industrialization brought factors such as climate change etc. and environmental disasters perceived on a global basis. In this developing process states sought a new model instead of the classical economic development model. As a first result of this search in

1987, the United Nations Stockholm Conference on the Human and the Environment sustainable development has been on the agenda for the first time. In this report, sustainability is defined as "development meeting the needs of today without compromising the needs of future generations to meet their own needs" (WCED, 1987).

Another definition of sustainable development, it aims to use the resources effectively which are scarce for the welfare of present and future generations without destroying them through the creation of a fit about the sustainability of environmental, social and economic development (Hall, Daneke and Lenox, 2010). According to this definition, if environmental, social and economic developments do not take place in a harmony, it is not possible to talk about sustainability.

## Sustainable Business

The main actors in the realization of sustainable development are businesses. Taking into consideration that businesses use natural resources to meet human needs and are economic units that contribute to economic, social and environmental improvements, their role in sustainable development understood better.

The concept of sustainability for businesses is discussed under social, economic and environmental dimensions. According to Aras (2012) sustainability, " is an extremely important indicator not only includes own internal factors of businesses, but also includes all external factors influence it and assessment of them."

In the name of sustainability, it is extremely important to determine a common way in the initiatives connected to the environmental awareness and the actors that is related along the chain starting with the supply of raw materials of businesses and up to the final goods and reaching the service to the consumers. Today, with globalization the effects of business activities go far beyond the time and place in which they are. In this context, while performing their activities businesses should act not only with an economic point of view, but also with a vision of sustainable business. The businesses which have the vision oversee the management of this process within the framework of environmental awareness (Altuğ et al., 2012).

The main objective of businesses to maximize profits in the short term and in the long term is to maximize shareholders' wealth. However, from the operation results of an enterprise affect not only the owners and its partners, but also affect the community, various institutions and organizations (Şengel, 2011). The activities of businesses are under pressure from these groups. Today, as the pressure increases day by day due to environmental factors (Aydın, 2012). In this context, businesses need to consider not only the economic dimension of their activities but also need to consider the social and environmental dimensions (Nowduri and Al-Dossary, 2012: Okka, 2005:15).

**Exhibit-2-1:** The Dimensions of Sustainable Business



Source: Yıldız T. 2006

The factors that need to be in order to have sustainable business activities (Benn et al., 2006):

- Being in contact with shareholders,
- To have the vision to draw a road map for the future,
- To achieve innovative capacity through clean energy
- To have the skills and capacity of risk reduction by increasing profit and preventing the environment damage.

Sustainable business development stages are presented in Table 2-2;

**Table-2-2:** Sustainable business development stages

PHASE	HUMAN SUSTAINABILITY	ECOLOGICAL SUSTAINABILITY
<b>Step 1: Rejection</b>	Employees and subcontractors exploited. Community concerns are rejected outright.	The environment is regarded as a free good to be exploited.
<b>Step 2: Non-responsiveness</b>	Financial and technological factors exclude broader social concerns.	Ecological factors are excluded from decision-making.
<b>Step 3: Compliance</b>	The emphasis is on compliance with legal requirements in industrial relations and safety.	Ecological issues unlikely to attract strong litigation or strong community action are ignored.
<b>Step 4: Efficiency</b>	Technical and supervisory training augmented with interpersonal skills training. Community projects and HR value-adding strategies are pursued only when a cost benefit to the company is obvious.	Environmental issues are ignored if they are not seen as generating avoidable costs or increasing inefficiencies. Sales of byproduct are encouraged.
<b>Step 5: Strategic Pro-activity</b>	Intellectual and social capital is used to develop strategic advantage through innovation in products/services.	Proactive environmental strategies such as product and process redesign are seen as a source of competitive advantage.
<b>Step 6: The Sustaining Corporation</b>	Key goals both inside and outside the firm are the pursuit of equity and human welfare and potential.	The firm works with society towards ecological renewal and positive sustainability policies.

Source: Benn S. et al. 2006

While sustainable development is associated with social, environmental and ethical issues, in terms of enterprise it is associated with corporate governance, corporate social responsibility and social accounting and can be integrated into enterprise (Mei, 2011).

## Environmental Accounting

Environmental accounting is also called as Green Accounting is expressed in different terms in the literature. For example: Environmental Accounting, Natural Resource Accounting (NRA), Environmental Management Accounting (EMA), Full Cost Accounting and so on.

After 17<sup>th</sup> century rapid industrialization, urbanization, environmental pollution induced climate change and the opening of agricultural lands for settlement due to population growth have revealed environmental problems. In other words, the production activities in order to meet human needs caused environmental problems and began to be an evident manner all over the world. June 5, 1972 Stockholm Conference, which is a turning point in the international policies related to the environment, has revealed that the need to embrace the environmental problems should be at the universal level not at local or regional level (Kırlioğlu and Yıldız, 2004).

In the second half of the 20<sup>th</sup> century, environmental issues have been a subject to scholars and regulations related to the business world. The concept of environmental accounting and related issues has been developed since 1970s and arrived to the present day (Todae et al, 2011).

In the last quarter of the 20<sup>th</sup> century environmental disasters such as Bhopal chemistry (1984) and the Exxon Valdez oil disasters (1989) revealed that continuation of only profit policy adopted by businesses would not provide the sustainability (Erkuş and Ateş, 2008, p.265). In 2010, in the explosion happened at British Petroleum (BP)'s drilling tower in the Gulf of Mexico 4.9 million barrels (779 million litres) of oil leaked into the sea at the end of 87 days. 48,000 people worked to prevent leakage threatening the environment and biodiversity and by the end of 2010 of \$ 17.7 billion were spent. As a result of ongoing cases until 2012, U.S. Department of Justice fined BP 4.5 billion dollars. Even if the Gulf of Mexico is cleaned up today, the recycling of damaged ecological balance will take many years.

Today, it is obvious that accounting which is an open system in an ongoing relationship with the environment, cannot remain indifferent to social and environmental issues (Çelik, 2007). Environmental accounting can be considered as a sub-branch of cost accounting or an independent branch (Yakhou and Dorweiler, 2004).

Environmental organizations play an important role on the environmental regulations made on a national basis, the formation of environmental awareness in the community and accentuating of businesses on environmental issues. Environmental accounting does not yet have sufficient legality in the business world

despite being constantly on the agenda of academic conferences and taking parts in the publications of academics and in a variety of environmental protection organizations (Çelik, 2007).

Environmental accounting is to present the financial and non-financial information, obtained from the physical effects of businesses on the environment and their efforts to minimize these environmental effects, to the public (Antheaume, 2004).

There are different definitions in the literature on environmental accounting. U.S. Environmental Protection Agency (U.S. EPA)<sup>1</sup> defines environmental accounting (1995) as follows:

- Identification and disclosure of financial information related to environment to the public within the scope of financial accounting and reporting,
- The identification and use of environment-related physical and financial data within environmental management accounting,
- External environmental impacts and estimated costs,
- The physical and monetary accounting of the remaining and used natural resources,
- Data collection and reporting of accounting data for the purposes of general accounting, natural resource accounting information and other information at firm-level,
- Considering the physical and financial data related to the environment within the scope of environmental accounting,

Bartolomeo et al. (2000) stated "*Environmental accounting provides information inwardly in the pricing decisions, cost control and capital budgeting; whereas it also provides data outwardly for the public and the financial community about public disclosure reports related to the environment*"

Businesses is required to report the physical and financial information related to the environment in which it operates and natural resources it uses to the public in a separate statement in the accounting information system. The potential harm that business activities may give to the environment with financial aspects and the expenditure and initiatives could prevent these harms should be full disclosure to the public by enterprises under the principle of public disclosure.

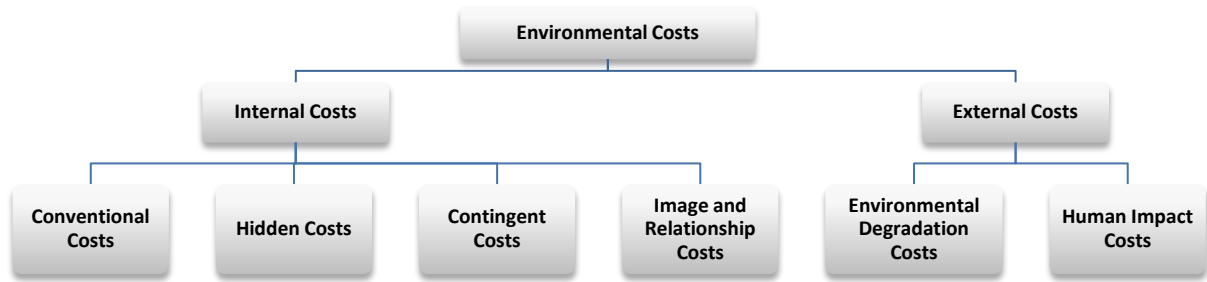
Environmental accounting helps to make decisions on identifying those responsible for the pollution stemming from commercial activities and the estimated environmental effects and expenditures. In addition, environmental accounting produces information needed in planning to reduce environmental expenditures and different consumption structures (Bailey and Soyka, 1996). This is associated with physical units / activities of the enterprise as well as monetary aspect (Lintott, 1999). Moreover, environmental accounting helps in allocation resource for environmental costs, cost measurement, integration of business decisions and providing information to the external environment (Stanko, Brogan and Alexander, 2006).

## **Environmental Costs**

Today, it is seen that society's environmental awareness developed depending on the environmental disasters (Masanet and Llodra, 2006). Businesses have to effort in regard to the creation of environmental awareness and protection of the environment as well as individuals. In this respect, environmental accounting can be described as "*a tool used to identify and measure environmental costs for the provision of adequate environmental performance.*" (Todae et al., 2011).

U.S. environmental protection agency mainly divides environmental costs into two. First, they are the internal costs affect the businesses directly and they can interfere with them. Secondly, they are the external costs that businesses are not responsible and they cannot interfere with them. This definition can be expressed as the following general headings (Todae, 2011);

<sup>1</sup> US EPA – United States Environmental Protection Agency

**Exhibit-4-1:** Types of Environmental Costs

**Source:** Todae et al. 2011, pp.653

Traditional costs are the costs arising from machinery and equipment, raw materials and consumer goods.

Hidden costs represent the indirect environmental costs or the dependent costs which may occur in the future. Within the scope of hidden costs, environmental costs resulting from legal obligations and voluntary actions are included. These costs are the costs that arise during the execution of the activities of a process, system or facility. Many businesses assess these costs as an expense in the period, and do not give the necessary importance to these costs in their business decisions and daily activities (EPA, 1995: Todae, 2011).

*Dependent costs* represent the costs may arise in the future depending on the environmental effects. For example, penalties to be paid for the oil spills as caused by various accidents and expenses related to the solution of environmental damage caused are the dependent costs (EPA, 1995: Todae, 2011).

*Image and relationship costs* (Public Relations) have more abstract structure than other costs. These costs are more difficult to measure compared to other environmental costs as they are abstract structured costs based on the subjective perception of managers, customers, employees, public and the governments. Examples of these costs are the costs associated with annual environmental reports, relations with the local population and environmental activities carried out on a voluntary basis (EPA, 1995: Todae, 2011).

*External costs*, the costs that businesses are not directly responsible but arise from the activities which have adverse effects on the environment. Activities that give rise to these negative consequences are the activities that cannot be prevented by law. In addition, to measure the real values of the external costs is difficult. However, some businesses are trying to take these costs as an item of costs within the environmental accounting systems (Todae, 2011). According to the U.S. Environmental Protection Agency, the environmental cost types are shown in Table: 4-2.

*Potential hidden costs*, represent the environmental costs that cannot be foreseen by managers. These costs are the environmental costs due to legal obligations, voluntary actions and the activities of enterprises. Although these costs are classified as overhead costs or research and development costs, some of the costs may be overlooked before operating as business managers focus on the costs of the investments to be done (EPA, 1995).

The resulting environmental costs may be subject to different classifications according to their occurrence. While some of the environmental costs emerge as a result of the activities carried out for the purpose of environmental protection and providing sustainability, others occur as a result of the use of resources in production activities. In addition, some of the environmental costs emerge as a result of environmental pollution caused by enterprises. In this context, environmental costs can be examined under three headings: prevention costs, operating costs and affect costs (Çelik, 2008).

*Prevention costs* are the costs incurred in the process of design, production, usage and destruction stages of the product in order to protect the environment and minimize the environment damage (Çelik, 2008). Costs incurred in the life cycle of the product;

- Environmental planning costs,
- Environmental harmonization costs in product design,
- Recycling costs,
- Eco-friendly packaging costs,
- Environmental management costs, waste control, elimination or treatment costs are within the scope of prevention costs. These costs are the costs that can be determined in accordance with the decisions of the administration.

*Operating costs* can be defined as the price for public natural resources benefited while operating activities. The use of natural resources such as air, water, soil, and minerals are kinds of these costs. Businesses may not be required to pay a fee for the operating costs arise from the use of natural resources if environmental damage that the public suffered as a result of the use of these assets is below the limits permitted by law (Çelik, 2008).

*Affect costs* are the costs related to environmental damage caused by the failure of the previous phases. These cost elements are defined as reduction in fauna and flora and the losses caused by waste released into air, water and the soil (Çelik, 2008). Measures taken after the pollution of the environment and natural damage are not effective and also lead to huge economic losses. In this context, environmental problems need to be managed before their occurrence (Kırımhan, 2005:113).

**Table-4-2:** Examples of Environmental Costs

<b>POTENTIALLY HIDDEN COSTS</b>		
<b>Regulatory</b>	<b>Upfront</b>	<b>VOLUNTARY (Beyond Compliance)</b>
Notification	Site Studies	Community relations/outreach
Reporting	Site Preparations	Monitoring/Testing
Monitoring/Testing	Permitting	Training
Studies/modeling	R&D	Audits
Remediation	Engineering and Procurement	Qualifying Suppliers
Recordkeeping	Installation	Reports (e.g., Annual Env. Reports)
Plans		Insurance
Training	<b>Conventional Costs</b>	Planning
Inspections	Capital Equipment	Feasibility Studies
Manifesting	Materials	Remediation
Labeling	Labor	Recycling
Preparedness	Supplies	Environmental Studies
Protective Equipment	Utilities	R&D
Medical surveillance	Structures	Habitat and Wetland Protection
Environmental Insurance	Salvage Value	Landscaping
Financial assurance		Other Environmental Projects
Pollution Control	<b>Back-End</b>	Financial support to environmental groups and/or Researchers
Spill Response	Closure/Decommissioning	
Stormwater Management	Disposal of Inventory	
Waste Management	Post-closure Care	
Taxes/Fees	Site Survey	
<b>CONTINGENT COSTS</b>		
Future Compliance Costs	Remediation	Legal Expenses
Penalties/Fines	Property Damage	Natural Resource Damages
Response to Future Releases	Personal Injury Damage	Economic Loss Damages
<b>IMAGE AND RELATIONSHIP COSTS</b>		
Corporate Image	Relationship with Professional Staff	Relationship with Lenders
Relationship with Customers	Relationship with Workers	Relationship with Host Communities
Relationship with Investors	Relationship with Suppliers	Relationship with Regulators
Relationship with Insurers		

Source: US EPA, 1995, pp.9

Some of the environmental costs are not paid and / or not taken into account by businesses. For this reason, these costs are not included in financial reports and records. For example, businesses do not take into account the noise they emitted to the environment and the harm they give to animals and plants. Another example is the use of underground water free of charge and to release it to environment. However, enterprises should calculate the damages in detail caused by the usage of resources and releasing them to the nature, should make cost analysis and submit them in their reports (Haftacı and Soylu, 2008).

The activities done to minimize environmental risks likely to emerge as a result of operating activities and to protect the environment and the costs associated with them can lead to structural and financial changes on businesses. These changes are (Epstein, 1996);

- Reducing costs with re-designing of the production process,
- Reducing costs with a change of product design,
- Price increases,
- A low price can be accepted at the first stage to determine the entire cost and price,
- To develop a launch strategy for the adoption of the product on the market.

When businesses made a choice considering the environmental impact to purchase an asset, how to account for cost differences arising is covered by environmental accounting. In this context, the costs incurred related to the environment is calculated in detail and the financial effects are shown in financial reports. Environmental risks which are non-financial must be shown in detail in operating / environmental reports and in the notes of the financial report (Haftacı and Soylu, 2008).

### **Environmental Management Accounting (EMA)**

Environmental management in enterprises has emerged as a data entry in the traditional management accounting. Desire for a better understanding of finance costs relating to the environment raised interest in the subject. Encouraging point in this development is that the effects of environmental factors on the profitability and financial position (Bartolomeo et al., 2000).

An organization should determine what its environmental aspects within the scope of its environmental management system by taking into account inputs and outputs (wanted or unwanted) related to currently being carried out or past activities, products and services, planned or new developments and new or modified activities, products and services. This process should take into account normal and abnormal operating conditions, including logically foreseeable emergency situations and decommissioning and commissioning requirements (ISO 14001, 2005).

There is no generally accepted definition of environmental management accounting (EMA). Based on the definition of IFAC<sup>2</sup> "EMA is the management of the environmental and economic performance in the developing techniques for acceptable environmental accounting system and implementation process." Some add reporting and auditing as well to this definition (EPA, 1995).

In addition to definition of IFAC, the United Nations Expert Working Group defines EMA as "the process of identifying, gathering, analyzing and using information to make inward decisions". Information is used in the process divided into two groups (IFAC, 2005). These are:

- physical information associated with the usage, circulation and release of energy, water, and other materials (waste) and
- The costs associated with the environment and financial information about recycling and protection.

The traditional accounting system is inadequate on environmental issues. This inadequacy is that environmental costs arising from operating activities do not examined separately in the traditional accounting system and are shown in semester / production costs. This situation causes not be aware of business managers about environmental costs and not being able to reach sufficient knowledge to manage these costs. Because they are not measured as necessary, business managers cannot effectively reduce these costs (Erkuş and Ateş, 2008:270).

Similarly, a study conducted by management accountants in the United States, reveals that business decisions do not take environmental costs into consideration enough. Giving a cost list to the participants in the study, they are asked which costs they consider when investing and the results indicated that environmental costs such as waste water, time the staff spent on the environment and penalties and so on were at lower ranks (Erkuş and Ateş, 2008:270).

### **Environmental Management Accounting: Application, Utility and User Area**

EMA whose overall objective is to produce environmental information, on the basis of the information produced it tries to explain the interaction between human beings and the environment. To limit the production of environmental information at the macro level can reduce the contribution of environmental decisions to be

<sup>2</sup> International Federation of Accountants

made at the micro level and may not provide expected environmental benefits in improving the environmental life quality. For this reason, environmental accounting should be capable of producing the necessary useful information not only at the macro level but also at micro level (Kırlıoğlu and Can, 2004). When we consider the environmental relationships at micro level, businesses are an important part of this interaction. To be successful at the micro level on environmental awareness, governments should create a national policy about environmental awareness and there must be co-operation and harmony with businesses (Çakar, 2007).

Environmental management accounting focuses on the process of measuring, verification, pricing and costing of consumption of the assets such as energy, raw materials, waste and so on. Accordingly, the these assets are identified in accounting system and activities carried out to reduce the harm they give to the environment and costs it caused (Masanet and Llodra, 2006).

Environmental financial accounting focuses on both reporting costs related to the activities of environmental obligations and other environmental liabilities and the presentation of information to those interested in non-business environmental financial information. Environmental management accounting as a part of management accounting focuses on giving information to decision-makers within the company about the raw materials, energy flow and so on. In this case, environmental financial accounting represents the outward face of business and environmental management accounting represents the inward face (Xiaomei, 2004; Wilmshurt and Frost, 2001). In other words, environmental financial accounting refers to the internal costs while management accounting environment refers to the external costs.

Environmental accounting which is sub-branch of environmental management accounting consists of four steps. The first step is the creation of business policies and strategies based on the legal requirements and environmental policies needed for the company image. The second step is the addition of environmental costs to production processes of the enterprise and reporting these costs. Third is to perform outward looking environmental reporting to be able to control the proficiency and scope level of environmental practices. The last step is to provide the technical and legal academic support for environment and to educate students who will become practitioners of environmental accounting in the future (Yakhou and Dorweiler, 2004). As well as the academic support carried out, businesses will provide some contributions to the environmental issues and will get some benefits through environmental accounting policies they followed. These are:

- Resource efficiency improvement and management of environmental costs,
- Ensuring compliance with environmental legislation,
- Reduction of environmental costs,
- More knowledge-based decision-making,
- Revealing opportunities,
- Pricing the products better,
- Internal and external reporting assistance,
- To increase the reputation/credibility of the business,
- Employee loyalty and attracting staff,
- The production of social benefits (Erkuş and Ateş, 2008),
- Determination of environmental costs and better management/ monitoring of the problems related to the environment,
- The production of knowledge needed for the environmental impacts of investments (Carrera and Iannuzzi, 1998).

Due to the EMA's focus on environmental issues, in particular it contributes to business management. Eco-friendly product / production, eco-friendly product or service design and environmental management systems can be seen as examples of environmental issues that environmental management accounting focuses on. Similar to the manner, the information provided by environmental management accounting is used in outward reporting. For this reason, EMA is not just a one-sided environmental management tool. EMA is a set of general principles and approaches, providing basic information for the success of many environmental management activities. Since the effects of environmental issues in decision making have had a growing trend, EMA has become more important in both environmental management decisions and in all other government activities (IFAC, 2005). At this point, EMA's application areas in business management can be listed as follows (UNSD, 2001):

- Valuation of the annual environmental costs / expenditure,
- Product pricing,
- Capital budgeting,
- Assessment of investment alternatives, accounting the amount,
- Accounting costs and benefits of environmental projects,



- Design and implementation of environmental management systems,
- Environmental performance measurement and benchmarking,
- Identification of performance targets,
- Declaration of environmental expenditures, investments and liabilities,
- Preparation of environmental reports or sustainability reports,
- The reporting of other environmental information for local authorities and statistical agencies.

Environmental management accounting has a large number of usage areas and benefits. In general they can be expressed under three headings: (IFAC, 2005):

*Compatibility:* EMA supports the cost-effectiveness of environmental protection through ensuring compliance of business with environmental policies, laws and regulations.

*Eco-efficiency:* EMA supports the use of energy, water and resources more efficiently and effectively in the activities within the business and in final products by reducing operating costs at the same time.

*Strategic Status:* EMA supports to guarantee the long-term strategic status of the enterprise. In addition, it is used in the measurement of cost-effectiveness of the business and in the evaluation of environmental interest programs.

## Conclusion

Businesses have a responsibility to concern and fulfil towards its employees, stakeholders and public while carrying out their activities due to its objectives. Environment has an important position within the scope of these responsibilities. As a requirement of sustainability, businesses using environment while carrying out its activities should think about future generations whereas they meet the needs of today's consumers and they must perform their activities on this perspective.

The environment is also important as well as the presence of production factors in order to meet continuity of business and demands of consumers. In sustainability management of the environment is a significant subject and environmental damage should be reduced to a minimum level. It is possible to define and measure environmental costs of activities to be done during the period and to minimize the potential environmental costs via environmental management accounting.

Environmental management accounting requires planning environmental impacts of main and other activities carried out during the period and the management of costs emerge. In addition, protection of the ecological structure of the environment in which businesses operate and sustainability can be provided by environmental management accounting.

In order to implement environmental management accounting successfully and to manage environmental costs, it is required to establish an independent environmental department under business and to ensure effective communication with other departments. Main accounts and subsidiary accounts should be opened to monitor the environmental costs just as the accounts monitor marketing, management, R & D expenses and they must take place in the uniform chart of accounts functionally. In addition, the environmental effects of operating results related to the sector of businesses should be put forward. The environmental problems will arise depending on investment projects planned for the future and solution plans with the environmental reports also must be presented. Thus, sufficient information can be presented to the public about the events that may emerge from the non-financial environmental risks which may affect the business and its future as well as financial position of business. So that the public will be able to have enough knowledge about measurement and evaluation of current and future risks of the business.

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