

### مجلة دراسات الاقتصاد والأعمال

المجلد: 9 العدد: 1 يونيو 2022



ISSN: 2521-8352 | e-ISSN: 2521-8360

# The Proposed Framework to Accounting Disclosure for Environmental Information in Libya: A Case Study in Alhlia Cement Company

Ezaddin Abdualadim Bakir Megatrend University ezaddin-bakir@live.com

Abulgasem M. Abusatala Elmergib University amabusatala@elmergib.edu.ly

تاريخ الاستلام: 2022.01.07 تاريخ القبول: 2022.06.22 تاريخ النشر: 2022.06.30

#### **Abstract**

This paper aims to incorporate the economic and environmental dimensions to set an exhaustive framework for the disclosure of environmental information to address the deficiencies in the outputs of the accounting system represented in the financial statements by including these lists' information on ecological responsibilities and economic units. The environmental dimension is considered, especially with natural recourses and pollution activities. The population of this study includes the national industrial companies operating in Libya, while the Al-Ahlia Cement Company represented the sample. The analytical method used throughout the study stages to deepen the understanding and clarify the components of the subject in an explanation of the methods used in the disclosure of environmental information in financial reports to Build a financial reporting model, which includes accounting and environmental data, and applying it to the company under study. Based on the ecological disclosure models presented and the previous study, the hypothesis is accepted: There is a possibility to build a proposed model to disclose the environmental activities of Al-Ahlia Cement Company. This framework will fill that gap if the company considers it.

Keywords: Environmental Disclosure, Environmental Accounting, Alhlia Cement Company, Libya.

الإطار المقترح للإفصاح المحاسبي عن المعلومات البيئية في ليبيا دراسة حالة الشركة الأهلية للإسمنت

أبوالقاسم محمود أبوستالة جامعة المرقب

عزالدين عبد العظيم باكير جامعة ميجاتريند

الملخص

يهدف البحث إلى دمج البعد الاقتصادي والبيئي في إطار مقترح للإفصاح عن الأنشطة البيئية لمعالجة أوجه القصور في مخرجات النظام المحاسبي المعتمد على الجوانب الاقتصادية من حياة الشركة، وذلك بتضمين معلومات حول الأنشطة البيئية لقوائم الشركة محل الدراسة، إضافة إلى التعريف بمفاهيم وأهمية المحاسبة البيئية والإفصاح المحاسبي عن المعلومات البيئية في القوائم المالية مع استعراض لبعض الأنموذجات المعتمدة في الإفصاح البيئي، يشمل مجتمع الدراسة الشركات الصناعية الوطنية العاملة في ليبيا، في حين كانت الشركة الأهلية للإسمنت تمثل عينة الدراسة، ولتحقيق أهداف الدراسة تم الاعتماد على المنهج الوصفي التحليلي المتبع طوال مراحل الدراسة لتعميق الفهم وتوضيح الأساليب المستخدمة في الإفصاح عن المعلومات البيئية في التقارير المالية لبناء أنموذج تقرير مالي يتضمن بيانات مالية وبيئية وتطبيقية على

الشركة محل الدراسة. بناءً على أنموذجات الإفصاح البيئي والدراسات السابقة، توصلت الدراسة إلى أن هناك إمكانية تطبيق النموذج المقترح للإفصاح عن الأنشطة البيئية للشركة الأهلية للأسمنت. واعتمادا على نتائج، أوصت الدراسة بضرورة تضمين هذا الإطار الذي سوف يملأ هذه الفجوة وتطبيقه خدمة للمصلحة العامة.

الكلمات الدالة: الإفصاح البيئ، المحاسبة البيئية، شركة الأسمنت الأهلية، ليبيا.

#### 1. Introduction

Recently, there has been a vast increase of interest in the issues of preserving and protecting the environment from different types of pollutants that could lead to severe damage, especially with the emergence and exacerbation of environmental problems in industrial and developing countries (Abdul Samad & Makri, 2016). Notably, there has been an increased interest in accounting for the environmental activities and the impacts of institutions consistent with the preservation and environmental development (Ekundayo & Josiah, 2020). Several demanding claims insist that much emphasis is on the importance of understanding and acknowledging the part of these institutions towards their environmental responsibility (Iwata, 2014).

These pressures have led accounting as a science and profession to challenge accommodating the company's environmental variables in establishing foundations that should meet the requirements of the parties surrounding it. It includes data and information that disclose the nature of environmental performance and work on the design of accounting systems for environmental responsibility (Nor, 2015), the resulted in the emergence of environmental accounting in accounting thought and practical application as a tool for accounting measurement and disclosure of the environmental performance of institutions (Sedky, 2019). While Environmental accounting adds a contributing and revolutionary value such as the innovation in the activities related to the environment, for instance, recycling resources and then using them in other activities, can lead to reduced environmental costs. Further, this may also lead to an increase in the profitability of the economic entity. However, this may also improve the quality of internal/external environmental reporting through environmental costs based on data on the ecological impacts of each productive activity that defers from the economic entity (Gilbert, 2018).

Therefore, researchers in this field are prompted to focus their investigation on disclosing financial information accompanied by information related to environmental activities in order to protect the environment from pollutants resulting from industrial and manufacturing activities as a result of the complete absence of environmental disclosure in the financial reports of the Al-Ahlia Cement Joint Stock Company (Abusatal et al., 2019).

#### 2. Research Problem

The traditional accounting systems cannot reflect the company's effort to protect the environment from pollution. Similarly, it cannot impose colligative and strict rules on the violating companies due to their harmful effects on the environment. Hence, the current financial statements in disclosing Accounting information related to environmental activities to the disclosure of such data in the financial statements will help show the number of challenging environmental efforts made by the company. These challenges raise a serious question that must be answered.

To what extent is it possible to propose a building model for disclosure of the environmental activities of the Alhlia Cement Company

#### 3. Research Important

The importance of the research does exist in achieving the following objectives:

- To provide the required assistance for Libyan industrial companies to disclose their environmental performance as part of their commitments toward the environment, whether compulsory or voluntary.
- To assert the importance of evaluating and emerging the company's activities in environmental protection by governmental and non-governmental organisations.
- There is an urgent need for the results and recommendations of research and field studies that enrich research efforts about disclosing environmental information in financial statements.

#### 4. Research Goals

This research paper aims to integrate the economic and environmental dimensions to set a comprehensive framework for disclosing financial and environmental activities. It also goals to highlight the concept, objectives, and importance of the ecological responsibility accounting and accounting disclosure of environmental information, as well as address the shortcomings in the outputs of the accounting system represented in the financial statements by including these lists of information on environmental responsibilities of the economic units. Furthermore, this research aims to achieve the following objectives:

• The current research results will help raise the importance of environmental disclosure in industrial companies.

• It will contribute to establishing a comprehensive model for accounting disclosure under the traditional accounting system adopted in the study sample company.

#### 5. Research Hypothesis

Based on the statement of problem and objectives under the current study, the following hypothesis has been formulated:

There is a possibility to build a proposed model to disclose the environmental activities of Al-Ahlia Cement Company.

#### 6. Literature Review

Recently, many studies have been conducted to investigate the effects of environmental disclosure and the framework for environmental reports on the targeted companies that issue these reports and their surrounding society.

In his study, Labedi (2015) found that independent measurement of environmental costs was essential for making economic decisions. Lieva et al. (2014) believe that engaging in social initiatives would help establish a positive contribution to society. While Abdulaziz (2016) pointed out that industrial companies in the state of Khartoum in all its sectors were aware of the concept of social responsibility in its broad sense and were committed to applying and disclosing it in the field of environmental preservation and commitment to laws, instructions, legislation and regulations were related to environmental freedom. Moreover, Wong et al. (2018) argue that companies responsible for the environment disclose environmental information, accept stakeholder oversight, and that air quality influences the behaviour of corporate decision-makers and stakeholders. Onyali et al. (2014) strongly support these claims; their study confirms that environmental disclosure policies have become a significant component of environmental policy worldwide.

On the other hand, Saeedi (2014) examined the accounting scale for environmental impacts and their disclosure. He concluded that adapting the traditional accounting system was the best and followed its impact to determine costs while determining benefits (revenues). This generates environmental revenues through the environmental information of the unit in addition to its performance. Furthermore, accountants' qualifications were found to affect the understanding of environmental accounting directly. In this respect, in his study, Saleh (2015) found that accountants do not have the appropriate qualification to apply environmental accounting disclosure with the existence of environmental legislation. Saleh (2015) strongly believes that such inappropriateness is a shortcoming in activating such legislation.

Kahit (2014) also indicated an evident inactivation of environmental accounting, despite the negative reality of applying environmental accounting in industrial units. Kahit (2014) stated that this led many companies to face many hindering obstacles when applying environmental accounting due to a lack of management knowledge of environmental accounting methods, legislation and laws that obligate units to carry out environmental accounting procedures and methods, and lack of detailed information. In addition, a study by (Jaryah, 2015) indicated that about 62% of the companies listed on the Kuala Lumpur Stock Exchange lack environmental information in their annual reports. Studying the case of the National Cement Company found a complete absence of environmental disclosure for this company through its financial reports, in addition to the absence of the role of environmental organisations in controlling industrial companies (Abustala et al., 2019).

Similarly, a study by (Abuostala, 2022) showed a positive and statistically significant relationship between environmental legislation and environmental disclosure on improving the quality of financial statements in Libyan cement companies was absent. The findings of other studies also support this. For instance, Al-Jazawi & Al-Barasi, (2018) concluded that the absence of the application of environmental accounting and environmental disclosure in the Libyan industrial companies impacted the lack of access to the desired environmental performance in the Libyan environment. Based on the results published (kribat, 2022), he recommended the necessity of establishing strict, standard laws and providing environmental auditing requirements to apply environmental auditing in corporations.

In summary, reviewing previous studies clarifies that the National Company for Cement in Libya does not have an environmental disclosure. Accordingly, this study comes to be an extension of previous research in environmental information disclosure. However, it differed from previous research in setting a framework or proposal for industrial companies that do not disclose environmental information and the applying environment in Libya, the National Company for Cement. This study also relied on some accounting disclosure models for environmental information.

#### 7. Research Methods

To achieve the objectives of this study, the researchers relied on the analytical method used throughout the study stages to provide a deep understanding and clarify the components of the subject in an explanation of the methods used in the disclosure of environmental

information in financial reports. Building a financial reporting model, which includes accounting and environmental data, and applying it to the company under study.

The study community includes the national industrial companies operating in Libya, and the study sample was selected, represented in the Al-Ahlia Cement Joint Stock Company. The company's selection came due to the absence of environmental disclosure in its lists and its strong association with sustainable development issues regarding its dependence on local raw materials and employing many workers. The selected company is one of the largest and most influential national companies in the cement industry sector. Also, it was selected as a sample because it leads the highest cement production ability among other companies in the same sector, with an estimated 51% of the cement produced in the country. Although cement is one of the main fundamental components in economic recovery, its production pollutes the environment, especially air and land, whether inside the work environment or surrounding cement factories.

#### 7.1 Environmental Accounting

Environmental accounting under IFAC is "the management of environmental and economic performance through the creation and development of appropriate accounting systems related to the environment and its applications." It usually includes the reporting and auditing process and contains the functions of life cycle costing, full cost accounting, benefit assessment, and strategic planning for environmental management" (Mellah & Bloutar, 2017).

Labadie (2015) & Islam (2018) defined it as the development of information and reporting of the financial statements that the institution provides to interested external parties. It refers to the potential costs that include the costs of treatment or compensation for potential environmental pollution. It focuses on the costs of other critical environmental obligations. It reports the traditional costs of an institution and its hidden costs resulting from the required activities to comply with environmental legislation and laws. Therefore, environmental accounting consists of the following types of accounting. They are:

- Environmental Financial Accounting EFA: This aims to disclose the environmental dimension in the financial statements published at the end of the period (Senol & Ozcelik, 2012).
- Environmental Management Accounting EMA: means managing economic and environmental performance by developing and implementing accounting systems and applications related to the environment, including life cycle costs (Islam, 2018).

- Environmental National Accounting ENA focuses on natural assets, intending to obtain modified economic indicators like the environmental total national income index.
- Environmental Cost Accounting ECA: They are the costs that are directly affected. Ecological cost accounting places a direct cost on each environmental aspect and determines the price of all kinds of environmental measures from pollution prevention, ecological design, and environmental management (Sanzhar & Alinur, 2019).

#### 7.2 Environmental Disclosure

Environmental disclosure is a set of data items associated with the performance and activities of the company's environmental management and its financial implications in the past, present, and future" (Abusatal et al., 2019). Sief (2014) defines environmental disclosure as institutions that can inform the community about various activities with ecological content. Environmental disclosure through the above is a presentation of information related to environmental activities in periodic reports and financial statements, facilitating ecological performance assessment and rationalising decisions.

Scholars (Abdul Samad & Makri, 2016) indicated that the organisation that wants to adopt and localise the environmental accounting system must begin with obtaining approval and support from senior management. The group must include representatives from all concerned departments, mainly financial and accounting, ecological, and risk management. In addition, a team of experienced analysts suggests modifying the accounting system (Nguyen, 2020). Besides, (Abdul Samad & Makri, 2016) indicate choosing the proposed environmental accounting approach and integrating it into daily activities.

#### 7.3 Environmental information to be disclosed

According to Al-hameri (2017), the Environmental Protection Agency "EPA" and the Financial Accounting Standards Board "FASB" describe the type and nature of the disclosed information. It asserts that the disclosures should include the following three main themes:

- Disclosure of environmental procedures and activities.
- Disclosure of environmental accounting procedures.
- Disclosure of environmental assets, liabilities, and costs

#### 7.4 Environmental Disclosure Mechanisms

Environmental information can be transmitted to the community and its stakeholders through a set of mechanisms by Optional and Compulsory Disclosure (Saidi, 2014). Furthermore, disclosing costs and environmental obligations is vital to clarify the financial

position and income statement items or increase their clarifications by integrating financial information and environmental activities in one report or separating between environmental and financial information disclosure. Each of them achieves different objectives. (Barbari & Mozarin, 2017).

#### 7.5 Accounting Disclosure Forms

#### i. SMFC Model (Scovill Manufacturing Company)

As it was prescribed in the report used by Scovil Manufacturing, the SMFC Model .6community and environmental protection and pollution control measures. It also prescribes information on consumer protection (Saidi, 2014).

Analysing the previous model includes four areas of social responsibility. The model does not express the financial position but rather the positive and negative aspects of the company's social performance. The model also does not explain the essential characteristics of the financial position report, as all items have no monetary values.

#### ii. Linowes Model

This model is called the "Socio-Economic Activity Report,". It is concerned with disclosing the costs of each institution's social responsibility activities without affecting the benefits of such activities. It summarises the operational and social performance of the unit's economic unit (list of economic and social processes) (Antal et al., 2002) & (Crumbley et al., 1977). This list reflects the negative and positive effects of the social responsibility of the department and in all related activities and areas, especially human resources, natural resources, products, services, and damages incurred by the unit in response to its social responsibilities.

#### iii. AAA Model

Another model of Accounting Disclosure is the AAA Model. The environmental Impacts Committee proposes it. It was developed based on descriptive disclosure of the institutions' efforts to solve environmental problems and provide information related to environmental pollution. It is recommended that the published financial statements include marginal notes about these efforts related to pollution control and the permissible limit, which is done by the institution's plans to reduce environmental problems. In addition, the material environmental impacts on the financial position of the project and the outcome of its operations (Mellah & Bloutar, 2017).

#### iv. The Egyptian Oil Sector Companies Model

As maintained by (Al-hameri, 2017), all expenses and revenues are determined regardless of their activity, which helps prepare the final accounts according to generally

accepted accounting principles. Environmental expenditures can be classified as capital expenditures and operational expenditures, considering all units whose business is related to environmental assets and showing them in their balance sheet, as in the oil reserves, trees, and others; in return, all liabilities and obligations relating to these assets must be shown in the final lists (Yousef et al., 2009).

# a) A list of the adjusted profit with the burdens of meeting environmental and social responsibility.

This list shows the effects of industrial enterprises company's environmental and social contributions on the net profit. This list describes whether these contributions are imposed by sovereign decisions or voluntary. The following table displays the adjusted profit statement (Armouti & Ahmed, 2013).

**List1** *The Adjusted Profit with the Burdens of Meeting Environmental and Social Responsibility.* 

Net accounting profit			••••
Minus			
First: compulsory social responsibility burdens			
1- Area of environmental contributions			
The cost of air pollution controls	•••••		
The cost of treating liquid waste	•••••		
Effluent Treatment cost	•••••	••••	
2- The area of public contributions			
Excess employment differences	•••••		
Differences in the employment of people with special needs	•••••		
Additional Subsidies and grants for workers	•••••		
Transport and transportation service differences	•••••		
Cost of housing services for workers	•••••		
Cost of a nursery centre for working children	•••••		
Forced pricing losses	•••••	••••	
3- Human resources			
The cost of training workers	•••••		
The cost of industrial security subscriptions	•••••	••••	
4- Product field			
The cost of controlling the standard quality specifications	•••••		
The cost of a safety test for the use of the product	•••••	••••	
Total compulsory social responsibility burdens		••••	(.)
Net profit adjusted for compulsory burdens			••••

It is clear from reviewing the models as mentioned earlier that the list has been divided into two stages:

These costs are categorised in the first stage in the four areas to be compared. In the first stage, the burdens of the mandatory environmental and social responsibility were collected and classified as shown in the table. In contrast, in the second stage, the burdens of the optional environmental and social responsibility are counted.

These optional burdens are subtracted from the net profit adjusted by mandatory environmental and social responsibility burdens, resulting in the economic function return, which expresses economic activity.

## b) The statement of financial position is adjusted with the effects of environmental and social contributions.

This list aims to provide information on the resources available for use in environmental and social performance and the corresponding rights of others. This model is also valuable for identifying the elements of wealth that generate environmental and social contributions in the future and the corresponding funds allocated by the institution for its acquisition (Armouti & Ahmed, 2013).

List 2
The Statement of Financial Position Adjusted with the Effects of Environmental and Social
Contributions

Total Net Assets		•••••
Minus		
1- Net Assets for environmental contributions		
Pollution control buildings and constructions	• • • • •	
Air pollution control devices. Liquid irregularity	•••••	
purification equipment		
Expenses to improve the aesthetic appearance of the environment	•••••	
Inventory of industrial waste purification materials	••••	
Total net assets for environmental contributions	•••	•••
Net assets for the field of public contributions		
<b>Buildings and constructions of the Child Welfare Centre</b>	•••••	
Residential buildings for employees	•••••	
Facilities and entertainment	•••••	
Health care facilities	•••••	
Transportation and transportation	•••••	
Medical equipment and equipment	••••	
The stock of medical supplies	••••	
Total net assets for the field of public contributions	••••	•
2- Net human resources assets		
Buildings and constructions of the training centre	••••	
Training methods and equipment	••••	
Equipment and equipment monitoring the environment of workers	••••	
Total net human resources assets	••••	.•
Total of contributions		•••••

Through the table, the assets of environmental and social activities, and the corresponding liabilities, appear separately from the assets and liabilities of economic activities, as the model assumes a direct relationship between the value of environmental and social assets for each area of environmental responsibility and the contributions it leads to which are attributed to this field.

#### 7.6 Environmental Reporting

As stated by Olaoye & Adekanmbi (2018), environmental reporting deals with the disclosure of environmentally related information by an organisation. This can include (but is not limited to) contingent environmental liabilities/risks, asset revaluations, and capital projections as they relate to the environmental cost analysis in critical areas (such as energy, waste, and environmental protection). It also includes the investment appraisal to include environmental and climate change factors, carbon emission and related control measures, and ecological impacts. In addition, it involves the levels of support for community environmental projects and levels of emission reduction support (such as the Clean Development Mechanism) for developing countries.

Environmental reporting is voluntary at national and corporate levels, and organisations use diverse reporting media. These include annual reports, stand-alone sustainability reports, integrated reports, special-purpose reports, websites, and social media to communicate environmental information to the broader community (Islam, 2018). Thus, Environmental reporting disclosure can be viewed as part of an organisation's responsibility to its stakeholders or as a response to stakeholder expectations.

#### 8. Suggested Disclosure Form

It is known that the industrial sector in Libya, including Al-Ahlia Cement Company, prepares its accounts according to the accounting system in its traditional and well-known form, including the financial statements. This method does not include measuring, classifying, and disclosing environmental expenditures. Hence, the absence of these criteria makes the quality of the financial statement data not fully expressive of the nature of the company's activities (Abusatal et al., 2019).

Therefore, the current study suggested a model for comprehensively disclosing the environmental performance to view the company's overall activities. Based on the ecological disclosure models presented, the present study sees the integration method as one of the

environmental disclosure methods to disclose environmental and financial information to achieve integration between environmental and economic information without the need for a fundamental modification in the traditional accounting system and without affecting the form of financial statements.

Including the environmental dimension in the unified accounting system adopted in the research, the sample company would reflect the mutual impact of economic activities on environmental activities where the disclosure process seems not misleading and more comprehensive and transparent to a large extent, will allow users of the financial statements to achieve the objectives of decision-making, control, and performance evaluation.

Through the visits made by the researchers to the company, we can review a summary of these effects:

- <u>Air pollution:</u> air pollution has attracted much attention as the public becomes increasingly concerned about serious environmental problems. It is widely recognised that air pollution, directly and indirectly, influences people's life and firms' production (Lin et al., 2021). In addition, the cement industry is considered one that seriously pollutes the environment (Elferjani et al., 2017).
- <u>Land pollution</u>: According to (Saidi, 2014), this type of pollution occurs through the exposure of the land to gases and dust emitted from the nozzle of the factory, which increases damage to agricultural lands and trees.

The effects which have been made by the pollution mentioned above asserts an urgent treatment that should apply the necessary procedures to eliminate the pollution problem negative impacts on our environment. There is no doubt that these environmental effects have financial implications that the company must address to provide the necessary means and supplies to address this problem.

One of the essential responsibilities is that the targeted company should establish an environmental control department that a well-trusted specialist supervises. The primary function of this department is to conduct experimental and field studies to treat and reduce pollution and see the costs incurred.

- After establishing the company's environmental department, review the nature costs incurred in the environment department.
- Classifying the costs by tabulating them according to the cost centres included in the
  accounting system. This will include the Production centre, production services centre,
  marketing services centre, and administrative services centre.

- The costs incurred by the company to protect the environment are divided into capital and current costs.
- While current expenses are included in the statement of current operations, capital costs will be included in the balance sheet list,
- The proposed model deals with the types of pollution, namely: air pollution and land pollution, allowing the Environment Department to study additional specialised studies in the future on pollution caused by cement companies.

#### 8.1 The proposed disclosure form costs according to their relationship to the cost control centre

According to Noodezh & Moghimi (2015), the most crucial subject in reporting costs is identifying them to disclose information in financial statements. Costs should be reported as current costs and capital expenditures. This model includes a classification of environmental costs into environmental costs and current ecological costs:

List 3
Disclosure Model for environmental costs in cost centres for the year 13/12/

P	Type	Type of Pollution		Amount
	of	Air Pollution	land Pollution	Spent
	Costs			_
Production				
<b>Productive Services</b>				
Marketing Services				
<b>Administrative Services</b>				

Preparing based on the company's pollution

After determining the total environmental costs and the amounts spent to protect the environment from all types of pollution classified by the environment department, these data are presented in two main lists. These lists are a) the statement of current operations and b) the statement of financial position. These lists will be used to complete the aspects of environmental disclosure within the financial statements included in the unified accounting system.

#### 8.2 Disclosure of current environmental processes

This statement represents the result of the surplus or deficit of commercial operations. It is the final main account as this statement contains the company's current operational costs, economic activity and other additional costs incurred to preserve the environment from pollution due to its production operations. The commodity and service requirements and fixed assets related to the environment are ecological costs. In addition, the salaries and wages paid to workers in the background are also considered among the environmental costs. All this is to

reach the result of the disclosure that expresses the surplus or deficit of environmentally economic processes and environmental revenue.

List 4
Income Statement to Disclose Economic and Environmental Processes

Statement	<b>Explanation No</b>	year	year
Net sales		-	-
(-) Cost of sales		-	-
= Total Income		-	-
(-) Administrative expenses		-	-
Total profit		-	-
(+)miscellaneous revenues		-	-
Net profit from economic operations		-	-
(+) Environmental revenue			
(-) Environmental Current expenses - Salaries and wages for the environment - Commodity supplies		-	-
<ul><li>Service supplies</li><li>depreciations</li><li>Other environmental expenses</li></ul>			
Surplus or deficit of economic and environmental operations before tax		-	-
(-) Tax		-	-
Tax provision		-	-
Net profit or lose		-	-

Preparing based on the company's data

#### 8.3 Environmental-Economic financial position balance sheet

The data of disclosure form for costs and cost centre concerns the purchase of fixed assets and the necessary capital additions to protect against pollution. In addition to environmental deferred revenue expenditures, it includes expenses research, explorations, costs research, and experiments in line with the requirements for preserving the environment. In this statement, the environment dimensions include

the fixed and current environment. It is shown in the model below.

List 5
Environmental-Economic financial position balance sheet

Jet fixed assets rojects under implementation ntangible assets (net) long, term investments Deferred economic voluntary expenditures (net) Cotal Long-Term Economic Assets Current assets:	year	year
Tet fixed assets rojects under implementation ntangible assets (net) nong, term investments Deferred economic voluntary expenditures (net) Total Long-Term Economic Assets	- - - -	- - - -
ntangible assets (net) ong, term investments Deferred economic voluntary expenditures (net) Total Long-Term Economic Assets	- - - -	- - -
ntangible assets (net) ong, term investments Deferred economic voluntary expenditures (net) Total Long-Term Economic Assets	- - -	- - -
ong, term investments Deferred economic voluntary expenditures (net) Total Long-Term Economic Assets	-	-
Poeferred economic voluntary expenditures (net)  Cotal Long-Term Economic Assets	-	-
Total Long-Term Economic Assets		
Current assets:	_	
	_	
nventory		-
Goods on the way	-	-
Occumentary credits	-	-
Debtors (net)	-	-
Other debtors	-	-
hort-term investments	-	-
ash in Bank	-	-
laims outstanding	-	-
Total Economic Current Assets		-
Total Economic Assets		
nvironmental fixed assets (net)	-	-
nvironmental deferred revenue expenditures	-	-
nvironmental projects under implementation	-	-
otal Environmental Fixed Assets		
nvironmental current assets	-	-
nventory of environmental materials	-	-
nvironment documentary credit	-	-
<b>Total Environmental Current Assets</b>		
otal Environmental Assets		
otal Economic and Environmental Assets		
Current Liabilities		
llocations	-	-
'reditor	-	-
ax authority	-	-
ocial security	-	-
Other creditors	-	-
otal Current Liabilities		
hareholders' Equity		
aid-in Equity		
recautions		
tetained earnings (losing)		

Profits and losses for the fiscal year			
Revaluation	-	-	
Net shareholders' equity			
Total Liabilities and Shareholders' Equity			

Preparing based on the company's data

#### 9. Discussion

Traditional financial accounting and reporting cannot account for and present the complexities associated with various issues of concern to the public environmental and social issues that may not always carry monetary values (Yongvanich & Guthrie, 2006). Economic activity is producing an increasing number of social and environmental consequences. This is strongly supported by the results of a study conducted by Noodezh & Moghimi (2015). In their study, the results indicated that the companies should be responsible by giving attention to the environmental effects of the company activities in environmental compliance.

Confirming this issue, Tilt (2006) and Laughlin's (1991) state that Laughlin's framework provides a significant first step in exploring how the environmental agenda is (or is not) creating organisational change. This paper extends Tilt.'s work to facilitate such exploration by adding elements to the company's financial statements to reach the Proposed Framework. Furthermore, Zhong et al. (2018) proposed an ontology-based framework to support environmental monitoring and compliance checking under building information modelling (BIM). This modelling showed a validated result of feasibility. Moreover, the effectiveness of the proposed framework is supported by the increasing attempts on the part of many companies toward the environment and society. The companies seriously try to show an outstanding image of their positive cooperation in social activities to acquire legitimacy. This reflects that they have turned to environmental reporting (Noodezh & Moghimi, 2015). The research model made in this paper provides a piece of environmental information to the company. However, Abusatala & Joudi (2022) showed the Libyan cement industry companies the importance of environmental accounting. According to Abusatala & Joudi (2021), the Libyan industrial companies have environmental disclosure requirements. This benefits the company to change the traditional system to a unified system that includes the economic and environmental dimensions. The study (Maatouq & Ali,2021) concluded that company officials lack sufficient awareness of global initiatives that can be imitated in preparing sustainability reports and disclosing environmental information.

Much research on the Libyan environment is not part of a proposed framework (model). The above-reviewed literature supports the possibility of building a proposed model to disclose

environmental information. This is not a counting down of the work undertaken; however, with a framework, companies will be better able to see the overall comprehensive cooperative vision of the environmental dimensions. Therefore, the hypothesis was accepted; There is a possibility to build a proposed model to disclose the environmental activities of Al-Ahlia Cement Company.

#### 10. Conclusions

The research aims to integrate the economic and environmental dimensions to set a comprehensive framework for disclosing environmental information. The study found that there was a possibility to build a proposed model to disclose the environmental activities of Al-Ahlia Cement Company. As a result, the hypothesis is accepted. Environmental disclosure provides legitimacy to the company's compliance with government legislation and laws related to the environment. The company's ecological disclosure did not receive sufficient attention due to the lack of awareness and knowledge of its management and its weak contribution to its responsibilities in protecting the environment and society. In addition, the lack of competition in the cement industry in the Libyan environment led the research sample company to neglect the environmental dimension, which would negatively affect the efficiency of allocating costs.

This research contributes to providing a piece of ecological information in the annual reports. This contribution extends the body of reporting that includes the environmental data. Furthermore, it will provide better insights into the company's underlying reasons and motivations for voluntary ecological reporting. The study recommends the following; Firstly, developing a unified accounting system that suits modern developments, including the requirements of environmental accounting. The findings of the present study are operational and have substantial environmental impacts. We suggest that the company's management adopt and apply the proposed model. Work on setting the legislation and laws that oblige the company to reduce the pollution resulting from its production activities; thus, it recommends establishing an environmental department.

#### Reference

Abdul Samad, N., & Makri, Z. (2016). The Reality of Environmental Accounting Measurement in Public Cement Enterprises, Algerian Journal of Economic Development, 4, 66:57.

- Abdulaziz, J. (2016). The Commitment of Industrial Companies to Disclose Social Responsibility Costs. Field Study, Faculty of Science and Humanities Saudi Arabia. Journal of Economics, 17(1), 106-121.
- Abuostala, B. (2022). Environmental disclosure in the light of environmental legislation and its impact on the quality of financial statements. An applied study on the companies of the Libyan cement industry. Āfāqiqtiṣādiyyaï Journal Volume 8. Issue 15, 171-209.
- Abusatala, B & Joudi, M. (2021). The Extent of the Availability of Special Requirements for Environmental Disclosure in Libyan Industrial Companies. Journal of Social Sciences and Humanities. 22,(2), 733-756.
- Abusatala, B & Joudi, M. (2022). The reality of applying environmental accounting to the Libyan cement industry companies A field study: Journal of Banking Financial Economics and Business Administration,11(1), 618-650.
- Abustala, A., Madi, S., Elghariani, O., Bakir., E. (2019). Accounting disclosure of environmental information in financial reports. A case study of the National Company for the Libyan Cement Industry. Academic Conference on Economics and Business Studies, (3), 441-465.
- Al hameri, H. (2017). Conditioning Standardized Accounting System for the Disclosure of Environmental Information Empirical Study in the Municipality of Karbala Directorate) A letter submitted to the Board of the College of Business and Economics Karbala University as part of the requirements for obtaining a Master of Science degree in Accounting, 1-13.
- Al-Jazawi, p. Al-Barasi, A (2018). The reality of environmental accounting and disclosure of environmental impacts in Libyan industrial companies and its relationship to achieving sustainable development. The fifth Scientific Conference of Environment and Sustainable Development.
- Antal, A. B., Dierkes, M., Macmillan, K., & Marz, L. (2002). Corporate Social Reporting Revisited. Journal of General Management, 28(2), 22–42.
- Armouti & Ahmed. (2013). The Impact of Sustainability Accounting on the Financial Reporting in Jordanian Shareholders Manufacturing Companies Listed on Amman Stock Exchange) Doctoral Dissertation..116-1

- Aversano, N., Di Carlo, F., Sannino, G., Tartaglia Polcini, P., & Lombardi, R. (2020). Corporate Social Responsibility, Stakeholder Engagement, and Universities: New Evidence from the Italian Scenario. Corporate Social Responsibility and Environmental Management, 27(4), 1892-1899.
- Barbari, A., & Mozarin, A. (2017) Measurement and Disclosure of Environmental Costs in the Financial Statements to achieve Sustainable Development. Journal of Administrative and Financial Sciences. Algeria, 1(1), 25-43.
- Bookther, G & Manakh, B. (2017). The Accounting Measurement of the Environmental Costs and Disclosing as an Entry Point for Achieving the Competitive Advantage of SME Industrial enterprises, National Conference on the Problem of Sustainability of SMEs in Algeria.1-20.
- Crumbley, D. L., Epstein, M. J., & Bravenec, L. L. (1977). Tax Impact in Corporate Social Responsibility Decisions and Reporting. Accounting, Organisations and Society, 2(2), 131-139.
- Ekundayo, G., & Josiah, M. (2020). Environmental Accounting Disclosure: A Critical Examination of Literature. British Journal of Economics, Finance and Management Sciences, Vol. 17 (2). 34-45.
- Elferjani, M. Abusatal, B. Katati, N, & Bakir, E. (2017). Environmental disclosure in Libyan cement companies. Case study of the National Cement Company. The first economic conference for investment and development in the Khums region. 1-16.
- Innocent, O. C., Okafor, T. G., & Egolum, P. (2014). An assessment of Environmental Information Disclosure Practices of Selected Nigerian Manufacturing Companies. International Journal of Finance and Accounting, 3(6), 349-355.
- Islam, M. A. (2018). Environmental Accounting. In Encyclopedia of Business and Professional Ethics. Springer International Publishing AG.
- Issa, S. O., & Hamman, A. M. (2021). Board Mechanisms and Environmental Disclosure Quality of Listed Oil and Gas Firms in Nigeria. Gusau Journal of Accounting and Finance, 2(2), 17-17.
- Iwata, H. (2014). Disclosure of Environmental Information and Investments of Firms. 1-32.
- Jariya, A. I. (2015). Environmental Disclosures in Annual Reports of Sri Lankan Corporate: A Content Analysis. Journal of Emerging Trends in Economics and Management Sciences, 6(8), 350-357.
- Kahit, A. (2014). The Reality of Environmental Accounting in Industrial Enterprises in Iraq, Al-Ghari Journal of Economic and Administrative Sciences, 8 (31), 290-309.

- kribat, M. (2022). The Reality of Applying Libyan Audit Bureau the Environmental Auditing in Corporations. Āfāqiqtiṣādiyyaï Journal.8,(15), 138-169.
- Labedi, M. (2015). The Accounting Measurement of the Environmental Costs and Disclosing in the financial Statements to improve the Environmental Performance. Field Study from the Cement Industrial Institutions in Algeria. A thesis for a Doctorate in Science. 1-241.
- Leiva, R., Ferrero, I., & Calderon, R. (2014). Corporate Reputation and Corporate Ethics: Looking Good or Doing Well. SSRN Electronic Journal.
- Li, M., Tian, A., Li, S., & Qi, X. (2018). Evaluating the Quality of Enterprise Environmental Accounting Information Disclosure. Sustainability, 10(7), 1-15.
- Lin, Y., Huang, R., & Yao, X. (2021). Air pollution and environmental information disclosure: An empirical study based on heavy polluting industries. Journal of Cleaner Production, 278, 1-8.
- Maatouq, K & Ali, M. (2021). Accounting disclosure measurement to the dimensions of sustainable performance and its impact on improving sustainability reports a comparative study on cement companies in Libya. Journal of the College of Education. Issue 23, 179-220
- Martelo-Landroguez, S., Albort-Morant, G., Leal-Rodríguez, A. L., & Ribeiro-Soriano, B. (2018). The Effect of Absorptive Capacity on Green Customer Capital under an Organizational Unlearning Context. Sustainability, 10(1), 1-20.
- Mellah, A., & Bloutar, M. (2017). Accounting Disclosure of Environmental Costs in the Financial Statements. A supplementary Note as Part of the Requirements for Obtaining an Academic Master's Degree in Commercial Sciences, 1-123.
- Musfialdy, M. (2019). Relationship between Investment Decisions, Environmental Concerns, and Environmental Performance on Corporate Social responsibility. Jurnal Aplikasi Manajemen, 17(1), 30-36.
- Nguyen, T. K. T. (2020). Studying Factors Affecting Environmental Accounting Implementation in Mining Enterprises in Vietnam. The Journal of Asian Finance, Economics, and Business, 7(5), 131-144.
- Noodezh, H. R., & Moghimi, S. (2015). Environmental costs and environmental information disclosure in the accounting systems. International Journal of Academic Research in Accounting, Finance and Management Sciences, 5(1), 13-18.

- Nor, N. M., Bahari, N. A. S., Adnan, N. A., Kamal, S. M. Q. A. S., & Ali, I. M. (2016). The Effects of Environmental disclosure on financial performance in Malaysia. Procedia Economics and Finance, 35, 117-126.
- Olaoye, F. O., & Adekanmbi, J. A. (2018). Impact of Environmental Management Accounting Practices and Report on Organization Performance. European Journal of Business and Management, 10(21), 74-84.
- Park, J., Lee, H., & Kim, C. (2014). Corporate Social Responsibilities, Consumer Trust and Corporate Reputation: South Korean Consumers' Perspectives. Journal of Business Research, 67(3), 295-302.
- Rely, G. (2018). The Effect of Environmental Accounting, Corporate Social Responsibility and Corporate Performance to Corporate Reputation. Research Journal of Finance and Accounting, ISSN 2222-1697 (Paper) ISSN 2222-2847 (Online) Vol.9, (14).159-171.
- Saidi, S., H. (2014). Accounting Measurement and Disclosure of Environmental Impacts in Industrial Enterprises, the Company's Case Study for Cement Hama Bouzian- Constantine. A memorandum submitted the requirements for obtaining a master's degree in management sciences.1-191.
- Saleh, M. M. A. (2015). The Role of the Environmental Awareness in applying Environmental Accounting Disclosure in the Jordanian Industrial Public Contribution Companies and Its Impact on Investor's Decisions in the Amman Financial Market. Doctoral Dissertation, Jinan University, 1-294.
- Saleh, M. M. A., & Jawabreh, O. A. (2020). Role of Environmental Awareness in applying Environmental Accounting Disclosure In Tourism and Hotel Companies and its Impact on Investor's Decisions in Amman Stock Exchange. International Journal of Energy Economics and Policy, 10(2), 417-426.
- Sanzhar, A., & Alinur, M. (2019). Environmental Cost Accounting and Importance of Activity-Based Costing for Management. Journal of Humanities Insights, 3(04), 226-231.
- Sedky, A. H. (2019). Developing the Role of the Environmental Accounting Disclosure to Improve the Financial Performance. Journal of Environmental Studies and Researches, 9(2a), 1-15.

- Şenol, H., & Özçelik, H. (2012, May). The Importance of Environmental Accounting in the Context of Sustainable Development and within IFRS Evaluation. 3rd International Symposium on Sustainable Development (Vol. 31).81-89.
- Sief, H. S. (2014). Accounting Framework to Measure the Environmental Costs and Disclosed in Industrials Companies-Case study of Societe Cement Hamma Bouziane (SCHB) in Constantine. Chinese Business Review.Vol.13, (6).356-366.
- Taylor, J., Vithayathil, J., & Yim, D. (2018). Are corporate social responsibility (CSR) Initiatives such as Sustainable Development and Environmental Policies Value Enhancing or Window Dressing? Corporate Social Responsibility and Environmental Management, 25(5), 1-19.
- Tilt, C. A. (2006). Linking environmental activity and environmental disclosure in an organisational change framework. Journal of Accounting & Organizational Change.
- Wisdom, O., Lawrence, I., Akindele, O. J., & Muideen, I. (2018). Corporate Social Responsibility and Investment Decisions in Listed Manufacturing Firms in Nigeria. Journal of Economics, Management, and Trade, 21,(4), 1-12.
- Wong, C. W., Miao, X., Cui, S., & Tang, Y. (2018). Impact of Corporate Environmental Responsibility on Operating Income: Moderating Role of Regional Disparities in China. Journal of Business Ethics, 149(2), 363-382.
- Yongvanich, K., & Guthrie, J. (2006). An extended performance reporting framework for social and environmental accounting. Business Strategy and the Environment, 15(5), 309-321.
- Yousef, Z., Abel Sayed, N., Iyed, S. (2009). Environmental Accounting: A suggested Framework to Disclosure for Environmental Information in the Uniform Accounting system. Applied study in south Refiner Co.[Basrah refinery]. Journal of techniques, 22(5).
- Zhong, B., Gan, C., Luo, H., & Xing, X. (2018). Ontology-based framework for building environmental monitoring and compliance checking under BIM environment. Building and Environment, 141, 127-142.

المعلومات البيوغرافية للباحث الثاني:
الاسم: أبوالقاسم محمود ابوستالة
الدرجة العلمية: استاذ مساعد
التخصص محاسبة
الاهتمامات: تكنولوجيا المعلومات والاتصالات والمراجعة والمحاسبة الاجتماعية والبيئية
البريد الإلكتروني: amabusatala@elmergib.edu.ly

المعلومات البيوغرافية للباحث الأول: الاسم: عزالدين عبدالعظيم باكير الدرجة العلمية: محاضر التخصص: محاسبة التخصص: محاسبة الاجتماعية والبيئية البريد الإلكتروني: eabakir@elmergib.edu.ly