

## **THE RULE OF THE ENVIRONMENTAL ACCOUNTING MANAGEMENT IN ACHIEVING THE SUSTAINABILITY AND INCREASING THE PRODUCTS QUALITY**

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### **Abstract**

after the change that happened in the work environment and its development and as result of the this effects on the environment, it become clear that the companies has to care for the environment because the increase in the pollution ratios in all of its sort, the companies started to care so we did found in fact some states has obliged the companies to use industrial methods that produces less pollution as much, the oil companies especially the gas companies which consume much gas by burning it or using conventional tools in its eradication or transportation which causes much gas waste, and it increases the environmental pollutions and the waste in limited natural resources, so we did this study to show that the companies could gain profit through protecting the environment, in order to achieve the sustainable development to the next generations.

**Keywords:** environmental accounting management, sustainability.

### **Introduction**

the world has witnessed a lot of things after the industrial revolution generally but it was not without cost, so the pollution has raised because of this industries and a lot of reduction in the natural resources which lead to the dangers environmental change such as the global warming, so the people started to care about the environmental cases and industries in order to reduce the negative implications on the environment by taking care about green industries and re-factoring, and that has become the method that has been used by these companies, so it became necessary to change the method of administration and accounting of this companies to become agreeable with these policies and aims of this companies to protect the environment and the limited resources and to provide the eco-friendly products in the lowest-cost to the costumers ant the highest quality, which will lead to increase the market share for these companies. the traditional accounting and the eco-information:

the traditional accounting provide detailed about the Montreal and material about the companies activity and it could be expressed by Montreal unit such as:

1-the mangrail accounting is designed to provide the need to the inner parties to make the necessary decisions to reduce the cost and the revenue on the short-term and the investment on the long-term.

2- the monetary accounting could provide information about financial position of the companies owners in definite time.

3- the other managerial systems such as the taxes or accounting bank regulations, and its purpose is to provide information to regulatory purposes.

the conception of the environmental accounting management:

many researchers has set multiple concepts for environmental accounting (Al-Mawali et al,2018:109) has define it, as defining, collecting, using, two types of information, to take the material information such as using the energy and its flow, the critical information about the cost and the profit that has relationship to the environment, this information has material and financial aspects for the environmental accounting management to define the volume of the effects on the environment on the companies. the main object of it, is to show importance of the environmental resources and provide us with information that has relationship with environment and the management environment in the accounting information (Agyemang et al,2021:12193) and (Agustia et al,2019:300) has shown that the accounting management is tool to achieve strategic aims through advancing the competitive advantage for the company so that the environmental management would become the medium between the environmental and the economic aims, so that both could advance together in the environmental performance of the company because Appling the environmental accounting has positive aspect on the fair value and could effect on the evaluating the company in the market in positive way, that could achieve the competitive advantage to the company.

### **Objectives:**

1. in the times that pressure has grown stronger to the originations, the environmental accounting has become more important to achieve the sustainable environment and the regulated one and to achieve the competitive advantage by using the sources effectively and by focusing on the cost management to build strategy that would lead to increase the revenues by marketing the green products and to achieve multiple aims such as (Gunarathne&Lee,2015:371):

- 1- protect the environment and the water.
- 2- reduce the waste and the chemical pollution.
- 3- expanding the activities of recycling and reusing.
- 4- expanding the use of the friendly eco-environment.
- 5- protect the biological diversity and expanding the local life methods.
- 6- reduce the cost by using renewable energy and the non-costing one such as the solar energy or wind, etc.
- 7- increasing the market share by marketing eco-environment products to make it more appealing to the costumer than the other non-eco-friendly products.
- 8- using materials that would be more efficient, and limiting the unnecessary income or outcome.
- 9- reducing the risk and expanding the human capital by the protecting the workers and their safety.
- 10- improving the financial revenue by reducing the costs of the energy.

and (Gray & Bebbington,2001:54) sought that the environmental management should include:

- 1- the accounting on the environmental obligations and its dangers.
- 2- there should be cost analysis in the main topic such as energy, waste, and environment protection.
- 3- evaluating the investment should be included in the environmental factors.
- 4- developing the accounting and informational systems to cover the environmental performance,
- 5- vaulting the environmental cost and the profit of enhancing the environment.
- 6- developing the accounting techs about the assets, obligation, and the costs in the environment.

### **Determinants to use the environmental accounting management**

(Bartolomeo et al, 2000:35) saw that the companies will use this system in flexible manner to obtain the necessary information from third party sources, the mangers will use some indicators that is suitable to the needs from the private parties, so the mangers will need some main indicators that is clear to maintain their performance and to clarify the sustainability of the companies, the environmental accounting management will not probably success if it doesn't find the enough support and marketing. so that it's has been discovers that the environmental efficacy with environmental management is not suitable because the lack of the support. and in order to its success there must be cooperation between multiple tasks such as financial and environmental management (Sttasakko,2010:6). and for the lack of experience with environmental mangers, it could weaken the link of the environmental causes with environmental and financial performance so it led to it Appling the environmental management, some mangers think that the mangers focuses on the quality and the prices without caring about the environment and this thought is not correct, so many law has been issue to tackle this.

#### **the steps:**

there are multiple steps to apply the environmental management (Epstein&Roy, 2003:20):

- 1- forming environmental strategy for the specific unit.
- 2- putting the environmental policy which the unit will follow.
- 3- developing the programs to build the capacities for the environment.
- 4- design the environmental systems which will support the environment.
- 5- determine the suitable methods to implement the strategy.

and to achieve this strategy we should follow (Epstein&Roy,2007:395);

- 1-set the aims and the purposes for the unit.
- 2- apply the environmental international standard.
- 3- design the environmental programs.
- 4- set the resources to achieve the environmental programs.
- 5- apply the environmental valuation system to the unit.

## **the rule of the environmental accounting management in achieving the sustainable developing and increasing the products quality**

the sustainability has been used in multiple forms and has been defined in multiple ways but (Vatn,2009:296) has set the best definition which was the sustainability that would serve the contemporary needs without effecting the future generations that is capable to fulfil its own desires, and the this contemporary needs should be fulfilled without effecting the environment , so the environmental accounting management has risen to achieve and implant the caring about the environment in the management as behavior that is capable to achieve the sustainability by reducing the pollution that has been created by the industries and other procedures that is could protect the environmental resources, to adopt the care in society, and to increase the need for the eco-friendly products especially in the oil companies because there are multiple pollutions resources, and by this management the companies could achieve the sustainable development and to have products that have high quality and positive impact on the environment such as the electric cars and to use the oil products in the best method instead of burning.

### **the practical aspect**

the environmental aspect in Iraq has decline because of the wars such as the Iran war, the arms proliferation, explosions, Iraqi war in 1991, the economic siege which led to the destruction of the sub-construction such as the water stations and the water filter plants, and after the Iraqi ware post 2003, the audit bureau has indict series environmental impacts after 2005, the UN programs has shown that there Iraqi environment has effected badly because of the wars, draining the marches , the economic sanctions which was major threat to Iraq, the economic sanction which led to reduce in the investment, care in the water filter, and the care about the saltwater form the arable grounds, which led to the increase in the wastes that could be a bases to the contamination. for that reason the UN has indicted the necessary for the measures that would be used to protect the environment by evaluating the environment in multiple aspects such as the spread of the nuclear weapon, and the wastes that is resulted from the oil refiners. and for these reasons the Iraqi legislators has started to care about the environment and to put analytical indications in the environmental and the economic aspects. from what has been shown above there is care about the environment and the study of the environmental issues such as studies and researches about the topic and setting the right working environment and to protects the workers.

we will apply the research on the gas filling company by using ABC system (Activity Based Costing) in order to calculate and balance the cost in the company, and the cost distribution by multiple steps, which are: step one analysis and determine the cost for the environmental activity, we mean determine the cost that the company incurred to make the production and the maintenance.

the next table we reveal the environmental cost for the company and its determinations for the major activities and setting the major costs,

Cost	Major activates	Cost drivers
The cost of preventing the pollution	216744534	Number of processing times
Wages and salaries	108500000	Number of employes
Water treatment cost	3000000	Volume of water processing
Refactoring cost	54300000	Number of the refactored products
Research and studies costs	4446000	Hours of training
Social activities cost	3550000	Number of employes that has been procced
Environmental improvements costs	2500000	
Total	393040534	

the second step: is to load the cost on the activates and products that has been loaded in the cost of the activates that has been used by causes of the cost, we had set it is not the table, the we load the cost that the company produce.

Table two

### Cost allocation to environmental activities

The costs	Total cost	The activities that prevent pollution	The activities of recycling the materials	The activates of training and researching with the employees	Special activities for the protection and the safety of the employees	The costs of water processing	The medical materials
<b>The cost of the pollution prevention</b>	216744534	216744534					
<b>Wages and salaries</b>	108500000	16275000	10850000	27125000	21700000	22785000	9765000
<b>The cost of water processing</b>	3000000					3000000	
<b>the cost of refactoring</b>	54300000		54300000				
<b>The costs of research and training</b>	4446000			3556800	889200		
<b>The cost of social activities</b>	3550000				2840000		710000
<b>The cost of the environmental improvements.</b>	2500000				1250000		1250000
<b>The total cost</b>	395790534	233019534	65150000	30681800	26679200	25785000	11725000

Third step: after we had set the prices, we will determine the costs of actives on the products that the company produces which is (gas, cylinder, valves, re-factoring the valves) as we will show in the third table.

Table 3 Allocating the cost of the activates on the products

The activates	The gas	cylinders	Valves	The refactored valves
Air Pollution prevention (the pollutants concentration)	163113674	23301953	34952930	11650977
Refactoring the materials (the number of the refactored units)		651500	977250	4886250
The research and training activates for the employees (number of the researches)	15340900	6136360	3068180	6136360
activates related to the employees' health (the number of the employees)	21343360	1333960	2667920	1333960
Water processing activates (the volume of the pollutants water)	18049500	2578500	2062800	1804950
Medical materials activates (the number of employees)	10552500	586250	351750	234500
Total number	228399934	34588523	44080830	26046997

by setting the environmental cost by the activity based on cost (ABC) and by using the environmental accounting management strategy we have set and determine the cost, we have notice rise in the cost of air pollution prevention and that could be attributed to the huge amount of pollutants which the company caused in the gas industry and the oil derivatives so the company need to use a new materials, tools and machines which lead to use the gas in the best method and will lead to reduce that air pollution which is caused by using old tools which lead to the loss of the gas by burning or leaking which will have bad implication on the sustainability of the resources and the environment, so the company will achieve the sustainability by using these tools and for the next generations, and will try to save the environment and society health. we have notice the rise the salaries, wage which is set as environmental costs, the same thing applies to the tools. we have notice rise in the costs of the tools without any advance and without any

good use, and by that i mean reducing the poisons gas leaks, we could say the same thing about the rest in the table 1, by using the environmental accounting management will have notice a rise in the environmental costs without any good implications to improve the environment. this needs to be tackled by changing gas pumping and transporting, by using new machines to produce new products with highest quality, by using products that will lead to protect the environment and the sustainability of the resources and the environment, we have to train the employees on the special courses related to the environment and the methods of protecting it which will lead to develop the employees by understanding their work and the volume of the dangers which could be posed to them by the traditional ways and the resources waste could pose to their life and society as whole.

## Conclusion

the researcher see that environment and its resources is threaten in incorrect way because the change in the environment and the climate has bad implications which need to be dealt with by laws and regulations to manage the environment to protect it and make it necessary requirement, so the caring about the research to limit the abuse of natural resources, so the study shows that the pollutants that the oil companies caused and especially the gas companies needs to be dealt with by environmental accounting management to be it work base, and to care about the materials which will protect the environment and next generations, the study shows that the care about the environment will have good implications on increasing its profitability and will have good implications on the environment and will lower cost which will result a new environment and good highly quality products and will sustains the natural resources.

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