African Journal of Hospitality, Tourism and Leisure, Volume 9 (2) - (2020) ISSN: 2223-814X


# Disclosure of Greenhouse Gas costs and Green Tourism: Evidence from the Iraqi Tourism Industry

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**Abstract**

One of the most prominent issues that occupy the world today with regard to the challenges and risks involved is research interest in the areas of disclosure of the cost of greenhouse gases. Its consequences extend to future generations in economic, environmental and social terms. With the increasing demand of stakeholders and their awareness of the importance of companies disclosing their financial reports on the strategic effects of their business on the climate, companies ought to find ways to disclose by responding to the requirements of global disclosure in international markets. However, what companies face in the Iraqi environment and with increasing greenhouse gas emissions (global warming) are challenges, most notably the weak disclosure in their annual reports and the absence of mandatory or voluntary instructions in the financial market as instructions No. (8) for the year (2011). The research aims to prepare a proposed index for the Iraqi financial market based on international treaties and protocols concerned with the disclosure of greenhouse gases through 31 paragraphs, knowing that it is possible to add any sections to these paragraphs and according to the activity of each company. The index was tested on a sample of the tourism companies listed on the Iraq Stock Exchange. The results show that there are initial initiatives to disclose greenhouse gases in the sample, even if relatively weakly.

**Keywords:** Greenhouse gas emissions, Iraq stock exchange, greenhouse disclosure index, green tourism.

## Introduction

One of the most prominent concerns of contemporary Iraq is preserving the environment, improving its properties, solving its problems and harmonizing with international requirements. With the spread of global warming (phenomenon of global warming) in all countries of the world, including Iraq (as a result of what he went through), it affects the environment very significantly. As global warming emissions grow from global warming there are an environmental and economic threat at all levels, they are not a real-time problem, but rather extend to future generations. Due to the importance of this phenomenon, many conferences and treaties were concluded, and the research currents increased according to which solutions were found to reduce the cost of greenhouse gas emissions. The importance of the research highlights that global warming, the global phenomenon that occupies the countries of the whole world needs to intensify and concerted efforts of all countries are needed to form cluster groups capable of limiting the phenomenon (Nicolaides, 2016). Iraq is one of the countries in which the Ministry of Environment is intent on setting the national strategy

for the protection of the environment for the year (2020) It identified the most important activities that may cause this phenomenon. However, the absence of disclosure of the paragraphs of the cost of greenhouse gas emissions represented by (carbon dioxide, methane, nitrogen dioxide, and forwards, fluorocarbons, perfluorocarbons, etc.) is evident in the financial reports issued by companies listed in the Iraqi financial market. In addition to the complete absence of instructions companies are obligated to disclose those costs in accordance with the requirements of disclosure in the market and as in the amended Instructions No. (8) for the year (2011) and the disclosure instructions under which the market operates.

The Iraqi environment suffered and suffers from human effects on its environment, which are repeated wars, explosions, bulldozing, marshes burial, gas combustion, spread of unlicensed factories and other problems that negatively affected the environment and the economy. It is a real threat to the Iraqi environment in which the Ministry of Environment lacks information, numbers and statistics about the size of Iraq's cause of greenhouse gas emissions. However, its manifestations are known to everyone from the deaths of many aquatic and wildlife species and heat waves that sometimes exceed 60 ° C and deserts result the Earth also experiences many earthquakes. In addition to the contraction of the winter months and others, the tourism sector in Iraq is one of the important sectors in the Iraqi economy, because it may contribute in varying proportions to the unwanted emissions of gases due to improper use of the environment by means of transportation and unwanted use of energy and some now extrapolate the accounting disclosure instructions in the aforementioned market, and it suffers from the absence of requirements to disclose greenhouse gases in the financial reports of the tourism sector.

## Literature Review

### Global warming and greenhouse gas emissions costs

The phenomenon of the global warming is being witnessed in the entire world, and the it is a problem with a wide impact for the present and future. It has emerged as a concept since ancient times and in 1820, as Fourier determined, this phenomenon was linked to changes that occur in the atmosphere, as it is more permeable to sunlight from outside (Stern & Stern, 2007). The atmosphere consists of a mixture of several gases, some of which vary between stability and change in terms of quantity and constant quantity is (nitrogen, oxygen, argon, krypton, hydrogen, xenon, helium, and neon) and the percentage by volume of nitrogen gas is about (78 and oxygen (21%), while the rest of the gases range to a percentage less than one. While the gases are variable, the amount of heat is (water vapor), and the percentage reaches less than (0.04) and (carbon dioxide) whose percentage ranges between (Zero - 0.03) and (ozone gas) its percentage reaches less than one million. Carbon dioxide, methane, and nitrogen dioxide result.

Another group of gases, sefaka fluoride (SF6), has been added, and two groups of industrial gases are HFCS and PFCS. The greenhouse effect is the phenomenon that gradually increases the temperature of the lowest layers of the atmosphere surrounding the Earth, as a result of increasing greenhouse gas emissions (most of which are formed from water vapour) since the beginning of the Industrial Revolution. As for the atmosphere, its carbon dioxide represents 15 % and methane 15%, a source of which is rice (Haldar & Mukherjee, 1992). The US Environmental Agency has classified important sectors that contribute to greenhouse gas emissions as being the energy sector, industry, transportation and communications sectors), and has diagnosed many international agreements and protocols related to greenhouse gas emissions, as the United Nations Framework Convention on Climate Change is one of the most important international agreements that It sets a general framework for joint

international efforts to address the challenges posed by climate change, and the agreement entered into force on March 21, 1994.

On September 11, 1997, the Kyoto Protocol emerged from that agreement, which came into force in February 2005. This protocol commits developed countries (thirty-seven industrialized countries and the European Union) to a so-called clean development strategy to reduce greenhouse gases, which requires advanced industrialized countries to implement projects that reduce greenhouse gases in developing countries, and in return developed countries receive emission reduction certificates (called carbon credits or carbon reduction rights) and developing countries benefit from investments and technology transfer in achieving the financial return from selling these certificates to achieve the sustainable development. There are those who see that there is a relationship between what is being emitted from greenhouse gases and global climate change and the value of economic units (Silva, Ross & Farias, 2009). A transformational eco-centric approach to business activities is urgently needed if the hospitality industry is to be sustainable (Nicolaides, 2017; 2018).

Carbon emissions rights are similar to tradable securities, i.e. they can be dealt with in capital-like markets, the carbon trade market is divided into the ozone market and the enterprise market and the ozone market is sold and bought for carbon emissions according to their need by companies or other countries. As for the market projects related to the implemented projects and the amount of emissions issued according to the performance of those projects, the World Bank indicated that the volume of trade in this market in 2018 amounted to 178.6 billion dollars, an increase of 93% over the year 2009 and trade in rights carbon emissions (called the 'GH' system) The “Cap and Trade System” is currently trading in ten markets around the world, including the Chicago Climate Exchange, and the European Climate Exchange market.

Once agreed upon, as a framework after the Kyoto agreement, there will be more transactions in those markets, which imposes the status of legal rules necessary to trade carbon emissions rights under an effective supervisory body, as well as the accounting rules necessary to report those rights, which is currently being done through the joint project between the International Financial Accounting Standards Board (IASB, 2011) and the American Financial Accounting Standards Board (FASB, 2010). The ability to quantify emissions is called a carbon footprint. The carbon footprint is the quantitative expression of carbon dioxide and greenhouse gases resulting from emissions and identifying emission reduction areas provides an opportunity to reduce costs. In addition, disclosure of emissions to stakeholders is required in meeting legislative needs, carbon trade, or as part of social responsibility, or setting up companies to make them stand out, thereby achieving a sustainable competitive advantage (Nicolaides, 2016; 2017a; 2017b, 2018; Becchetti, Di Giacomo & Pinnacchio, 2008).

Numerous studies have found that many customers prefer environmentally friendly companies (Nicolaides, 2016) and pay additional costs for products with a low carbon footprint. Tang and Luo (2014) indicate that with a low carbon footprint, the carbon footprint reflects the amount of carbon dioxide emitted from the production of a product and until it reaches the customer. Consequently, there were many accounting professional bodies that tried to contribute to the development of regulations, guidelines and evidence in organizing the accounting disclosure of greenhouse gas emissions in the absence of a unified accounting standard dealing with how to set indicators to disclose the costs of greenhouse gases. This was in addition to the fact that there are many projects and initiatives regarding the same subject and at the level of the world countries we list some of them as follows:

**Carbon Disclosure Project**

This project is related to encouraging sectors that suffer from an increase in greenhouse gas emissions, both in the public and private sectors, to disclose the costs of these gases and reduce the impacts of climate change, as Britain launched this project for the first time as an attempt to find a database under which companies and data are provided to be kept. There is a general database for the purpose of rationalizing decisions at the level of economic units and investors (Andrew & Cortese, 2011).

The project is also one of the organizations that make up the Climate Disclosure Standards Board, which is a group of commercial and environmental organizations aiming to develop an acceptable international framework for public acceptance that can be used by companies to disclose information about opportunities and risks associated with climate change, and carbon reduction strategies, and its effects on the value of shareholders' equity. Linnerooth-Bayer and Hochrainer-Stigler (2015) collected the data issued by companies and disclosed it (as a non-profit), as is well known, many companies in the countries of the world report on greenhouse gases through the carbon disclosure project. During this project, it is possible to set strategic goals regarding the future of companies in light of increasing emissions. The Carbon Project (CDP) is one of the major projects as a database in the world that provides information on the world regarding climate changes.

The project provides benchmarks used by companies around the world to disclose global warming. On the basis of this, it can be said that the CDP is the main source for obtaining and benefiting from the information. In addition, it is the largest project in the world that provides a reference framework for preparing global warming reports. It is a repository of information that faces a continuous increase in the provision of information and the number of companies that provide that information. The researchers believe that Iraqi companies can participate in this database and disclose information related to climate change and define their strategies through indicators that will be proposed by them.

**The Greenhouse Gas Initiative**

This was a a protocol developed by stakeholders, non-governmental units, and academics through the World Business Council for Sustainable Development (WBCSD) The World Resources Institute and the initiative aims to prepare standards for accounting and reporting on greenhouse gases and their recognition (WRI & WBCSD, 2004,171). This initiative and its implications can be illustrated as in Figure 1.

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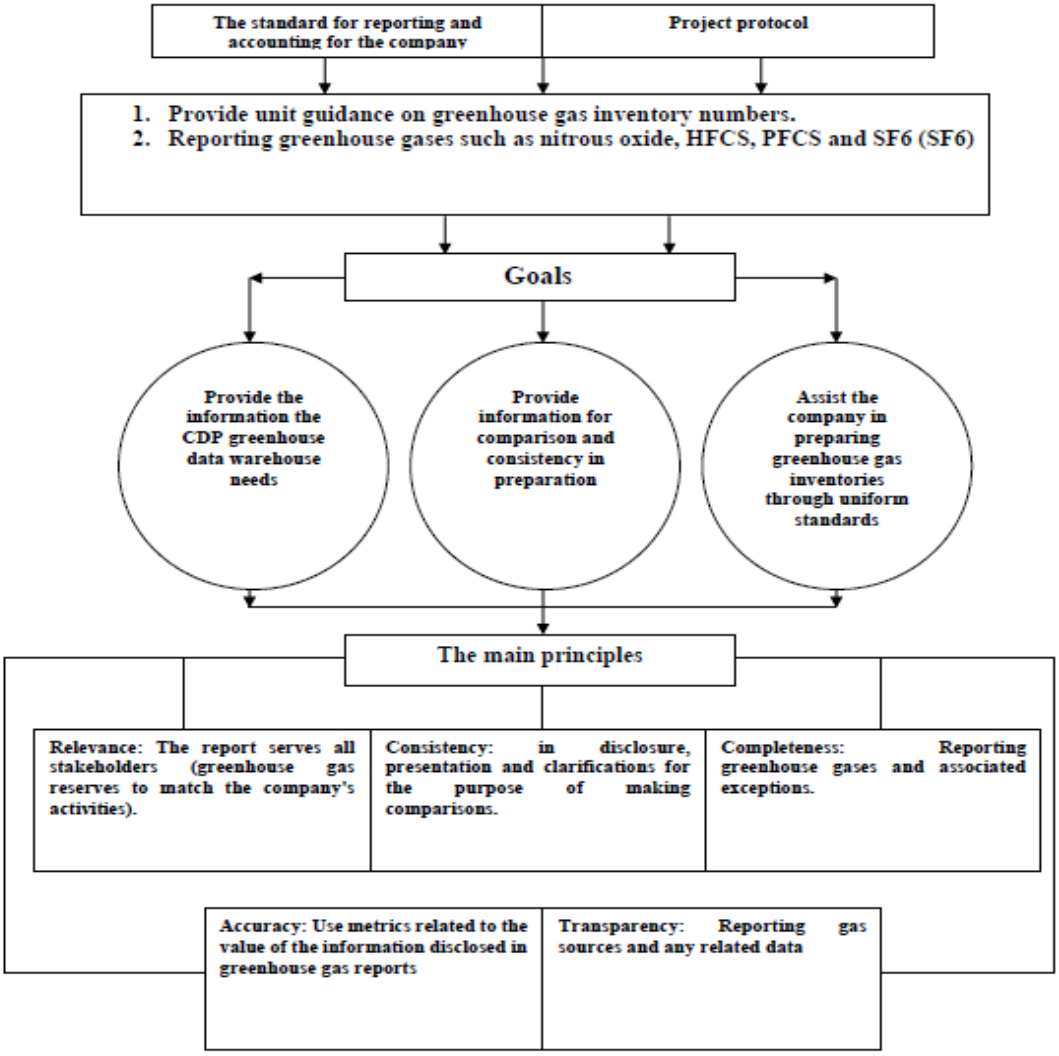


**Figure 1.** Contents of Greenhouse Gas Initiative *Source: WRI (2004)*

## The Climate Disclosure Standard Board

The Council presented a set of requirements for climate disclosure, as in the following figure, Figure (2).

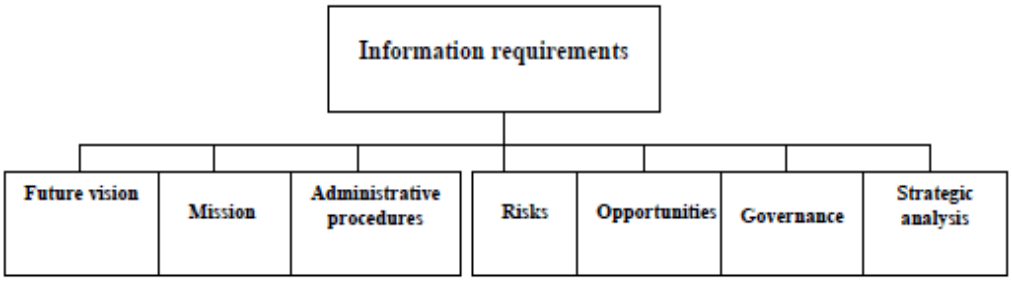


**Figure 2.** Climate change disclosure requirements *Source: CDSB (2012)*

## Global Framework for Disclosure of Climate Risks

Global Framework for Climate Risk Disclosure (GFCRD)

The global framework for the disclosure of climate risks was presented by a group of investment companies and provides information disclosed for the purposes of investors. The contents of the framework can be illustrated in Figure (3).

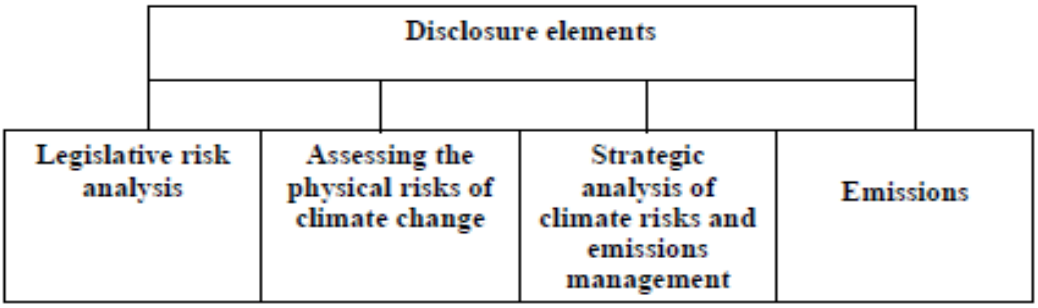


**Figure 3**. Global Framework for Disclosure of Climate Risks Source: Doran and Quinn (2008)

**SEC Guidelines for Disclosure of Climate Change SEC, 2010**

SEC issued guidelines on non-financial disclosure that included four aspects as requirements and as in Figure 4.

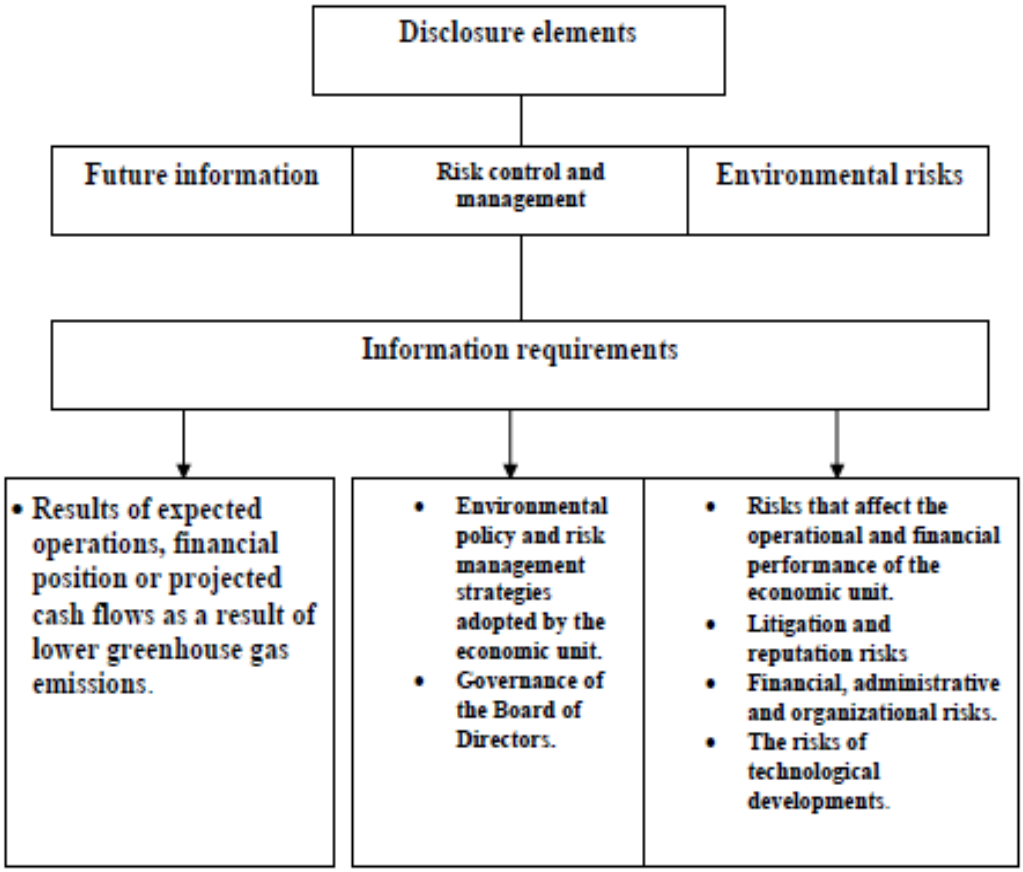


**Figure 4**. SEC Guidelines for the Disclosure of Climate Change *Source: Ben-Amar and McIlkenny (2015)*

The environmental activities of economic units such as those related to climate change are one of the most important factors driving the creation of an environmental strategy for companies. Environmental regulation and monitoring of greenhouse gases produced by economic units have become coercive pressure on companies to comply, and societal pressure is also an important factor to make units disclose emissions, and accordingly, the units were divided into four groups illustrated by Table (1).

**Table 1**. Classification of companies according to the disclosure of greenhouse gas emissions strategies

| # | Type of Company | Qualities |
|---|---|---|
| 1 | Indifferent companies | It has no emission evaluation or control and of course it cannot disclose. |
| 2 | Beginners | They have some operations and activities but allocate little financial resources to reduce greenhouse gas emissions, relatively little disclosed. |
| 3 | Emerging | Greenhouse gas emissions are monitored and evaluated and inventory inventories are established, but disclosure is limited to meeting regulatory requirements only. |
| 4 | Active | It has an evolving scope for greenhouse gas management and carries out a range of activities to reduce greenhouse gas emissions as well as to disclose separate or combined reports with financial reports. |

Source: Binh, Fowler, and Hunt (2008)

From the previous perspective of interest in disclosing greenhouse gases, accounting has evolved from a simple tool for documenting, recording, classifying and analyzing economic events to a set of practices aimed at influencing social reality and the way in which decisions are interpreted (Lovell & MacKenzie, 2011). In the context of granting confidence and credibility to the reports issued by the units regarding greenhouse gas emissions, the Standards of Verification and Confirmation issued the Confirmation Links Standard No. (3410) entitled (Confirmation Links on Greenhouse Lists) as it provides guidance on emissions lists, the product life cycle, default basic information and key performance indicators based on emissions data as well as requirements for the application of tools that help reduce emissions. Also the confirmation services must be in accordance with reasonable assurance services and limited assurance services, and the standard aims to reach reasonable assurance if the declared greenhouse list is free of material misrepresentation due to fraud or error, and therefore the auditor can make a conclusion about this (IOC 3410Socpa).

## Disclosure of global warming and green tourism

The accounting literature presented many studies related to disclosure of greenhouse gas costs despite the difficulties that these studies faced due to their synchronization with many problems facing the accountant regarding the recognition of environmental expenditures and obligations and how to measure and report those costs by virtue of the lack of an accounting standard regulating accounting practices (Al-Wattar et al., 2019; Almagtome, 2015; Almagtome, Almusawi, & Aureaar, 2017; Once & Almagtome, 2015; Once & Almogtome, 2014). Ravin and Raine (2007) used the corporate governance entry to explain the disclosure of greenhouse gases, and this was according to the regulations and instructions found in economic units. They found that economic units voluntarily disclose greenhouse gases in accordance with the instructions of environmental management systems, governance, environmental management committees and any instructions.

Bosetti and Frankel (2011) analyzed the factors that could affect companies 'disclosure of information related to greenhouse gas emissions and climate change around the world depending on two directions first through analyzing the content of financial reports and factors that affect the disclosure of greenhouse gases using the template (Dependency Model) and multiple linear regression. They indicated that there is a statistical relationship between the disclosure of greenhouse gases, company size, and the ratio of the market value to the book value. The World Tourism Organization estimates that world tourism is the reason behind more than (5%) of all greenhouse gas emissions, most of which is caused by transfers and the use of plastic resources (Ali, Almagtome & Hameedi, 2019; Khaghaany, Kbelah & Almagtome, 2019). Participants at the Watsos conference in Switzerland cautioned on climate changes

and stated that heat emissions are threatening tourism as an industry and that some global parties in the hotel sector have initiated measures through their activities to work to preserve the environment through programs called (green hotels) and via the use of solar energy in hotels and alternative energies and water recycling. They also state that paying attention to general energy issues and the use of energy by guests and increasing the number of environmentally friendly hotels is critical. This aims to achieve the required balance in terms of attracting the largest number of tourists and to maintain the sustainability of the natural tourism resources.

In the second world conference to study the impact of climate change on tourism and how to develop this sector in a sustainable manner in Davos, Switzerland, some reasons were diagnosed for the rise in global warming, in which the tourism sector contributes to the problem in that the process. This is by transporting tourists and it is directly responsible for three quarters of the carbon dioxide percentage emissions and an estimated rate (40 %) of these are from aircraft, (32%) from cars and (21%) from general subsistence. In the local environment, the studies focused on environmental disclosure in general. Without researching the disclosure of the cost of greenhouse gas emissions and by virtue of the fact that the topic is contemporary in the Iraqi environment, the current research contributes to providing a suggested indicator for the disclosure of greenhouse gas costs and has been prepared according to a set of initiatives, protocols and accounting and non-accounting issues. It also tests the level of disclosure in one of the important sectors in the Iraqi financial market which is the tourism sector as a guide in the Iraqi environment.

**Building a global warming index according to global initiatives**

The alignment of sustainable development goals and indicators with the National Development Plan for the year 2030 in Iraq is the road map for implementing the sustainable development agenda in the local environment, and it considers the Iraq Stock Market as one of the leading and influencing bodies in society and seeks to build an advanced environment in preparing and reporting on sustainability reports. It also seeks to be encouraging companies listed and obligated to disclosure so as to achieve future value for the market through these reports with the aim of supporting the growing trend towards investment standards in the environment and society. This will be promoting awareness of its best practice and improving a developed system in the field of institutional and technological governance and the climate and the premises of the following:

1. Building the Iraq Stock Exchange with smart market specifications that adopt a sustainable electronic environment method and adopt the (Green Box) method.
2. Supporting sustainability strategy initiatives for companies listed on the market, while giving concessions to companies that pursue sustainability as their strategy.
3. Building a sustainability agenda for the market by aligning market indicators with the sustainable development goals and working to join the European Union's Sustainability Group for the International Sustainable Stock Exchanges Initiative.
4. Encouraging the listed companies to issue sustainability reports.
5. Create green financial tools to encourage investment in environmentally friendly projects as well as the availability of sustainable financing.
6. Promote cooperation between global financial markets calling for green financing for the Sustainable Stock Exchanges Initiative (SSE).
7. Interest in issuing reports related to carbon footprint and global warming that are concerned with global warming issues and work to disclose according to the requirements of bodies and sponsors of the Climate Stability Board (FSB) Climate Initiative.

8. Work to launch new indicators in the market, such as the greenhouse effect index and the future sustainable disclosure index.

The year 2000 was the beginning of interest in disclosing global warming, and it is a phenomenon characterized by different climatic conditions, such as heat, rain, and drought, as a result of the emission of gases, most notably PFcs, SF6, N2o, Ch4, Co2 that cause climate change. Several international and regional bodies have emerged and are interested in disclosing global warming, including the Global Reports Initiative and the gas emission trading system in the European Union. Several global financial markets have called for global warming to be disclosed in the reports of the companies listed therein and the reports are compiled in a digital repository (CDP).

According to the Global Warming Disclosure Project, information gathering takes place through what the companies supply in all parts of the world to the base (CDP) and through communication with listed and unlisted companies in financial markets which are willing to voluntarily disclose emissions from their activities. Also, the CDP project is one of the bodies that make up the Climate Disclosure Council, which is an organization that includes a group of commercial and environmental organizations that aims to develop an international framework that enjoys general acceptance by companies that intend to disclose opportunities and risks accompanying climate change and its reflection on stakeholders. According to various researchers (Andrew & Cortese, 2011; Brunel & Johnson, 2019; Chiriacò et al., 2013; Kauffmann, Less & Teichmann, 2012; Olson, 2010) there are many benefits to greenhouse gases reporting such as:

1. Corporate response to reporting global warming provides benchmarks for companies to measure and improve corporate performance, while investors have information about visions and their implications for shareholder rights.
2. The availability of a global system for companies to disclose and exchange information on climate change in all parts of the world.
3. It is considered as a step to reduce emissions that companies contribute to occurring through information and indicators resulting from rep;rting emissions.
4. Improving transparency for stakeholders, as the pressure generated by stakeholders was the main reason for reporting global warming.
- Global warming gas
- Greenhouse gases
5. Improve the corporate / public / foreign reputation of companies.
6. Creating opportunities for innovation by companies by avoiding products polluting the environment and replacing them with environmentally friendly products, thereby increasing the company's value.
7. From the perspective of available opportunities, reporting on global warming provides the company's ability to obtain credit from financial institutions as well as the availability of comprehensive opportunities to enhance the company's strategies and anticipate risks and operational challenges.

Based on the foregoing, it can be considered that adopting the disclosure of global warming in the financial reports of companies listed on the Iraq Stock Exchange separately or combined with the financial reports can give the market an opportunity to enter the global financial markets, given that the disclosure of global warming has become a vital priority in the disclosure concerned Most countries have it. The disclosure of global warming on the Iraq Stock Exchange can be summarized as follows:

- **Objective**: It is to enhance the disclosure in the Iraqi market for securities of companies listed on the market that contribute to greenhouse gas emissions. The

proposed indicator requires that companies (operating in the field of industry, agriculture, energy, etc.) disclose greenhouse gas emissions and ozone-depleting gases as well Than any other emissions associated with climate change.
**The need**: to launch the Global Warming Disclosure Index on the Iraq Stock Exchange According to the National Inventory of Gas Emissions in Iraq for the years (1997) and later, according to the first national communication of Iraq submitted to the United Nations Climate Change Convention.

## Methodology

The research aimed to determine the relationship between the disclosure of greenhouse gas emissions costs according to an indicator that is built using international initiatives and protocols and accounting professional bodies to be a guide for companies listed in the Iraqi financial market. The research was based on the hypothesis that an indicator for the detection of greenhouse gases in the tourism sector in the Iraqi environment can be built to test the level of disclosure. This study adopts a quantitative approach using the financial data disclosed in the annual reports of a sample companies consists of 10 hotels listed in Iraq stock exchange for the year ended in 2018. To measure the level of disclosure of the costs of green tourism, a measure consisting of (31) items was approved within 6 sections, knowing that (1) represents compatibility / with the indicator while (.) Incompatibility with indicators is an item. The proposed measure for disclosure of greenhouse gas emissions includes the following sections:

**First**: the economic unit: the nature of its domestic or international activities

1. The name of the economic unit, its legal form, and local and foreign employees
2. Its original habitat. And its subsidiaries
3. The nature of the activities carried out
4. Type of industry and sector
5. Information about competitors inside and outside the country of economic unity
6. The unit sales growth rates according to its activities

**Second**: The nature of domestic and international agreements or legislation dealing with global warming

7. The company complies with local legislation on global warming
8. The company provides information for the CDP database

**Third**: Global warming: opportunities, risks and coping

9. Type of responsibilities towards reducing greenhouse gas emissions
10. The current and future risks of global warming on the company's activities and on society
11. Actions taken by the company and future emission reductions in
12. accordance with international agreements.

**Fourth** - Climate governance followed by the company

13. The presence of the (Climate Change Governance) committee in the company

**Fifth** - Carbon accounting or thermal emissions accounting

14. The approaches adopted in calculating greenhouse gases according to (GHG Protocol & S10) and internationally accepted.
15. The amount of emissions in equivalent of (Co2) calculated per ton
16. Disclosure of emissions locally and internationally for the company's activities

17. Disclosure of emissions resulting from the use of generators or the withdrawal of the national electricity alternative.
18. Disclosure of emissions covered by the Kyoto Convention
19. Detailed disclosure of greenhouse gas emissions according to source, coal, natural gas, chemical fertilizers, internal generators ... etc.
20. There is confirmation that the information disclosed has been subject to confirmation services by an external auditor in accordance with the International Standard on Auditing (ISAE 3410).

**Sixth**: Additional Disclosures. The challenges facing the company in reducing gas emissions.

21. A description of performance measurement compared to internal reference measures
22. Greenhouse gas emissions not covered by the Kyoto Protocol (Nox, CFCS) and reported separately.
23. The performance ratio indicators, that is, the amount of emissions per kilowatt hour and emissions per ton / output.
24. Future vision for any greenhouse gas reduction strategies or programs.
25. The amount of uncertainty in the future emissions report.
26. Information on offset emission reductions
27. Information about operations to remove or reduce the volume of gases emitted, causes or vice versa.
28. Future vision: The disclosures should include information on the short and long-term future vision, including trends and factors associated with climate change.
29. Governance: The disclosures should describe the governance processes as well as the organizational resources that have been allocated to identify and manage the body overseeing climate change-related issues.
30. Description of the projects, protocols and agreements signed with the economic emission reduction authority.
31. Alternative renewable energy sources alternative to the source of the energy that causes emissions.
32. A description of the strategic planning used by the unit to reach the goal of global warming.

## Results

The tourism sector in the Iraq Stock Exchange is considered an important and vital sector. Table (2) represents the companies listed in the market, as the Iraq Stock Exchange is the stock exchange in the Iraqi environment.

**Table 2.** Sample companies

| # | **Company name** |
|---|---|
| 1 | Ashur Hotel |
| 2 | Baghdad Hotel |
| 3 | Babylon Hotel |
| 4 | Ishtar Hotel |
| 5 | Karbala Hotel |
| 6 | Al-Mansour Hotel |
| 7 | National Investment and Tourism |
| 8 | Palestine Hotel |
| 9 | Al-Sudair Hotel |
| 10 | The tourist city of the Mosul Dam |

To test the level of disclosure of the cost of global warming in the tourism sector, a sample of (5) companies listed in the financial market was chosen, and in conjunction with the proposed index, Table (3) shows the information disclosed regarding greenhouse gas costs in tourism sector companies for the year (2018) .

**Table 3**. Results of disclosure based on the suggested index

| # | Company name | General information (6 items) | Legislation (2 items) | Global warming (3 items) | Climate governance (1 item) | Carbon accounting (7 items) | Additional Disclosures (12 items) | Total (31 items) | % |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Ashur Hotel | 4 | 1 | 0 | 0 | 0 | 10 | 15 | 48.39% |
| 2 | Baghdad Hotel | 4 | 0 | 0 | 0 | 0 | 11 | 15 | 48.39% |
| 3 | Babylon Hotel | 5 | 0 | 0 | 0 | 0 | 9 | 14 | 45.16% |
| 4 | Ishtar Hotel | 6 | 1 | 0 | 0 | 0 | 8 | 15 | 48.39% |
| 5 | Karbala Hotel | 4 | 2 | 0 | 0 | 0 | 8 | 14 | 45.16% |
| 6 | Al-Mansour Hotel | 5 | 2 | 0 | 0 | 0 | 8 | 15 | 48.39% |
| 7 | National Investment and Tourism | 2 | 2 | 0 | 0 | 0 | 9 | 13 | 41.94% |
| 8 | Palestine Hotel | 3 | 2 | 0 | 0 | 0 | 11 | 16 | 51.61% |
| 9 | Al-Sudair Hotel | 4 | 1 | 0 | 0 | 0 | 12 | 17 | 54.84% |
| 10 | The tourist city of the Mosul Dam | 5 | 3 | 0 | 0 | 0 | 10 | 18 | 58.06% |

From the analysis of the table, it is clear that the tourism sector companies in the research sample have disclosed, in varying proportions, about general matters and are not matters related to global warming gases.

## Conclusion

Global warming is a phenomenon that has increased in interest in the past years due to its dangers extending to future generations. The results show that there are deficiencies in the traditional accounting disclosure due to lack of attention to environmental aspects, including the detection of greenhouse gases. In addition, there are many benefits of disclosing the costs of greenhouse gases through which economic analysis strategies to reduce future greenhouse gases can be analyzed and considered as a road map for economic unity in reducing emissions. The Iraqi environment also suffers from a weak response to societal and institutional pressures regarding the disclosure of greenhouse gases. On the other hand, it is possible to build an index related to disclosing the costs of global warming, and through it, it is possible to enhance the disclosure of the environmental responsibility of economic units in reducing global warming. The carbon footprint is the methodology adopted to estimate total greenhouse gas emissions. The banking sector suffers from the relative decline in the disclosure of greenhouse gas costs, according to the proposed index in the Iraqi market.

The state's efforts must join hands with citizens to limit the phenomena that contribute to greenhouse gas emissions. Also, all companies whose operational practices have had a negative impact on the environment should be obligated to disclose negative impacts through reports issued concurrently with the financial reports. In addition, it is necessary to rely on the companies listed on the Iraqi financial market on the proposed index when disclosing the cost of greenhouse gas emissions. In addition to directing the research currents in the Iraqi environment towards contributing accounting in the calculation of the costs of greenhouse gases and working on issuing an accounting rule regarding that. Finally, the international assurance standard (3410) should be adopted in the Iraqi environment to add confidence to global warming reports.

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