

# The role of environmental vigilance in achieving sustainability for environmental and social performance

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## Abstract

The study aims to know the role of environmental vigilance in the sustainability of environmental and social performance, so as a result of wars and infections from factories, hospitals, natural disasters and the spread of viruses, we have not found any interest in the Ministry of Health and Environment. The role of the department is to investigate the level of environmental vigilance in the sustainability of environmental and social performance. Therefore, the results of the study indicate a link between environmental vigilance and sustainability of environmental performance, despite the high gap between them and the sustainability of environmental performance in the ministry. Especially in the technical department, which emphasizes the importance of the dimensions of environmental vigilance and its impact on improving the performance of the department in particular and the ministry in general.

Keywords: environmental Vigilance, sustainable performance, environmental performance, social performance  
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## 1 Introduction

The research aims to shed light on the importance of environmental vigilance for the research sample to confront environmental pollutants that lead to harm to human health, and international reports, especially by the United Nations, have stated that Iraq needs tremendous efforts to save it from the clutches of environmental pollution, as it has become a serious threat to human life And animals and plants, and environmentalists did not expect the government to abolish this ministry, whatever the circumstances, as it teaches the knowledge of certainty of the scale of the disaster in this regard. The technical department in the Ministry of Health and Environment was selected as a sample for research. The independent variable (environmental vigilance) included three dimensions, which are information policy, social and economic policy, and legal policy. As for the dependent variable, it included two dimensions of sustainability of environmental performance and sustainability of social performance as the results show that there is a discrepancy in the research results. As it appears that the results of the research are an interaction between environmental vigilance and after the sustainability of social performance, which contributes to helping the technical department in the ministry, always ready to face unstable negative conditions and eliminate pollutants.

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## 2 The scientific methodology for research

The current topic will present the problem, objectives, and importance of the research, then it will deal with the hypothetical outline of the study, in the light of which the research measurement tool will be built through a review of foreign and Arab literature, as well as the limits of the research and the sample of the research. The following is an explanation of what has been mentioned briefly:

### 2.1 The research problem:

The knowledge problem is embodied in how to bridge the knowledge gap between environmental vigilance and sustainability of environmental and social performance. The field problem is the lack of awareness of officials of environmental pollution due to wars and toxic gases that are emitted from factories and companies as well as pollutants due to hospital work and viruses spreading in the Iraqi environment. Research on how to make the current state of the environment better based on the results of the research. Therefore, the research problem can be formulated with the following question: (Does the environmental vigilance contribute to achieving the sustainability of the environmental and social performance of the technical department of the research sample?).

### 2.2 The importance of research

The importance of the research lies in shedding light on the importance of environmental vigilance and its impact on:

- 1- Directing officials, especially the technical department in the Ministry of Health and Environment, on the importance of focusing on issues of environmental vigilance and sustainability of environmental and social performance.
- 2- Arousing the department's attention to the research sample by searching for means and ways to prevent environmental pollutants and limit their negatives to protect the environment and society.
- 3- Stating the importance of environmental sustainability in preserving human and community life.

### 2.3 Research objectives: The research aims to:

- 1- Shedding light on the concept of environmental vigilance and sustainability of environmental and social performance.
- 2- Knowing the role of environmental vigilance in improving environmental and social performance.
- 3- Knowing whether the research sample has a cultural awareness about environmental alertness.
- 4- Diagnosing the size of the gap in the current situation and how to contribute to addressing it.

### 2.4 The hypothetical scheme of the study:

The research dealt with two main variables, which are environmental vigilance as an independent variable with its dimensions (information policy, economic and social policy, legal policy), and the dependent variable (sustainability of environmental and social performance) with its dimensions (sustainability for environmental performance and sustainability for social performance) and the following figure illustrates the scheme (Figure 1). The hypothesis of the study:

### 2.5 Research hypotheses

The research was based on the main hypothesis that: There is a direct relationship between environmental vigilance and sustainability in environmental and social performance ... and the sub-hypotheses branch out, including:

The first sub-hypothesis: There is a direct relationship between environmental vigilance and sustainability of environmental performance.

The second sub-hypothesis: There is a direct relationship between environmental vigilance and sustainability of social performance. The third sub-hypothesis: environmental vigilance contributes to achieving sustainability of environmental and social performance.

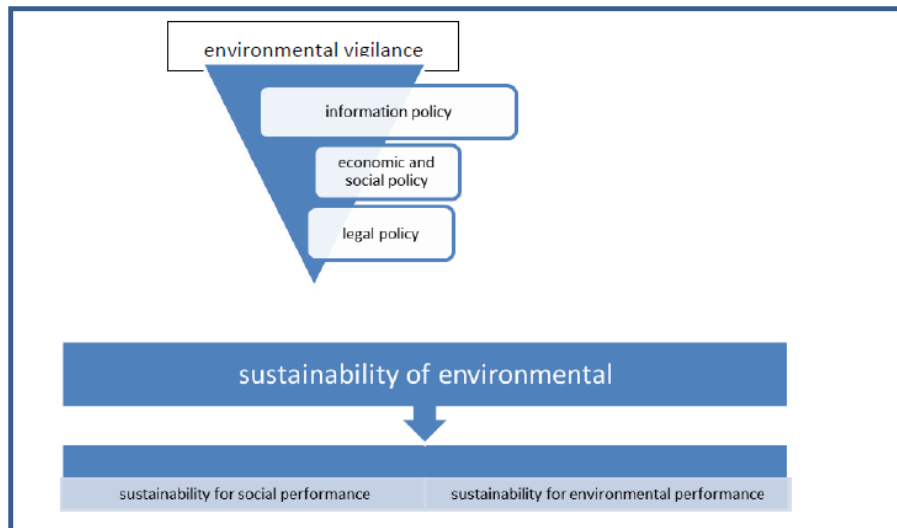


Figure 1: the hypothetical outline of the research

Table 1: Building the research scale

Main variables	Sub-variables	Number of paragraphs	Researcher's name and year
	environmental vigilance	19	
	information policy	9	Adapted by [1]
	economic and social policy	5	Adapted by [18]
	legal policy	5	Adapted by [18]
	sustainability of environmental and social performance	20	
	sustainability for environmental performance	9	by [17]
	sustainability for social performance	11	by [17]

## 2.6 Building the search scale

After reviewing the scientific literature in the field of environment and strategic management, the research scale was constructed (Table 1).

## 3 The theoretical framework

### 3.1 The concept of environmental vigilance

Vigilance is a word derived from the Latin (*Vigilantia*), and the use of this term in French originates from the concept of radar surveillance and this is to protect an area. Martinet and Martin explained in their book on economic intelligence that this radar (or as they called it the vigilance radar) works on Continuous monitoring of an area, whose purpose is to notify those responsible of any danger they face. But there is another type of radar called the follow-up radar, from here it has been described [23] as referring to vigilance or anticipation, attention, observation, observation and observation, vigilance or vigilance and caution, and preparedness or alertness of danger.

[15], explained that waking activities focus on three types of actions, called (*les 3A de la veille*):

- 1- Alerter: Detecting and identifying threats, opportunities, trends and emerging problems.

- 2- Adaptation (Adapter): Controlling resources according to the special variables in the environment, anticipating and making decisions.
- 3- Agir: solving problems of a political, social, economic, and technological nature and interacting to create a competitive advantage.

[19] linked the concept of quality with vigilance, that is, the quality of vigilance and observation of individuals working within the organization that would enable them to discover and manage unexpected results and obtain the highest and best quality of the organization's products. Figure (2) illustrates the organization in the vigilance state.

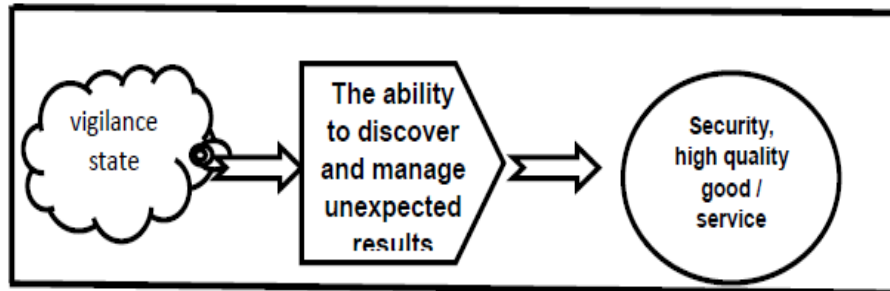


Figure 2: Organization in the vigilance state

Source: [19] "The surprising source of great Results, Attention and mindfulness".

The concept of environmental vigilance is related to the remaining elements in the environment of the organization that were not taken into account by the previous types, such as the legislative and financial vigilance and the geopolitical vigilance of environmental science and cultural vigilance. The application of environmental vigilance is considered a difficult task for the organization as it concerns a wide aspect of the remaining environment. The organization should deal with the selected information with great care in terms of analyzing, processing and sending it to the decision-makers so that they, in turn, determine the basic information in the vigilance process.

There are those who called it (the peripheral vigilance) also known as the comprehensive vigilance that is concerned with monitoring the economic, legal, demographic and cultural developments that affect in one way or another the activities of the organization.

Environmental vigilance also means awareness of the various changes that can occur within society, which may expose the organization to the risk of disturbance and affect its relationship with the environment, for it is therefore also called social awakening, as it consists in observing changes that have a relationship with various aspects of social life, including the development of demographic growth, habits Consumption, population centers. Its implementation is a difficult task for the organization, because it is concerned with a wide aspect of the remaining environment related to all the events and changes that occur in the fields of the environment [13]. The organization that takes into consideration the political, economic, social and cultural goals (values, beliefs, and rules of behavior) that guide the behavior of individuals and society and determine what is right, what is wrong, what is acceptable and what is not acceptable for behavior, and it is the standard against which to assess the behavior of the individual and the behavior of others Be successful and enable it to achieve the goals it aspires to [5].

Understanding the cultural context is important in assessing an organization's capacity, and failure to understand changes in culture or between cultures will have a major impact on the organization's ability and thus affect its competitive advantage [9].

### 3.2 The importance of environmental vigilance

- The success of the organization depends to a large extent on the extent to which it studies the environmental factors affecting through the available resources, the scope of the potential market, patterns of values, customs and traditions.

- Knowing the internal strengths and weaknesses and the opportunities and threats external to the institution.
- Adapting to the factors of the changing environment of the organization and making it positively affect this environment and thus play an effective role towards economic growth and development.

### 3.3 Domination environmental vigilance

#### 1- Information policy

The information policy for the environment includes a set of laws, rules, and directives related to the informational environment, and therefore the information policy for the environment includes a wide range of environment-related elements such as environmental information communication, environmental information technology, environmental information economics, environmental information systems, information networks and information management. Environmental and others.

#### 2- Social and economic policy:

It is represented in identifying and observing all social phenomena such as: social conflicts, religious and customary conflicts, misunderstanding between generations, adherence to traditions, and everything that stops the attention of the alert and threatens the safety or enhances organizational harmony. Social vigilance aims to warn or limit the negative effects of obstacles in the existing relations between the organization and its workers. It is also granted to the managers of the organization: A healthy atmosphere contributes to making good exchanges between members of the group.

Ease of dealing with internal problems, such as reorganizing work.

- The means to assure organizational effectiveness.

#### 3- Legal and Legislative Policy:

Represented in tracking and monitoring laws and regulations in the sector in which the organization is active, for example, an industrial organization, regardless of its geographical location, must know the existing and prevailing regulations in the region as well as political developments. Therefore, it must follow these laws and legislations issued by governmental or ministerial bodies or anybody Official bodies in the state because such laws affect the activity of the organization or the opportunities granted by the state to reduce, for example, taxes.

#### 4- Policy factors

Political factors are considered one of the basic elements in the overall environment. They are the forces or factors that are driven by political decisions, and they are closely related to economic factors. Institutions cannot operate in isolation from what is happening in the surrounding political environment. The organization's relationship with the political environment is based on political decisions, such as wars, nationalization, coups, and prohibitions against international institutions or specific countries. Political parties and political pressure groups are one of the components of political forces in any country, so that they have a clear influence on the political environment of the state. The organization is affected by the limitations of this environment and the opportunities it offers.

#### 5- Vigilance for environmental science:

The environmental environment is considered one of the influences on the organisation's economic bodies through its elements represented in the natural materials, water, green spaces, plains... etc, and the geological and climatic conditions that the organization operates within its shadow, and these conditions have an impact on the good functioning of the organization.

## 4 Sustainability of environmental and social performance

### 4.1 The concept of sustainability for environmental performance:

The care and preservation of the environment and its resources means preserving the elements and components of human survival on this planet, and then it is necessary to strive to confront the environmental problems that appear as a result of human activities. There is no doubt that facing those damages that harm the environment and its resources basically requires understanding the components of the environment and its resources and measuring the size of the problems that harm With it [4], indicated a way to organize human activity so that society and its members are able to meet their needs and at the same time preserve the natural vital system while planning to import that for a long

time.

Therefore, environmental sustainability is defined as making a decision and choosing to mitigate the negative impacts and impacts of human activities, and then taking measures towards using limited resources wisely and in a fair and equitable manner for both present and future generations. [11] may refer in the context of achieving environmental sustainability, which means environmental stability, so the operations management in industrial organizations must work to operate the production system in a way that supports and preserves the resources as the product life cycle from the design stage to the production stage and then use or Recycling provides an opportunity to preserve resources, as most industrial companies choose more economical and environmentally friendly alternatives and have options in preserving the environment by reducing the environmental impact and striving for sustainability and environmental stability.

## 4.2 Dimensional sustainability of environmental performance

[18], indicated that environmental mismanagement and its repercussions on health and productivity were the main goal of the emergence of the concept of sustainability, which is concerned with achieving ecological balance and preserving the environment, whether natural or constructed, and to achieve this through the following dimensions:

- 1) Ecological integration: The ecosystem approach is a strategy for the integrated management of land, water and living resources based on preserving these elements and taking into account sustainability and fairness when using them [20] The concept of the ecosystem appeared widely in the twentieth century and has taken an important position in the modern environment. Studies on environmental sciences have currently developed environmental management strategies that include recognition of ecosystems as a means of achieving a comprehensive perception of nature [20].
- 2) Reducing pollution: The problems of environmental pollution have exacerbated in recent years and the interest in trying to find ways to stop and mitigate their severity has increased. At the very least, to stop this frightening collapse in the ecosystem. It is worth noting that environmental pollution does not have a specific home, because pollution that occurs in a country may lead to pollution in neighboring countries, and as environmental pollution is a global phenomenon threatening all regions, ecosystems and their neighborhoods. Of plants and animals, as well as the most dangerous threats, namely human societies, so it has become necessary to monitor environmental pollution, identify polluting sources and work to reduce them.  
It is noticed that there is a direct relationship between concern for the environment and its pollution, as the greater the percentage of pollution, the greater the interest of bodies and organizations, and this is what many international and international official organizations have done, and it was approved by the United Nations report issued in (1999), after which several administrative systems appeared aiming to create an administrative system Effective, for example (ISO 14000), which is a set of requirements concerned with creating an environmental management system that can be applied in various organizations of various types and sizes, in addition to its adaptation to various conditions, whether cultural, social or geographical, which has been applied in most organizations [2].
- 3) Rationalizing the consumption of resources: natural and environmental resources are a gift from God to the countries, and the extravagance in the use of resources leads to the destruction of the components of the environment, and that one of the problems of environmental degradation results from the depletion of more resources and environmental natural materials is one of the factors that conflict with environmental sustainability, so there must be A scientific management of natural resources is interconnected with the environmental management system so that it reduces pressure on it, and this is done by following a method that deals with how to economically utilize available resources in order to meet the current requirements of individuals as well as ensuring that the future requirements of future generations are met without harming the environment [3].
- 4) Reducing the impact on human health: The absence of environmental awareness is one of the most important environmental problems, that man misused his ability to improve and change his environment, which led to the imbalance of natural balance and threatening the life of living organisms, as human health has its roots extending in his environment, so the conditions of the environment They affect its moulting characteristics, as well as affect its growth, exposure to infection, disease or prevention of disease, treatment and immunization, nutrition and other aspects throughout its life. The effects of the environment, especially those arising from pollution on human health, are called Ecological Health, which can be defined as Ecological Health. "The state of providing a safe and stable environmental habitat for a certain type of living organism, on top of which is the human being, so that he can live his life properly and practice his vital activities in it."

- 5) Using renewable resources: [8] clarifies environmental resources as those resources that have an intrinsic value or a value for long-term sustainability. Therefore, renewable energy sources are characterized by the possibility of their continuous exploitation without leading to the depletion of their source. We get it through the streams of energy that exist in nature spontaneously and cyclically. We also mean by renewable energy electricity that is generated from the sun, wind, biomass, geothermal and water, as well as biofuels and hydrogen extracted from renewable sources. The environment today has become an element of rational exploitation of resources and a fundamental variable of sustainable development variables due to the negative repercussions of pollution on the climate on the one hand. And because much of the natural resources are not renewable, which makes it imperative to exploit them according to rules that preserve survival and do not lead to disruption or suppress growth [22].
- 6) Preserving biodiversity: Biodiversity refers to all life forms that exist on the earth, including plants, animals, fungi, and other microorganisms, and it also refers to the groups that form them and the habitats in which they live. It can be defined as "the total variation of life on earth" [21] That is, the variability of living organisms derived from all sources, including the terrestrial and marine ecosystems and the ecological formations that these systems are part of. This variation includes biological diversity within the species as well as between different ecosystems [21]. Therefore, the Ministry of Health and Environment should adopt a preventive and punitive deterrent policy for anyone who violates the environmental borders.

### 4.3 Sustainability of social performance:

Sustainable work is defined as work that is carried out consciously and thoughtfully without any impact on the physical and social environment, whether directly or indirectly now and in the future [10], while social performance is defined as providing products and services that meet the needs of stakeholders. Current and future, and thus social sustainability is broader in that it includes formal and informal processes, systems, structures and relationships that support the activity and capabilities of current and future generations to create healthy and appropriate societies for societies that are socially sustainable, diverse of sects and nationalities, democratic and provide a better quality of life [16] (Therefore, social sustainability focuses on the following elements [18].

A- Social capital    B- Social infrastructure    C- Government commitment    D- Equality and social justice

In order to create a sustainable social performance that supports the economic activities of the organization, organizations must carry out these activities:

Charitable work: It means the humanitarian activities and services that gain the organization the sympathy of the community. It can be carried out through donations and aid, charitable projects, participation in charitable work, and caring for the families of workers.

Support for civil society organizations: It is intended to provide a package of types of financial, material and moral support that the organization provides to civil society organizations, which can be in multiple forms of support such as sponsorship, communication channels, participation, and projects.

Community service: It refers to the necessary social and moral services needed by the community, which can be provided through specific circumstances and events, and may be in the form of community respect, social and health care, entertainment, cultural and educational services .Transparency: It means adherence to laws and procedures that enable society and stakeholders to easily access their information, which can be dealt with through public disclosure, anti-job exploitation, anti-bribery, and easy access to information. Environmental requirements: It refers to the activities, means and programs that the organization undertakes to maintain a clean and sustainable environment, which can be carried out through many measures such as protecting natural resources, disposing of waste and exhausts in a scientific way, combating pollution causes, and balancing social responsibility.

In order to create sustainability for social performance, we only have to interconnect the elements referred to by Mohsen, 2016, which organizations should adopt a social responsibility strategy as we previously mentioned, as well as adopting the ISO 26000 standard, which refers to protecting the environment and beneficiaries, as well as social auditing, which is the social issue system stipulated in the agreements. Human rights, socially responsible investment, which is how to properly spend and invest money with social goals, and the following figure illustrates the four dimensions (Figure 3):



Figure 3: The four dimensions of sustainability for social performance

## 5 The practical side

Iraq is considered one of the environmentally affected countries according to local and international reports, due to the exceptional circumstances that it went through as a result of wars in all their regular and unusual forms, and the government was rather to set up strategic programs to confront the pollution resulting from these wars, and not to neglect this dangerous file that threatens the lives of millions of Iraqis. This context is what we see of horrific images of congenital deformities and the spread of serious diseases such as cancer and malignant tumors distress specialists and experts, because the Iraqi hospitals scattered in all governorates are full of such diseases that the country was completely free of, so we see that the government's move to cancel the Ministry of Environment was an incorrect decision and we consider A major "setback" for the collapsed environment in our country, and many were optimistic about the formation of this ministry, which played an important role in promoting the environmental reality, International reports, especially by the United Nations, have stated that Iraq needs tremendous efforts to save it from the clutches of environmental pollution, as it has become a serious threat to human, animal and plant life, and environmentalists did not expect the government to abolish this ministry, whatever the circumstances, as it is a science education. Certainly the magnitude of the disaster in this regard.

Therefore, the current topic deals with the checklist for the actual application of environmental vigilance in the Technical Department / Ministry of Environment and how it can contribute to sustainable performance that can preserve the safety of society from dangerous pollutants in air, water, soil, etc.

### 5.1 A checklist of the main and subsidiary search variables

The independent variable Environmental vigilance ((an organized method in managing organizations based on monitoring the environment in its entirety, allows by identifying weak signals and identifying potential developments that may occur to them. It focuses on spreading useful knowledge through general and intelligent monitoring and follow-up of the environment of the organization through Research on realistic and future information in order to create business opportunities, reduce risks, and take appropriate decisions by decision-makers in the organization)). Therefore, the independent variable (environmental alertness) included three dimensions (information policy, environmental policy, legal policy), which clarify each dimension in detail.

#### 1- Information policy

The information policy for the environment includes a set of laws, rules, and directives related to the informational environment, and therefore the information policy for the environment includes a wide range of environment-related elements such as environmental information communication, environmental information technology, environmental information economics, environmental information systems, information networks and information management. Environmental and others.

We notice from Table (2) below that the percentage of the extent of conformity, which depends on the amount



of the weighted arithmetic mean that we obtain (represented by the numerator) - because (denominator) the highest degree of the scale is a fixed amount - it is between (acceptable to weak) that is by A weighted arithmetic mean (2.57) and at its lowest level when it is (43%), where the size of the gap is at (57%), which is the "degree of departure from the ideal situation represented by a matching range ratio (100%), which corresponds to an arithmetic mean.

Table 2: The total measure of the dimensions of the main variables

Dimensional variables	The scale				
	Frequency	Score	Weighted arithmetic mean	Percentage of Conformity	Gap Size
Environmental vigilance					
Informational policy	7	18	2.57	43%	57%
Social and economic policy	5	17	3.4	57%	43%
Legal policy	4	17	4.25	71	29%
Sustainability of environmental and social performance					
Environmental performance	9	20	2.2	37%	63%
Social performance	11	47	4.27	71%	29%

A weight of (6) ", and the smaller the gap due to the improvement processes, the better and more close to the very high case. In the same way, we perform calculations for other variables, and their results are as follows.

Calculations were performed by the method [7], (AlShammari, 2013: 173) : (Weighted arithmetic mean = ((Frequency  $\times$  Weight) total) / (Repetitions total)  $\frac{(1 * 0) + (1 * 1) + (1 * 3) + (3 * 4) + (0 * 5) + (0 * 6)}{1 + 1 + 1 + 1 + 3 + 0 + 0} = \frac{18}{7} = 2.57$

Percentage Match Range = ( Mean Weighted )/ ( Scale in Higher Score =  $\frac{2.57}{6} = 0.43 = 43\%$  Gap Size = 1 - match extent percentage =  $1 - 0.43 = 0.57 = 57\%$

As we note from the table above, the technical department depends on multiple sources to obtain information on the external environment, such as interviews and the Internet. This is what was confirmed by officials in the Ministry of Health and Environment

Obtaining information from official authorities and citizens, especially with regard to the liberated areas, regarding water pollutants, mines, uranium and carcinogenic substances as a result of wars, especially in Diyala, Salah al-Din, Fallujah, Anbar and other cities. And this succeeded through what the environmental team did in the technical department and the mine department ... it applies the scientific rules to create an ideal healthy environment. Although the technical department analyzes and processes data to make decisions appropriate to the environment and society, there is a conflict in decision-making, especially after the previous merger of the Ministry of Environment into the Ministry of Health to become the Ministry of Health and Environment.

## 2- Social and economic policy

The ISO14001: 2004 standard defines it as the organization's intentions and directions, with its relevant environmental performance that is formally expressed by senior management. Economic and social policy provides the framework for action and defining environmental goals and environmental targets. They are measures that are taken [or not taken] intentionally to manage environmental activities with the goal of preventing, minimizing or mitigating harmful impacts on nature and natural resources, and ensuring that man-made changes do not cause harmful effects on humans.

Since we notice from Table (2) above that the percentage of the extent of conformity, which depends on the amount of the weighted arithmetic mean that we obtain (represented by the numerator) - because (denominator) the highest degree of the scale is a fixed amount - it is between (acceptable) which is the amount of medium Arithmetic weighted (3.4) and at its lowest level when its amount is (57%), where the size of the gap is at (43%), which is the "degree of departure from the ideal situation represented by the conformity ratio ratio (100%), which corresponds to the mean A weighted arithmetic of (6) ", and the more the gap decreases due to the improvement

processes, the better and more close to the very high case. In the same way, we perform calculations for other variables, and their results are as follows.

$$\text{Weighted arithmetic mean} = \frac{((\text{Frequency} \times \text{Weight}) \text{ total})}{(\text{Repetitions total})} = \frac{(0 * 0) + (1 * 1) + (0 * 2) + (1 * 3) + (2 * 4) + (1 * 5) + (0 * 6)}{0 + 1 + 0 + 1 + 2 + 1 + 0} = \frac{17}{5} = 3.4$$

$$\text{Percentage Match Range} = \frac{(\text{Mean Weighted})}{(\text{Scale in Higher Score})} = \frac{3.4}{6} = 0.57 = 57\% \text{ Gap Size} = 1 - \text{match extent percentage} = 1 - 0.43 = 0.43 = 43\%$$

This is what officials affirmed by the ministry's commitment to all legal and environmental requirements. Therefore, the environmental policy in Iraq seeks to solve environmental problems using technical, administrative and legal procedures. The ministry is also interested in spreading environmental culture to bring about the necessary change in the ways of thinking and environmental behavior of workers and citizens, developing environmental awareness and creating knowledge. The basic environment in order to crystallize positive environmental behavior is the prerequisite for the individual in society to play his role effectively in protecting the environment and thus contributing to the preservation of public health.

Economic and social policy tools refer to the methods the ministry takes to implement its environmental policies. Therefore, the ministry may use a number of different types of tools. For example, economic incentives and market-based tools such as taxes, tax exemptions, negotiable licenses and fees, which may be an effective way to encourage compliance with the principles of environmental policy. Ministry officials have emphasized that Paragraph (14) that includes (includes the Technical Department of Through its environmental management system, this policy is available to all.

### 3- Legal policy

The organization must establish and implement procedures in order (to reach applicable legal requirements and other requirements related to the environmental aspects of the organization, and to determine how to apply these requirements to the environmental aspects).

Therefore, the results indicate that the percentage of the extent of conformity, which depends on the amount of the weighted arithmetic mean that reached (4.25), which indicates (high to average degree) at the percentage of the extent of conformity approximately (71%), where the size of the gap is (29%) And it is "a high degree of the ideal situation, as we note that the technical management is close to the state of moderation and that it applies the legal policy to an acceptable degree, knowing that the legal policy is one of the requirements of environmental management. It is unnecessary and does not add value to the work, in addition to the technical department seeking to dispose and discover pollutants by establishing legal procedures that limit the increase in environmental pollutants. Technical management Submit reports to senior management on the performance of the environmental management system, including recommendations for the purpose of continuous improvement.

## 5.2 Second: the dependent variable (respondent):

Sustainable performance: sustainability refers to preserving the resources and assets of the organization for the longest possible period of time, and sustainability is achieved through three indicators of economic performance, environmental performance, and social performance, and research focuses on the environmental and social performance to support economic performance. They are economic data - and social data and environmental data - and sustainable development - and the material definition of sustainable environmental performance is: the necessity to use renewable natural resources in a way that does not lead to their death, deterioration, or diminution.

- 1- Sustainability of environmental performance: It is noticed from the results of the analysis that the arithmetic mean of the environmental performance dimension of the adopted variable (sustainable performance) has obtained a weighted arithmetic mean (2.22) and it falls within the scale of (low) at a rate of (37%) and this indicates that there is a gap of (63%) and shows that the technical administration does not apply modern methods in detecting hazardous pollutants and radiation, and Table (2) illustrates this in general terms.

Despite the limited use of technical management techniques that enable the elimination of emissions in air and water. However, the United Nations Environment Program (UNEP) aims for this project to use environmentally friendly technologies such as providing drinking water, waste disposal, sound environmental management of wetlands, and building capacity for decision-makers in this regard the field.

Depleted Uranium Assessment and Capacity Building: This project aims to conduct an assessment of the environmental impact of depleted uranium pollution, and to work on building capacities in the field of environmental

impact assessment and monitoring methods for radioactive materials in the environment. The technical department in the ministry also uses technologies that enable disposal of waste (solid and hazardous). This is what was stated in the agreement clause between the Ministry of Health and Environment and the United Nations Environment Committee, which focuses on the assessment of hazardous materials such as the assessment of depleted uranium pollution and capacity building: This project aims to conduct an assessment of the environmental impact of depleted uranium pollution, and work on capacity building in the field of environmental impact assessment and the means of controlling radioactive materials in the environment. It is also noteworthy that the Mines Affairs Department of the Ministry of Health and Environment, which oversees the implementation of the Iraqi program for mine affairs, continues its awareness-raising campaigns on the dangers of mines, explosive devices, remnants of war and foreign objects (booby traps) in the areas liberated from the filth of ISIS terrorist gangs and IDP camps in various Iraqi provinces. Despite all the aforementioned, it was very weak in the field of technical management using investment techniques and optimal exploitation of natural resources, as well as the weak use of technical management as economic means to avoid waste in the main uses of companies' and factories' operations (energy, water, land spaces, oil).

- 2- Sustainability of social performance: The results indicate that after the sustainability of social performance, it has attained an arithmetic mean (4.27), and this value indicates that the scale is within (high to average) with a percentage estimated at (71%) and this means that the gap is approximately (29%) despite the application Programs for training and appointing employees working, but they do not apply a clause (the company follows rules to prevent the state of bias or intentional discrimination in all areas of work) and does not document and do not apply rules for dealing with suppliers, and Table (2) shows the results in total.

It is noticed that the ministry applies training programs to develop technical and administrative cadres, and this is what some officials have confirmed, as the United Nations program has trained a specialized team from our ministry on advanced devices during the past year, so they have become qualified to train other cadres to start work in all governorates where polluted sites are widespread. The technical administration also deals positively with everyone who provides assistance and advice to get rid of and reduce environmental pollution, and this is what we find in its dealings with the World Bank in four major projects such as: Development Environmental Awareness Project: The project aims to enhance the cooperation shown by the citizen towards protecting the environment and his areas of activity in it. Capacity building in the environmental field: It includes training programs, hopefully to start, aimed at strengthening the capabilities of our cadres working in various environmental fields.

- 3- Conduct Environmental Assessment: It aims to enhance the capabilities of the Ministry of Environment's cadres to conduct environmental impact assessment of projects and activities polluting the environment.
- 4- Iraq Emergency Environmental Management Project.

## 6 Conclusions and recommendations

### 6.1 The conclusions

- 1- It is clear that there is a discrepancy in the results of the dimensions of environmental vigilance as follows:
- 2- The results of the research showed an interaction between environmental vigilance and the sustainability of social performance, which contributes to assisting the technical department in the ministry on permanent readiness in the face of unstable negative conditions and the elimination of pollutants.
- 3- The results of the research indicate a correlation between environmental vigilance and sustainable performance despite the high gap between it and the sustainability dimension of environmental performance in the ministry, especially in the technical department, which confirms the importance of dimensions of environmental vigilance and its impact on improving the performance of the department in particular and the ministry in general.
- 4- The research results showed that the technical administration is interested in collecting information about its external surroundings.
- 5- The results show that there is a difficulty in analyzing the information obtained from the external environment.
- 6- Although the technical department analyzes and processes data to make decisions appropriate to the environment and society, there is a conflict in decision-making, especially after the previous merger of the Ministry of Environment into the Ministry of Health to become the Ministry of Health and Environment.

- 7- The results indicate that most workers in the ministry do not own and know about the environmental policy of the ministry and the government's approach in this field, despite the large number of pollutants that are put out by factories and companies, as well as government and private hospitals, but there is a conflict in the powers granted to some official authorities in accounting for negligence.
- 8- Despite the submission of environmental reports by the committees in charge of the Ministry's departments, including the Technical Department, the Mine Lifting Department, and other departments concerned with dealing with soil, water and air problems ... etc. Now, legal measures have not been taken despite the diversity of pollutants in our beloved Iraq, namely:
- Electromagnetic - microwave ovens, high-pressure lines, electrical transformers, cables and generators, which led to exposure to the risks of leukemia and childhood cancers due to the electromagnetic minutes!
  - Chemical - organic compounds and salts - ions and toxic metals that pollute the food chains, water and air!
  - Physical - noise, odors, and visual pollution. Organic and inorganic materials, acid rain water and industrial wastes that cause changes in color, temperature, turbidity, surface tension and taste. Radioactive - depleted uranium (DU).
  - Traffic - Traffic congestion increases in the streets of Baghdad and Iraqi cities due to the increase in the number of traffic vehicles, the backwardness of road and transportation networks and the decline in traffic culture! Traffic congestion spews huge quantities of toxic car exhaust gases, which are gaseous pollutants whose danger exceeds that of industries.
- 9- Sulfur and nitrogenous oxides cause acid rain harmful to the agricultural environment and fisheries, damage to building walls, sidewalks, streets, and cars, darken the colors of monuments, vegetation and paint, and help with metal corrosion. Traffic congestions affect the efficiency of vehicle performance, the economic consumption of fuel together and the health of people.
- 10- I note that the sustainability of environmental performance did not achieve acceptable results, as the gap was very high and this is what confirmed the dimensions of environmental vigilance and this indicates the lack of information and the difficulty of analyzing it accurately and the lack of clarity of the environmental policy for most workers in the ministry, as well as the conflict of powers granted to each of the Capital Secretariat, the Ministry of Health and the Council The governorate, the Ministry of Environment and other official departments and ministries.

## 6.2 Recommendations

1. The technical department in the ministry should use a modern information system with advanced technologies to help collect data that enhance the state of vigilance, caution and attention to them and interpret the signals received from the environment at all times with high accuracy.
2. The need for the technical administration to spread the culture of improving performance among workers in the field of treating pollutants and reducing their risks to humans, through meetings and seminars, in addition to monitoring their daily behavior to determine the extent of their application by spreading the values and beliefs of that culture to ensure the improvement of performance.
3. It is assumed that there is a clear authority for the ministry and an independent entity for it.
4. Developing environmental awareness and creating basic environmental knowledge in order to crystallize positive environmental behavior as a prerequisite in which the citizen can effectively play his role in protecting the environment and thus contribute to preserving public health. All of this requires providing the necessary cadre for environmental institutions and making environmental conservation science a science. Basic teaching curricula in Iraqi universities.
5. The importance of making the necessary amendments to the environmental laws in force and refining them from narrow utilitarian purposes, and in particular mentioning the following laws:
  - Environmental Protection and Improvement Law No. 3 of 1997.
  - Formations system for the Department of Environmental Protection and Improvement No. 1 of 1998.

- The system of incentives and wages for the Environment Protection and Improvement Department and the Environmental Protection and Improvement Departments in the governorates No. 2 of 1998.
  - Provincial council's formations for the protection and improvement of the environment No. 4 of 1997.
  - Instructions for the tasks and departments of environmental protection and improvement in the governorates and their formations No. 1 of 1998.
  - Law No. 67 of 1986 regulating rubble collection areas.
  - Instructions for lighting in the work environment issued by the Ministry of Health No. 7 of 1993.
  - Instructions for the dangers of aromatic benzene and its products issued by the Ministry of Health No. 6 of 1996.
  - Instructions for transporting and supplying drinking water by truck, issued by the Ministry of Health No. 5 of 1993.
  - Instructions No. 4 of 1993 issued by the Ministry of Health on protecting workers from vibration.
- 6- Activating the role of the Central Organization for Standardization and Quality Control in health control, especially for sterile drinking water bottling laboratories.
- 7- Activating the role of the free, independent, national Iraqi judiciary, the role of the independent public authority for contracts and sales that have not seen the light until this moment, and the role of the Central Organization for Standardization and Quality Control, to hold accountable the corrupt and the corrupt who have become a danger

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