

Proposed model of industrial environmental cost and its impact on the financial statements

Dr. Nasreldeen Gidam Elnagy

Majmaah University Saudi Arabia

Abstract- This research finds to answer the following questions. What is the importance of measuring and analyzing the environmental costs of industries companies? What is the relationship between environmental costs and financial statements? How to include this environmental cost in our financial statements? Research study the concept of environmental quality accounting costs of concepts related to environmental pollution. And the degree of interdependence between the concept of environmental accounting, and increase awareness of the environmental responsibilities to led the need for attention to accountants and decision makers to the problem of pollution and knowledge of different aspects to gaining the costs borne by enterprises to reduce or remedy the damage caused by pollution measurement, the firms operating in the sugar industries or practicing active would not pollute the environment, it must disclose environmental accounting information in order to meet the demand of stakeholders on this information allowing them to evaluate past decisions or assistance in making the current or future decisions.

I. OBJECTIVES OF THE RESEARCH

That environmental issues represent a big challenge for accountants through their measurement and analysis of the environmental costs and disclosed along with other costs, giving a new and sophisticated dimension to a career that had previously been considered by the fiscal and monetary aspects while ignoring the social aspect of social responsibility of the facility where the challenge lies in that there is a difficulty in measuring some environmental costs and how to address them, requires a study of the methods of measurement and analysis of the environmental obligations that arise from the practice facility for the tasks and activities. It was found that there is a relationship between economic development and the environment and that the accounting role in this development through the necessary accounting information provided by the accounting system which exhibits which took a new course and take a new dimension which is the environmental dimension. Which requires publication in the financial statements so that benefit management and investors and to give the image reflect the truth and reality, and is not limited to data and financial information, but also include data and information that reflect the environmental impacts, due to the increasing pollution levels and then the magnitude of the environmental obligations and that are part of the total liabilities of the entity environmental cost is considered arising from environmental compliance pollution one of the main items to be taken into account when assessing the long-term for goods and services profitability, is the

environmental dimension of the most important factors to reach competitive advantages, especially in light of the growing interest by different groups of society and related parties facility aspects of the environment and information financial and non-financial assessment established performance in a comprehensive manner, including environmental responsibility, which in turn affects the decisions of investors to provide a high quality product at a reasonable price and is harmless to the environment, which can be established on the effective competition and challenges, including environmental changes require the ability and skill of the accountant in the measurement and analysis of associated and generated costs about the changes and the impact to the environment as these costs are one of the elements of production costs due to the load of the final product of the facility, whether good or service.

The research in this chapter, a field study on the Kenana Sugar Company through knowledge of the accounting system of the Kenana Sugar Company and submit the questionnaire for employees and managers to take their views and analysis of these data and test hypotheses to reach result
Sugar future in the Sudan

Kenana is considered in the eyes of much specialist sugar in the world most successful within five sugar factories in the world in terms of the magnitude of the factory and the magnitude of the farm and the magnitude of the employment and social services. Other industries Of the most important industries, which can be played on the sidelines of the sugar industry (yeast and Ethanol industry, paper and cardboard, and animal feed)

This is a very important part of the sugar production cost factors, factors and perhaps of the factors that has made the production of sugar cane beets so cheaper than preferred Kenana engage in investment funding from the shareholders' share of the profits.

First: This program first began 82-1998m plan, which focused on the replacement and reconstruction programs.

Of the most important industries, which can be played on the sidelines of the sugar industry (yeast and Ethanol industry, paper and cardboard, and animal feed)

This is a very important part of the sugar production cost factors, factors and perhaps of the factors that has made the production of sugar cane beets so cheaper than preferred Kenana engage in investment funding from the shareholders' share of the profits. direct relationship with sugar.

- Some spare parts manufacturing instead of importing.
- Agricultural extension of the first phase of ten thousand acres and contains the program other than the irrigation network and two handler plant to generate electricity ten MW.
- Forestry Project

The second plan was the first purpose other than to continue the expansion of sugar production and improve quality even keep pace with global market entry requirements in diversity adding new products, the company's projects in order to avoid the risk of relying on a single production and is based on maximizing the benefit of the asset value in the first place, and these projects are:

- Forestry Project
- Workshops run commercially

Outline of ethanol (biofuels) Can biofuels (Ethanol) of sugar cane crops, corn, oilseeds (soybeans, Aljtrova), the remnants of wheat, rice, cotton, trees, grasses and manure and organic waste, as well as cellulosic ethanol from crop residues. Attention to energy crops went recently for the purpose of reducing the emission of carbon dioxide in the air, prompting the use of biomass other sources of renewable energy instead of fossil fuels, and for this and other reasons to use in some countries, including increase agricultural production and reduce dependence on imported oil. The following table shows the amount of annual global production of some crops used for the purpose of energy Biofuel uses:

Electricity production and transport Developmental effects for the production of biofuels

1. The use of bioethanol separate or mixing with gasoline and diesel for use in various aspects.
2. Use these results in an increase in the demand for raw materials for the production of biofuels, which means allocating more land for this purpose. But the lack of experience and risk factor may limit the turning farmers Vantage these raw materials is the production of crops with little use of these risks provider and result in the transfer of resources to rural areas.
3. Provide employment opportunities for rural and agricultural high wages and affects others factories in the countryside or to transfer the basic raw materials for factories infrastructure.
4. Provide energy to produce electricity locally, which helps to create a local industrial base.
5. The export of these materials product.

Warnings that must be observed:

1. Use and allocation of agricultural resources (such as land and water)
2. The overall environmental impact of biofuels (marginal lands, forests, industrial waste.
3. Integration of small-scale producers in the market and their conversion to produce these crops.
4. Access to technology.
5. The conversion of land for the cultivation of a single crop, which leads to malfunction of biodiversity and the method of cultivation and processing of raw materials.
6. Food security as may be competition on food crops, but produces an opportunity to increase the production of these crops, as well as the production of other crops using the appropriate marginal lands not suitable for the production of food crops

The development of bio fuels trade: - The biggest producers of biofuels Brazil (the biggest source of ethanol), the United States and China, respectively, Europe is the largest producer of

bio-diesel.

- International trade has grown significantly in the ethanol in the past years, Brazil's exports have increased from 200 000 Ton in 2000 to 1.8 million tons in 2004.

- There is an increase in the trade of vegetable oils in the past few years for several reasons, including the demand for the production of biodiesel.

Bio-fuel production in developing countries and challenges:

1. export competition: With the cost of production in a few developing countries, but that a small market may face tariff barriers to the entry into force of the developed countries.

• Sudan has all the natural resources, human and material, and highlights the potential for a giant producer of ethanol in the world.

• Sudanese sugar industry in general and in particular Kenana qualified and ready for the start of the project has been initiated Kenana Ethanol establishing new ethanol plant in Kenana card 66 million liters per year, begin commercial production in 2008.

• a proposal to measure the environment costs Based on the progress of the past experiences of developed countries in the field of accounting researcher suggests that the measurement of information relating to environmental costs in the financial statements for the Kenana Sugar Company to include the cost of environmental three parts: The first measurement of environmental costs The second measurement and of environmental liabilities The third measurement of general information regarding the environmental accounting

II. PROPOSED MODEL TO INCLUDE THE INDUSTRIAL ENVIRONMENTAL COST ON FINANCIAL STATEMENT

Proposed budget preparation, including environmental costs:

The purpose of preparing the annual budget for the Kenana Sugar Company, a team from an accounting costs will arrange for it after rooming administration directives, which usually are as follows:

1 Target / plan for the annual production (Products types and volume of products).

2 / The light that defines the expected output and the cost of materials as used in production quantities.

3 / also/ specify other direct and indirect costs and overhead costs depending on the volume of activity.

4 / To the competent authorities of the environment based on the development of appropriate financial estimates for the work of research and development and mechanisms to measure the damage to the environment and the fight against environmental pollution and all the necessary protection of the environment within the annual budget of the Company until the adoption and exchange them when the lieutenant.

5 / Then calculates the cost per unit produced, the profit margin is added to determine the selling price to determine the total size of the company's profits during the year to achieve Environmental costs of Kenana Sugar Company

<i>Data</i>	<i>Invest. amount</i>	Implementation details and effects	Amount paid
1/ Environmental costs to reduce the environmental impacts of the production and activity of the service Details 2/ environment, the cost 3 / total cost to the environment trading cost of resource protection The cost of the environment in the first production, etc. Environmental costs and other administrative activities Environmental costs in research and development Environmental costs in social activities Costs of environmental damage Inter other amounts during the period Inter amounts of research and development for the period The value of the return of the item 1.3 The value of the return of item 2			

Figure above shows preventive environmental costs and prevent environmental pollution, including water, air, noise, odors and soil, climate change and other environmental changes. After obtaining the final result to the list of environmental costs

and the grounds revenues Investment environmental and recycling and other revenues, add this result to the list of gains and losses either cost added to the cost or return and added to other revenues, as shown in the figure below

Proposed Model
Kenana Sugar Company Limited
Budget of profit and loss account for financial year.....

	<i>Molasses</i>	<i>Other Feed</i>	<i>Ethanol</i>	<i>Sugar,</i>	<i>Totals</i>
<i>Sales</i>	25,000,000	52,500,000	75,140,000	537,820,000	690,460,000
<i>Other incomee</i>	10,000,000	5,400,000	6,380,000	32,250,000	54,030,000
Total revenue	35,000,000	57,900,000	81,520,000	570,070,000	744,490,000
Direct cost	4,400,000	14,500,000	43,200,000	260,500,000	322,600,000
Molasses		7500,000		(7,500,000)	
Electricity costs			85,000	(85,000)	0
Water vapor costs	1,500,000	1,500,000	1,500,000	(4,500,000)	0
production costs	4,000,000	4,000,000	4,000,000	(12,000,000)	0
Tot. gross profits	30,600,000	43,400,000	38,320,000	309,570,000	421,890,000
Sales and d. costs	1,300,000	2,700,000	7,000,000	30,100,000	41,100,000
City serv. Costs	3,200,000	7,100,000	9,700,000	60,900,000	80,900,000

F. assistance costs	13,300,000	5,400,000	7,500,000	25,700,000	50,800,000
Environment cost	2,400,000	571,000	396,000	34,700,000	38,200,000
Total costs	20,200,000	15,800,000	24,000,000	151,000,000	211,000,000
Net profit	10,400,000	27,600,000	14,320,000	158,570,000	210,890,000

These costs shows in a clear and explicit in the financial statements the company makes more confidence approaching interested in the environment and puts them in a matrix environment sponsoring companies which qualify for ISO certification. This cost of the show within the administrative costs incurred after the product gross profit and pre-payments, which are subject to tax The environmental costs, which we are always at hand to Accounts company clearly Within the costs

that we have mentioned before also clear in the financial statements. And thus can be added to these amounts among other costs according to what is described in this model and therefore the quality of the environment are added costs, which have been measured to tons of sugar and these costs also appear in other financial statements clearly in profit and loss account, end of period

Annual balance sheet

<i>Liabilities</i>	<i>Assets</i>
<p><u>Fixed</u> 1/Machines / equipment / help in preserving the environment 2 / buildings used to preserve the environment 3 / machines and machines help to preserve the environment</p>	<p>Human Resources labour Training Loans from banks for the development of research and recycling and investments environment</p>
<p><u>Current</u> 1/dedicated to environmental protection investments 2 / Dedicated Exchange accounts on environmental protection</p>	<p>Allocations 1 / to counter environmental damage to water pollution 2 / to counter air pollution 3 / workers to cope with the treatment of pollution and environmental damage 4 / to meet the environmental damage of pollution and chemical NOISE</p>

Been clarified and show the fixed assets and traded, which provides environmental quality services of prevention and treatment of environmental pollution and also the obligations of human resources towards training and loans from banks for use in environmental sanitation and to do any kind of investment to reduce the environmental costs and also the work of the financial allocations to cope with environmental Pollution and the treatment of workers as a result of environmental pollution and chemical pollution damage.

These environmental items appear in a clear and explicit in the balance sheet to show the position.

Through the well-known accounting and which is always a statement of the operating budget models researcher suggests environmental costs add to the list of the estimated annual budget and drawers those cost

III. RESULTS

The results of the study on the lack of the concept of accounting for the quality of the environmental costs are clearly within the Kenana Sugar Company for the sugar and Ethanol industry achieved the following objectives:

A - Calendar to calculate the true environmental costs of the investment project and see the size of the environmental performance of the interior and out flows of the project costs.

(B) The environmental performance evaluation of current practice in industrial installations sugar and ethanol industry Sector system does not fit the modern environmental variables.

(C) The industrial facilities sugar and ethanol industry sector do not apply environmental accounting system, and there have any standards to reduce environmental pollution and preserving the environment.

(D) There persuasion among managers not to evaluate the environmental performance of the current system's ability to provide appropriate information to streamline decision-making

IV. RECOMMENDATION

1/ Encourage complementary industries that depend on the sugar industries waste and Alithanol.

2/ processing of agricultural waste to produce products with economic returns such as wood panels and paper.

3/ Recycling agricultural waste sources and the use of remnants of the food industry and turn it into animal feed and can reduce the financial expenses,.

4/ The scope of the state and the world must work to make good use of resources and also reduce the risk of flooding and reduce or sewage treatment and recycling of industrial wastes and other treatment.

5/ Should be spent on staff training in environmental rehabilitation sector and to assist in research and development and planning to minimize environmental damage

REFERENCES

- [1] Kiltzman, K/ Environmental Cost Accounting for Improved Environmental Decision Making Pollution Engineering 2001
- [2] K. J. Accounting – Integration environmental and Economic United Nations. Alan / Hand book of National
- [3] Shane J. Schvaneveldt, Environmental performance of product benchmark and tools for measuring Improvement (2003)
- [4] Tanaka M. Y Others Contemporary Cost Management Champanan Hall (London) 1996."A critical Analysis of Environmental Costing , American Business Review et al (1998 Vol. 61 No
- [5] Yamagami Tatsunolo and Katsuhiko Kokubu "A note on corporate social disclosure in Japan accounting auditing & accountability jornal Vol (1991)
- [6] Epstein, M.J. "Accounting for product tack – Backs" Management Accounting (1996) August
- [7] Leigh Holland and Yee Boon Foo Differences in environmental reporting practices in the UK and the US: the legal and regulatory context the British accounting review No 35 No, (2003)

AUTHORS

First Author – Dr. Nasreldeen Gidam Elnagy, Majmaah
University Saudi Arabia