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The Role of Environmental Monitoring in Achieving Sustainable Development: A Study of a Selected Sample of Iraqi Companies

Sakar Daher Omar Amen^{*1}

1. Assistant Professor / Northern Technical University / Kirkuk Technical Institute

* Correspondence: sakardaher@ntu.edu.iq

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Abstract: As a result of the environmental imbalance that emerged and became significantly evident during the twentieth century, along with the increasing awareness and recognition by governmental and non-governmental entities of the reciprocal relationship between economic and environmental development, and the disproportionate rise between global population growth and growing human needs on the one hand, and the scarcity of non-renewable natural resources on the other, the concept of sustainable development emerged. This concept comprises three main principles: environmental protection, social development, and economic growth. To demonstrate the importance of this study and address its problem, the research examines the nature of monitoring in general and environmental monitoring in particular, presenting its concept and characteristics. It also explores the topic of sustainable development in terms of its nature, characteristics, and classifications. The study includes an analysis of a selected sample of Iraqi companies through a questionnaire distributed to individuals within the chosen companies. The research ends with some crucial findings and recommendations among which the following ones can be listed: the role of supreme financial and accounting oversight bodies in facilitating the accomplishment of sustainable development is manifested in three areas that lead to the formulation of the sustainable development strategy, the achievement of sustainable development, and the fact that the planning and implementation of the program will proceed in the areas of sustainable development needs.

Keywords: Monitoring, Environmental Monitoring, Sustainable Development, Iraqi Companies.

1. Introduction

The environment should be saved and taken care of at any costs, since environmental protection is among the most important aspects to consider when it comes to preserving the health of the population and the overall welfare of the society. As prevention is better than cure, being effective and cheaper, companies via their various monitoring organisms are mandated to embark on preventive mechanism of ensuring that the environment is kept up and safe. Among these measures is the creation of environmental awareness in various groups in the society, engaging them in the decision-making processes and the required activities in the reduction of pollution and the promotion of environmental protection by the society based on the idea that the environment is a friend to man. The environment, in its turn, presents a lot of benefits and resources when people take care of it, use the elements of the environment correctly and preserve it.

The rising concern has seen new trends emerge in the monitoring activities performed by the supreme audit institutions, shifting away the traditional audits and performance audits to environmental audits. The environmental audit framework was embraced by the International Organization of Supreme Audit Institutions (INTOSAI), which made it a definition whereby it highlighted the aspect of environmental audit involving all forms of audit, which includes financial audit, compliance audit, and performance audit. It also reveals that the difference between environmental auditing and ordinary auditing carried out by supreme audit bodies is not essential though it adds that extremely technical environmental inspection by institutions both in the government and the business sector do not feature in the work of the working group.

Based on the above, the content of this research has been structured according to the following sections:

2. Study Methodology

Local Study Problem:

If development is a civilizational necessity, then the search for its tools and means becomes an obligation. Human beings were created in this universe with a mission supported by the conditions and foundations necessary to organize the movement of life. However, throughout different stages of life, humans have used the environment and its components in an irrational and unbalanced manner, depleting its resources, altering its features, and affecting its components. This misuse resulted in various harms and multidimensional consequences. The world did not fully grasp the essence of the problem and its impacts until these consequences became complex and interconnected, affecting every society without exception.

Accordingly, the study problem is defined through the following questions:

- What is the level of application of environmental monitoring in the Iraqi companies included in the study sample?
- What is the level of sustainability achieved in the operations of the Iraqi companies included in the study sample?
- What is the nature of the relationship between environmental monitoring and the fulfillment of sustainability requirements in the Iraqi companies included in the study sample?
- What is the nature of the impact of environmental monitoring on achieving sustainable development in the Iraqi companies included in the study sample?

Significance of the Study:

The importance of this study stems from the variables and topics it addresses environmental monitoring and sustainable development and their influence on the survival of companies and the goals they seek to achieve, such as developing managerial and productive approaches that play a major and essential role in ensuring sustainability. The significance of the study is highlighted by its contribution to helping the companies in the study sample in the following ways:

- Demonstrating the role of environmental monitoring in improving the environmental performance of the Iraqi companies in the sample, and consequently the numerous benefits gained by the companies, stakeholders, and society as a whole.
- Enhancing the environmental conditions of the companies in the sample in a more organized manner through the adoption of an integrated and sound environmental management system, and creating theoretical and practical knowledge regarding the concept of sustainable development as a relatively modern concept and its importance to companies and society.

Study Objectives:

Based on the identified problem and significance of the study, the main objective of this research is to inform the surveyed companies about the role that environmental monitoring plays in achieving sustainable development. In addition, the study includes several secondary objectives:

- Presenting the conceptual framework of monitoring in general, and environmental monitoring in particular.
- Clarifying the types of environmental monitoring and their key characteristics.
- Explaining the scientific framework of sustainable development by presenting its concept, characteristics, and major classifications.
- The study aims at establishing how environmental monitoring may influence sustainable development in the Iraqi firms within the sample of the study.

Study Hypothesis:

The study is based on the following main hypothesis: *Environmental monitoring has a significant and influential role in achieving the requirements of sustainable development.*

Study Methodology:

In order to support the aims of the study and test the hypotheses, descriptive method will be applied to determine the general theoretical framework with references to the theses, dissertations, journals, and books related to the study topic. The analytical technique is utilized to examine the outcomes of the field study carried out on a chosen sample of Iraqi companies.

3. Theoretical Framework of the Study

First: The Conceptual Framework of Environmental Monitoring

1. The Nature of Monitoring

One of the pillars that are deemed as crucial to companies is monitoring. It is a moving and ongoing process and it needs properly researched procedures to guarantee that it is operating in tandem with the plans and policies that the institutions are using to run their operations. Monitoring ensures the balance between means and objectives, or efforts and results, the aim of which is to check whether the actual performance corresponds to intended and planned performance [1].

Monitoring has been defined as: ensuring that implementation is being conducted according to the plan that is set and according to the objective instructions and regulations, and with the objective of identifying the weakness and errors, envisaging them, and eliminating them as well as covering all parts of the activity in the public project and the parties involved in the management process [2]. This definition draws attention to the role and purpose of monitoring by associating it with the confirmation that work starts as planned, as per instructions, and as per rules established by the organization or the company that help define the weak areas, deficiency, errors, and deviations and to rectify and avoid them later.

According to Jamal, monitoring is defined to refer to: something that can be seen to have been accomplished by the program and the objectives that were set by the program in this particular way, and the level of efficiency that was required and within the period of time that was planned to be implemented that is, within the schedule that was laid down to carry out the execution process [3].

According to the above definitions, it is possible to define monitoring as:

An organized administrative process undertaken by the authority in charge, which entails constant monitoring of performance, quantification of the methods and comparing with the set standards to detect deviations and minimize errors and the most suitable

actions to take that are corrective and remedial that ensure maximum utilization of available resources in the company to achieve its goals.

2. Definition of Environmental Monitoring

Environmental monitoring is regarded as one of the most significant areas that are receiving growing concern across the world in the view of the myriad environmental issues experienced in the contemporary age. Business enterprises and the government have realized the need to conserve the environment and enhance its quality.

Haddad and Hadeed established environmental monitoring as the plans and procedures to ensure that all persons and firms abide by the environmental standards and safety and prevention techniques with the aim of minimizing environmental pollution, providing safety to all living organisms and preserving and conserving resources to be used by the future generation [4].

Environmental monitoring has also been explained as: a critical periodic, documented, systematic and objective examination of the operations of an economic unit in order to control their adherence to environmental policies and legislation, and to check the efficiency, economy and effectiveness of those policies. This is done by a neutral and independent party who is not part of the company and this party prepares an environmental report that is submitted to the internal parties to enable them make decisions associated with the environment [5].

According to the European Union Committee, environmental monitoring is the definition of an inspection process designed to determine the compliance with environmental regulations and to make sure the data and information presented in the environmental report are credible, and that all information about important environmental questions have been used [6].

The British Standards Institute defined environmental monitoring as *a systematic evaluation to determine the extent to which an establishment's environmental management system complies with planned programs, and to assess the effectiveness and suitability of that system in achieving the company's environmental policy* [7].

Based on the above, it is evident that the environmental monitoring is not yet given a single, accurate definition. Nevertheless, one can see that the majority of these definitions focus on the following aspects:

- Environmental monitoring is a critical, reliable, and objective analysis that is conducted systematically.
- It is a process that is periodically conducted, either internally by a company or by an outsourced body.
- Environmental monitoring is done to confirm that data and information presented in environmental reports are sound and properly reveal all notable environmental issues.

3. Types of Environmental Monitoring

Environmental monitoring takes the following forms [8]:

- Compliance Monitoring: Structured checking of the degree of compliance of the concerned parties in relation to environmental law and quasi law.
- Ethical Monitoring: This refers to systematic surveillance of environmental performance or activity levels in regard to standards set by the company, and overall rules of ethics and behavior.
- Financial and Environmental Monitoring: Monitoring: Monitoring devoted to discussing the actual and possible costs and benefits of adherence to environmental standards.
- Hot Environmental Issues: This is a process of monitoring of hot issues that the government or perceived hot issues by the population that arise as dangerous or

urgent based on the effect they have on the company and the measures undertaken to address them.

- Environmental Performance Monitoring: It is intended to guarantee that environmental programs are carried out effectively, economically and efficiently and in accordance with the policies of the people.

4. Characteristics of Environmental Monitoring

The main and distinctive characteristics of environmental monitoring, covering its various aspects, are as follows [9]:

- A systematic, periodic and critical audit performed by some external and independent authority, has the legal authority to ascertain the environmental impact of the company and its associated operations, and also to ascertain whether the company is adhering to internal policies and legislative standards.
- It is an ongoing process that is recurrent and ideally an interview of both company representatives and external consultants in order to be objective in analysis and own solutions.
- To assess the impact of the company and its activities on the surrounding environment by applying certain criteria, calculate the environmental cost of operations, enhance all the factors involved in the operations of the company and their effects, and find the most effective approaches to develop such operations.
- Environmental monitoring can be based on the external and internal auditors. To raise the level of confidence in the reports released, they need to be audited by independent and impartial auditors hence leaving a lot of responsibility to the external auditors.
- Since the company undertakes continuous operations, it will maintain continuity in its operations through environmental monitoring through environmental examinations. Monitoring may be done at different levels, which include examining a particular element of the company policies and practices, analyzing inputs and outputs, assessing engineering practices and reviewing management information systems, among others.

Second: Sustainable Development in the Context of Environmental Monitoring

1. An Introductory Definition of Sustainable Development

It is clear that economic and social development cannot be put at a standstill to conserve natural resources, or cannot proceed without thinking of consumption of natural resources and demands of the future generations. The recognition of the strong interrelation between development and the environment has resulted in the development of another concept known as sustainable development which means development that can be sustained keeping in check the balance between human beings and their natural environment, between the society and the development. It focuses more on quality than quantity like health, housing, education, and environmental impact assessment of developmental projects.

Al-Naas observes that sustainable development can be defined as development that satisfies the present needs without interfering with the capacity of the future generations to satisfy their needs [10]. Although international declarations have been made to ensure sustainable development and it may seem easy at the outset, its definition, interpretation, and usage have been put in very disparate ways and this makes it ambiguous to a large extent which is termed to be complex. In this context, Fowke and Prasad have given over eighty definitions, which compete and contradict one another [11]. This dilemma of sustainable development concept is its vulnerability to power relations both within and between companies which requires critical analysis of the concept. Evidently, power relations influence the meanings and language adopted by the people.

Nevertheless, after analyzing the lowest shared standards in the different definitions and understandings of sustainable development, one can point out four principal features [12]. The former attribute is that sustainable development is an intergenerational phenomenon, that is, it is a process of transforming one generation to the other. This means that sustainable development should be based on a period of two generations and that the time frame is sufficient between 25 and 50 years. The second similar feature is associated with the degree of measurement. Sustainable development on the various levels (global, regional, local). Nonetheless, what is sustainable in national level does not necessarily mean sustainable in the global level. This is because this geographic disparity occurs as a result of transfer mechanisms where the adverse results of one geographical area or nation can be transferred to another geographical area or nation.

The various domains form a third similarity attribute since sustainable development has at least three domains; economic, environmental and socio-cultural. Although sustainable development could be differentiated with respect to each of these domains, the importance of the concept is especially in the interrelatedness of the domains. Sustainable social development tries to shape the development of individuals and the community so as to uphold justice, improve living conditions, and promote health. The major objective in sustainable environmental development is to preserve the natural systems and to conserve the natural resources. Sustainable economic development is concentrated on the development of economic set ups and effective management of both natural and social resources. The problem is that, these three areas of sustainable development seem to be theoretically congruent, but may not be consistent in practice. Furthermore, the fundamental principles differ: efficiency is the main principle in sustainable economic development, justice is central to sustainable social development, and resilience or the capacity of the Earth to renew its resources is emphasized in sustainable environmental development.

The fourth common characteristic relates to the multiple interpretations of sustainable development. Although each definition emphasizes consideration of current and future human needs and how to fulfill them, in reality, any assessment of these needs cannot be entirely objective, and any attempt is inherently accompanied by uncertainty. Consequently, sustainable development can be interpreted and applied according to different perspectives [13].

2. Characteristics of Sustainable Development

Sustainable development is able to achieve its objectives due to a set of characteristics, the most important of which are:

- Detailedness of Objectives: Objectives of sustainable development do not focus on enhancing the livelihood of the communities in selected few places and in the short term. Rather, they are projected to the whole of humanity in the long run. The values that are promoted in a society tend to define needs; hence, sustainable development entails propagation of values that enhance a degree of consumption within realistic boundaries.
- Cumulativeness: Sustainable development did not appear out of thin air, on the contrary, this is the culmination of the development of different ideas and suggestions.
- Continuity and Evolution: Its vision is prospective and ready to further contributions and involvement with the purpose of development and renewal.
- Futurity: Sustainable development is long term. The time aspect is crucial, since it is guided by the current abilities and anticipating as well as projecting future alterations.

3. Achieving Sustainable Development through Environmental Monitoring

Environmental problems and sustainable development became widely discussed since the United Nations Conference on Environment and Development (UNCED) of 1992 and the World Summit on Sustainable Development (WSSD) of 2002. Most supreme audit institutions have paid more attention to the issues of the environment and have made efforts to establish environmental monitoring practices. The INTOSAI Working Group on Environmental Auditing (WGEA), which is focused on sustainable development, has been organizing and coordinating practices and research associated with environmental monitoring since its inception [14] [15].

Presently, it is possible to summarize the role played by the supreme audit institutions to facilitate the realization of sustainable development in three areas:

- Helping in formulation and implementation of sustainable development strategies.
- Playing a role towards sustainable development goals.
- Playing a part in making sure that program preparation and execution in the regard of sustainable development specifications.

4. The Practical Aspect

Description of the Population and Sample

1. Reasons for Selecting the Study Field:

When it comes to the process of selecting the study field, it is a continuous issue until the hypotheses will be tested and the study objectives will be met. The correct choice of the study area is also a great way to achieve the quality of findings. The firms that are part of the study sample are pillars through which the reality of sustainable development in the country can be promoted. These companies were appropriate as the field of study considering the clarity of the study variables. The reasons why this has been selected are:

- a. The correspondence of the nature of the study and the aims to the reality of the surveyed companies.
- b. The potential of carrying out the study on-site and have the cooperation and support of the management to help in sourcing the information required to carry out the research.

2. Study Population and Sample:

The sample under study was chosen based on a random sample of the employees in Iraqi firms. They were sent 95 questionnaires out of which 81 were returned. There were 6 questionnaires that got incomplete responses thus disqualified. Thus, research was conducted with 75 valid questionnaires, which is 78.8% of sent out questionnaires.

The following part describes and discusses the key peculiarities of the sample of the study that will be used as the foundation of the analysis.

• Distribution of the Study Sample by Educational Level:

The research sample is spread among the various education levels in the Iraqi companies beginning with individuals with advanced degrees (PhD, Master, Higher Diploma), then individuals with a Bachelor's degree, then technical diplomas (graduates of technical institutions), secondary education (all branches), and others as indicated in Table (1).

Table 1. Distribution of the Study Sample by Educational Level.

Educational Attainment	Number	Percentage (%)	Cumulative Percentage (%)
Doctorate (PhD)	2	2.6	70.5
Master's Degree	10	13.3	

Higher Diploma	4	5.3	
Bachelor's Degree	37	49.3	
Technical Diploma (Technical Institutes)	11	14.7	29.5
Secondary Education (all branches)	8	10.8	
Other	3	4	
Total	75	100	100

It can be observed from the following table:

1. PhD holders constitute 2 persons, which represent 2.6, Masters degree holders are 10 persons, which represent 13.3 and Higher Diploma holders are 4 persons which represent 5.3.
2. The sample of the study includes 37 holders of the bachelors degree, which is 49.3.
3. The number of people with technical diploma is 11 people, which is 14.7 percent, secondary education holders (with all branches included) are 8 people, which is 10.8 percent, and the holders of other qualifications are 3 people, which is 4 percent.
4. Considering these percentages, they represent a good distribution, as the study sample consists of higher degrees and bachelor's degrees, totaling 70.5%, which facilitates the respondents' comprehension of the questionnaire items.

• **Distribution of the Study Sample by Academic Specialization:**
The study sample is distributed across a range of academic specializations, as shown in Table (2).

Table 2. Distribution of the Study Sample by Academic Specialization.

Academic Specialization	Number	Percentage (%)
Accounting	39	52
Business Administration	6	8
Economics	9	12
Statistics	3	4
Computer Science	13	17.3
Other	5	6.7
Total	75	100

From Table (4), the following can be observed:

1. Accounting represents the largest specialization within the study sample, with 39 individuals, accounting for 52%.
2. Some other specializations can be classified under management and economics (Management, Economics, Statistics), totaling 18 individuals, or 24%.
3. Computer Science specialists represent 13 individuals, accounting for 17.3%.
4. Other specializations total 5 individuals, representing 6.7%.

Distribution of the Study Sample by Years of Administrative Experience:

Years of administrative experience represent an important factor in practical knowledge accumulation, which in turn can lead to expertise in the use of monitoring in general, and environmental monitoring in particular. Experienced individuals are better able to identify areas where monitoring can contribute to achieving sustainable development. The sample used in the study will be distributed based on years of administrative experience as shown in table (3):

Table 3. Distribution of the Study Sample by Years of Administrative Experience.

Years of Experience	Number	Percentage (%)
Less than 5 years	9	12
5 to less than 10 years	26	34.6
10 to less than 15 years	19	25.4
15 to less than 20 years	13	17.4
20 years or more	8	10.6
Total	75	100

Table (3) shows that most of the study sample has over 5 years of administrative experience (reflecting 88%), which demonstrates the reliability of the study sample in ascertaining the role of environmental monitoring in attaining sustainable development. This is specifically in the sense that the participants are fully equipped in terms of their knowledge of accounting, auditing, environmental and administrative employment, which adds to the increased practical (applied) significance of the findings.

4. Methods of Analysis and Statistical Processing:

Depending on the condition of the research and study goals, the SPSS program was used to process and analyze the questionnaire, applying a number of suitable statistical techniques. The following are the statistical techniques employed by the researcher:

- **Cronbach's Alpha:** Used to measure the reliability or consistency of the questionnaire.
- **Arithmetic Mean:** Used to determine the level of responses (high or low) of the study sample for each item of the study axes, with items ranked according to the highest mean.
- **Standard Deviation:** Used to identify the extent of variability in responses for each item of the study axes.
- **Factor Analysis:** Aimed at identifying a set of factors responsible for generating variation in a large group of response variables.
- **T-Test:** Used to identify differences between the means of two samples.
- **Cronbach's Alpha in Questionnaire Processing:** Applied to measure responses on the questionnaire items, with responses limited to: Agree, Neutral, Disagree.
- **Pearson Correlation Coefficient:** Used to test the consistency of responses to the questionnaire items and to examine the nature of the relationships between study variables.
- **Reliability Test:** Used to assess the validity of the questionnaire results and the correlation between its questions, including the calculation of Cronbach's alpha coefficient.
- **Multiple Regression:** Used to determine the effect of independent variables on the dependent variable.
- **Stepwise Regression:** Used to identify the significance of the effect of independent variables on the dependent variable.
- **ANOVA (Analysis of Variance):** Used to test the significance of the effect of independent variables on the dependent variable.

- Validity and Reliability Tests for the Questionnaire:

A. **Validity Test:** In order to ascertain the face validity of the questionnaire, the questionnaire was shown to a panel of experts and reviewers who are experts in the areas of research (Accounting, Auditing, Environment, Management, Economics, Statistics, and Computer Science). They were requested to give feedback on clarity of each item and suitability of each item to each axis. Most of the remarks and

recommendations made by the reviewers were factored in and thus some items were modified and new items were added.

- B. **Reliability Test:** The reliability of the scale was tested on a sample population of 25 members of the study population to ensure they were reliable. The questionnaire was again administered after 15 days to the same group. The responses revealed that there was 85 percent match and this portrays a high degree of reliability. According to the validity and reliability analysis results, the final questionnaire comprised of 20 items, which were spread through the main axes.

- Analysis of Results on the Role of Environmental Monitoring in Achieving Sustainable Development and Hypothesis Testing

1. Responses of the Sample on the Role of Environmental Monitoring in Achieving Sustainable Development:

Axes two and three of the questionnaire were dedicated to measuring the role of environmental monitoring in achieving sustainable development and testing the study hypothesis.

The responses of the study sample to the questions included in Axis Two (Environmental Monitoring) and Axis Three (Sustainable Development) were processed and presented in Tables (4) and (5).

Table 4. Responses of the Sample to Axis Two (Environmental Monitoring).

Question Number	Agree		Neutral		Disagree		Total		Mean	Standard Deviation
	S	%	S	%	S	%	S	%		
.1	49	65.3	5	6.7	21	28	75	100	2.3733	.89704
.2	71	94.6	2	2.7	2	2.7	75	100	2.9333	.34222
.3	73	97.3	-	-	2	2.7	75	100	2.9467	.32438
.4	31	41.3	8	10.7	36	48	75	100	1.9333	.96329
.5	36	48	10	13.3	29	38.7	75	100	2.0933	.93250
.6	68	90.7	4	5.3	3	4	75	100	2.8667	.41373
.7	36	48	10	13.3	29	38.7	75	100	2.0933	.93250
.8	62	82.7	7	9.3	6	8	75	100	2.7467	.59487
.9	48	64	14	18.7	13	17.3	75	100	2.4667	.77692
.10	51	68	13	17.3	11	14.7	75	100	2.5333	.74132

Table 5. Responses of the Sample to Axis Three (Sustainable Development).

Question Number	Agree		Neutral		Disagree		Total		Mean	Standard Deviation
	S	%	S	%	S	%	S	%		
11.	44	58.7	23	30.7	8	10.6	75	100	2.4800	.68497
12.	48	64	20	26.7	7	9.3	75	100	2.5333	.66441
13.	54	72	13	17.3	8	10.7	75	100	2.6133	.67570
14.	64	85.3	7	9.3	4	5.4	75	100	2.6667	.60030
15.	54	72	15	20	6	8	75	100	2.8000	.51988
16.	42	56	20	26.7	13	17.3	75	100	2.6400	.62903
17.	50	66.7	17	22.7	8	10.6	75	100	2.3867	.76923
18.	65	86.7	9	12	1	1.3	75	100	2.5600	.68260
19.	70	93.3	5	6.7	-	-	75	100	2.8533	.39227
20.	12	16	17	22.7	46	61.3	75	100	1.5467	.75861

2. Analysis of Results on the Role of Environmental Monitoring in Achieving Sustainable Development

The study hypothesis that environmental monitoring plays a significant role in influencing the achievement of sustainable development requirements can be tested by

analyzing the results related to the questions in the Environmental Monitoring axis alongside the questions in the Sustainable Development axis, as shown in Tables (4) and (5). All studied variables, including all details of the independent variables, were taken into consideration.

Table 6. Results of Regression Analysis between the Environmental Monitoring Axis and the Sustainable Development Axis.

Model	Unstandard Coefficient		T	Sig.
	B	Std Error		
8. (Constant)	3.947	.474	8.327	.000
Q7	-.257	.106	-2.418	.018
Q17	-.190	.038	-5.002	.000
Q18	.233	.047	4.908	.000
Q15	.196	.044	4.434	.000
Q3	-.364	.105	-3.466	.001
Q8	-.311	.078	-4.007	.000
Q9	.115	.049	2.362	.021
Q20	.107	.054	2.000	.050

Stepwise regression analysis was used to exclude variables that have no effect or whose effect is not statistically significant, thereby isolating the statistically significant variables that can be relied upon to explain the dependent variable. The results for the studied variables are as follows:

The regression analysis results (Table 6) indicate a significant effect of all the independent variables included in the model, supported by the F-value presented in Table (7). The coefficients of the independent variables and the significance level of each are shown in Table (6). The remaining variables in the model explained 54.6% of the variation in the dependent variable, as indicated by the coefficient of determination ($R^2 = 0.546$).

These results confirm the acceptance of the study hypothesis: **environmental monitoring plays a significant role in influencing the achievement of sustainable development requirements**. The significant variables are (Q7, Q17, Q18, Q15, Q3, Q8, Q9, Q20).

This implies that the role of environmental monitoring in the development and execution of sustainable development strategies enables the supreme audit institutions to identify imbalances and risks that discourage sustainable development, track the implementation of policies and programs aimed at sustainable development strategies, analyze the results, give relevant recommendations, assess the attempts done to preserve the environment and other activities, and audit indicators to ensure their dependability and congruency with the desired objectives. Moreover, environmental surveillance adds to the increase in the area of economic and social concerns pertaining to the company.

Table 7. ANOVA Analysis for the Effect of the Independent Variable on the Dependent Variable.

Model	S.S	Df	Mean Square	F	Sig.
1. Regression	6.088	8	.761	9.913	.000
Residual	5.066	66	.077		
Total	11.154	74			

Table (7) results suggest that the effect of the independent variable is important because F-value of 9.913 is very important at 0.01 level of significance, consequently supporting the study results.

5. Conclusions and Recommendations

After such an overall overview of environmental monitoring and sustainable development, along with the conclusions which are stated in the main body of the study, one can make the following conclusions:

- The management of the studied companies pays little attention to the periodical assessment of the compliance with the environmental legislation regarding environmental monitoring. This impacts negatively in terms of detecting deviations in the environmental work on time and consequently increases them and makes them harder to address through quick and simple solutions.
- The analyzed businesses are not able to process solid and liquid waste, even though the management tried to create additional efficiency in production and minimize waste in its activities.
- The present research reveals that the management of the companies under investigation pays inadequate attention to the purchase of materials with natural properties with a view to achieving sustainable development. Nonetheless, there is a positive signifier, as per the findings of the study, showing though comparatively the degree to which the corporations are dependent on effective technology that can help them minimize pollution through their many production activities.
- Located in the companies under study, the general interest in employing materials with lesser environmental impact appears to be low, which might subject the company to legal liability, even though their efforts and interest in optimizing the utilization of materials in production are substantial.

In continuation of the methodological requirements, and based on the conclusions reached, the following recommendations are proposed for future benefit:

- The management of the studied companies should give greater attention to the process of periodic evaluation, as it has positive implications for detecting deviations in the application of regulations and instructions related to environmental legislation.
- Encourage participation and contribution from all employees of the studied companies by allowing them to present ideas and suggestions that serve environmental work and enhance team collaboration, which effectively contributes to setting the company's plans and objectives.
- It is necessary to identify alternative materials that are environmentally safe to reduce negative impacts and to procure materials with natural properties for sustainable development by opening tenders to specialized global companies to provide these materials at the most competitive prices.

Provide a suitable working environment and improve the procedures adopted by the studied companies to protect employees from pollution during production processes, ensure the availability of safety equipment, disseminate guidelines and decisions within company buildings, and redesign internal layouts to maintain employee safety.

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