IJHER International Journal of Humanities and Educational Research
ISSN: 2757-5403
Volume 6, Issue 5, October 2024

Received: 24/07/2024 **Accepted:** 19/08/2024 **Published:** 01/10/2024

MEASURING THE ENVIRONMENTAL DIMENSION OF SUSTAINABLE DEVELOPMENT ACCORDING TO THE GRI STANDARDS: A PROPOSED MODEL

Dhahir Habib BAHEDH[1]

University of Basrah, Iraq

Prof.Dr. Suhail Abdullah AL-TAMIM[2]

University of Basrah, Iraq

Abstract:

Sustainable development in its various dimensions (economic, environmental, and social) is considered an important issue at global and local levels. It has gained importance for several reasons, the most important of which is the damage, emissions, and waste from companies operating in various sectors. Therefore, for companies to achieve sustainable development requirements regarding the environmental dimension, they must demonstrate their impact and performance on environmental activities to protect the environment and society, which requires them to measure and then disclose this impact. The significance of this study is underscored by its focus on quantifying the environmental aspect of sustainable development, a matter deemed essential by all parties involved due to its detrimental impact on both the environment and society. Therefore, measuring the ecological dimension represents a real company problem regarding mechanisms and tools. What criteria would be sufficient to measure this impact? Many regulatory frameworks and standards are primarily concerned with measuring sustainable development, and its various dimensions, especially the environmental dimension, and among the most critical regulatory frameworks are the Global Reporting Initiative (GRI) standards. From this standpoint, the problem of this study emerged in addressing the issue of measuring the environmental dimension through the Global Reporting Initiative (GRI) standards because it represents a real problem for all companies. Therefore, this study aims to design a proposed framework to measure the environmental dimension of sustainable development according to the standards (GRI). Through this proposed framework, companies can measure their environmental performance and disclose it according to reports prepared to reveal this impact to provide appropriate and helpful information to various stakeholders.

Keywords: *Sustainable Development, Environmental Dimension, GRI.*

http://dx.doi.org/10.47832/2757-5403.28.1

[1] dhaher224@gmail.com

[2] suh2001971@yahoo.com

1. Introduction: Adoption of sustainability practices has increased because of the current business competitive environment and the worldwide aim for the attainment of the Sustainable Development Goals of the United Nations. Thus, sustainability reporting has gained prominence and is getting increasing attention domestically and globally (Khan et al., 2023). These days, businesses consider it their commercial responsibility to prevention the environment from the damaging impacts of their waste. The environmental component is crucial to sustainable development and functions with other elements to attain complete sustainability (Purvis et al., 2019; Sebhatu, 2008). The (IPCC) meeting of the United Nations gave an overview of the state of affairs in the fight for sustainable development. It stated that humankind is at a turning point in its history and that prompt decision-making is necessary to ensure a future that future generations can live on. There have been interventions before it. Sustainable development faces a wide range of interrelated and diverse difficulties. As a result, environmental concerns have gained international attention, and several frameworks and goals are eager to ensure its preservation. For instance, in 2019, the UK government set the world's most aspirant climate change goal: a 78% reduction in carbon emissions by 2035. And 100% 2050 net zero carbon (Adewumi et al., 2024). Therefore, companies must state their environmental performance, because the environmental impacts of most decisions may only be felt in years have passed. It is easier to issue environmentally responsible decisions with a good framework for evaluating environmental considerations and risks (Al-Tamimi, 2022). Therefore, this study aims to design a proposed framework for measuring the environmental dimension, which is an essential and vital dimension according to the best and most widely used standards, which are the Global Reporting Initiative (GRI) standards, to solve the problem facing companies in measuring their environmental performance, which poses great difficulty for them when making decisions.Assessing environmental performance enables a corporation to monitor its advancement in developing organisational strategies. Companies must carefully evaluate the environmental objectives they aim to accomplish within a designated timeframe. Through the process of assessing environmental performance, the organisation will gain insight into the necessary actions it must undertake in order to accomplish its environmental objectives. (Al-Tamimi, 2022). Hence, this study's significance lies in its ability to fill the research void by introducing a framework that enables the company to assess its performance by quantifying the influence it has and, as a result, bolster its reputation by adhering to the formalised environmental regulations and laws.

2. Theoretical framework:

2.1. Sustainable Development:

The establishment of sustainable development principles is a significant event in the twentieth century, as it aims to safeguard the planet and the Earth from irresponsible pollution and disasters. Consequently, it represents a new beginning in the effort to safeguard the environment from the harm caused by a variety of industries (Nilgün KUTAY & TEKTÜFEKÇİ, 2016; Martens, 2006). As a result, numerous conferences, seminars, and agreements encouraged all societie's to advocate for sustainable development. The United Nations Stockholm Conference of 1972 is one of the most significant conferences (Mazza, 2021; Klarin, 2018:Santos et al., 2021). Following this, the United Nations established the Brundtland Commission, also known as the World Commission on Development and the Environment. This commission was the most significant turning point in the dissemination of the concept of sustainable development. In 1987, the commission published its report, "Our Common Future," which defined sustainable development as development that meets the needs of the present without compromising the needs of the future (González et al., 2021; Mensah, 2019). Sustainable development necessitates the fulfillment of all its dimensions. Three fundamental dimensions comprise sustainable development: the environmental, social, and economic dimensions (Ciegis et al., 2009; Duran et al., 2015).

2.2. Environmental dimension:

Prior research (Cristian et al., 2015; Duran et al., 2015; Ozili, 2022) has highlighted the significance of the environmental dimension as a fundamental dimension of sustainable development. Companies across different industries must prioritize this dimension due to the substantial harm it inflicts on the environment and society. The environmental aspect of sustainable development pertains to the meticulous and deliberate utilization of natural resources, the adoption of renewable energy sources, the conservation of biodiversity, the maintenance of ecosystem equilibrium, and the practice of recycling (Yıldırım et al., 2022). Environmental sustainability encompasses the company's actions to safeguard vital natural resources and preserve the environment. These endeavours involve mitigating environmental consequences, minimising resource use and biodiversity loss, and preventing substantial environmental degradation caused by pollution, depletion of the ozone layer, and the accumulation of carbon dioxide. Carbon emissions destroy natural habitats, which are crucial for maintaining biodiversity. Addressing pollution, lowering energy use, and implementing protective measures are essential for preserving these habitats (Purvis et al., 2019).

2.3. The Global Reporting Initiative (GRI) standards: Previous literature has confirmed that the Global Reporting Initiative (GRI) standards are among the most extensively used and widely accepted standards at the global level for reporting sustainability reports (Diaz-Becerra et al., 2021; Searcy, 2012). These standards establish indicators and requirements for companies to measure, disclose, and evaluate their sustainable performance, particularly regarding the environment. The goal is to foster a positive relationship between the company and its

stakeholders (Dwiharto et al., 2023). The Global Reporting Initiative (GRI) was founded in late 1997 by the Alliance for Environmentally Responsible Economies (AEREs). The project is a volunteer initiative aimed at helping various stakeholders make crucial decisions. Its main objective is to establish a universally applicable framework for companies to use when developing sustainability reports, thus improving transparency and accountability. Companies can create a common language with their stakeholders by focusing on sustainability in three key areas - economics, society, and the environment. (Del Mar Alonso-Almeida et al., 2014; Kocmanová & Šimberová, 2014).

2.4.

3. Research methodology:

The methodological framework represents the basic map of the research vocabulary that will be addressed. Accordingly, this framework consists of:

3.1. The study problem:

Sustainability issues have gained broad resonance worldwide due to their importance, especially the environmental dimension, which has become the focus of everyone's attention. Therefore, companies have a primary option to enhance their reputation and market value by measuring their environmental performance and providing valuable information to stakeholders about this performance. Therefore, measuring this performance is difficult for companies. This raises the following questions: What is the appropriate model for measuring environmental performance? What are the best criteria by which we can measure this performance? Therefore, this study solved this problem by presenting a proposed model to measure the environmental dimension of sustainable development according to the standards of the Global Reporting Initiative (GRI).

3.2. The importance of studying:

The importance of this study is highlighted by the importance of the environmental dimension of sustainable development, which has become an issue of the current era. The study also presents a proposed framework for companies to measure this dimension to determine the extent to which they meet those requirements for the environmental dimension according to the model prepared to evaluate their environmental performance. According to this model, the company can know it's positive or negative impact on all stakeholders.

3.3. Objectives of the study:

This study aims to achieve the following objectives:

1. Learn about sustainable development, the environmental dimension, and Global Reporting Initiative standards.
2. Propose a framework for measuring the environmental dimension of sustainable development by Global Reporting Initiative standards.

3.4. Study Approach:

The two researchers relied on the descriptive approach to understand and research the study's problem and find the appropriate solution. This approach describes the phenomenon under the study in depth and breadth, accurately and objectively, and provides the best appropriate solutions.

4. Proposed framework:

4.1. Framework structure:

Based on the literature review, to the researchers' knowledge, there is no proposed framework like the one found in this current study to measure the environmental dimension of sustainable development based on the updated and revised Global Reporting Initiative standards. Therefore, this framework is the first of its kind in measuring the environmental performance of companies because it provides valuable and appropriate information to multiple stakeholders about companies' commitment to their sustainable performance regarding one of the dimensions of sustainable development, which is the environmental dimension.

The proposed framework, as in Table (1), was designed based on the updated and revised Global Reporting Initiative environmental standards, which are considered among the best standards used at the global level in measuring sustainable development, especially the environmental dimension.

TABLE (1) The proposed framework for measuring the environmental dimension according to GRI standards

Environmental dimension			Requirements (*)		
Standards	Indicators for each standard	Specific requirements for each indicator	Total	It has been met	Not met
Materials	1. Materials by size / weight	The total weight or size of materials used in the production and packaging of the organization's primary products and services during the reporting period is: • The use of non-renewable resources. • Renewable materials are utilized..			
	2- Utilising recycled materials	The company's main products and services are recycled input material percentage.			

* Note: Requirements that are met are given a number (1), and requirements that are not met are given a number (0). Thus, the part is divided by the whole to find the ratio of each criterion of the environmental dimension.

	3- The products and packaging materials that have been recovered	Product and packaging material recovery by category.			
		Procedures used to collect information related to this requirement.			
	1- Energy consumption in the company	The company measures the total amount of nonrenewable fuel used in joules or multiples thereof, along with the types of fuel used.			
		The company's overall renewable fuel consumption, measured in joules or multiples thereof, is approximated, as are the specific fuel types used.			
		The estimate is provided in joules, watts, hours, or their multiples for total consumption of: • Electricity • Heating • Cooling • Steam			
		The statement provides an approximation joules, watts, hours, or their multiples for a cumulative amount of: • Electrical sold. • Heating sold. • Cooling sold. • Steam sold.			
		The company's overall energy usage is assessed in joules or its multiples.			
		Any particular rules, procedures, presumptions, and instruments for computation. .			
		The conversion factors' original source.			
	2- Energy consumption the company in extern	External energy usage of the company, measured in joules or their multiples.			
		Any special requirements, procedures, presumptions, or computational instruments.			
		The Source of employed conversion factors.			
	3- Energy density	The percentage of energy intensity of the company.			
		The ratio is computed using the company-specific measure that is selected.			
		The density ratio takes into account the following energy types: steam, fuel, electricity, heating, and cooling.			

		The proportion of energy utilized by companies, either internally, externally, or both.			
	4-Reduce energy consumption.	The decrease in energy consumption achieved through efforts to streamline and enhance energy efficiency is quantified in joules or multiples.			
		The kinds of energy that are reduced, include electricity, fuel, steam, heating, and cooling.			
		The foundation for determining the decreases in energy usage includes the reference year or starting point, and the reasoning behind its choice.			
		The standards, methodology, assumptions, and calculating tools employed.			
	5- Minimizing the energy requirements of products and services	The decrease in energy consumption for products and services provided during the specified time frame, measured in joules or their multiples.			
		The key components utilized to ascertain the decreases in energy usage encompass the reference year or initial level and the rationale for its selection.			
		Any standards, methodologies, assumptions, and calculation tools used			
Liquid waste and water	1- Water management as a shared resource	The report provides a thorough overview of the company's water management strategies, including its operational locations, water extraction methods, consumption trends, and disposal strategies, as well as any consequences that stem from, influence, or are directly connected to the company's operations, goods, or services through business partnerships.			
		The approach employed to ascertain water-related impacts entails specifying the extent and time range of assessments, as well as utilizing appropriate tools and methodologies.			
		Describe the process of managing water-related impacts and how stakeholders can collaborate to manage water as a shared resource. The company also establishes strategic collaborations with water-intensive suppliers and customers.			

		Describe the company's complete water and wastewater management strategy, which involves setting water-related goals and objectives. It explains how these goals align with general policies and water-stressed regions' unique realities.			
	2- Managing impacts related to water drainage	Describe any defined minimum requirements for the quality of liquid waste disposal, as well as the procedures utilised to determine them. • The standards are applied differently to facilities operating in locations without local drainage requirements. • Any standards or guidelines for water quality prepared internally. • Any sector-specific criteria are taken into account. • Whether the future watershed has been considered.			
	3- Water withdrawal	An approximation indicates that the total volume of water taken by all regions is in the millions of litres. We classify this quantity based on available sources of information, if any. • Seawater • Subsurface water; • Surface water; • Produced water; • Water from a third party			
		The total water withdrawals from water-stressed areas, estimated in million liters, and categorized, if applicable, using the following sources: Surface water ; • Subsurface water ; • Seawater ; • Extracted water ; • Water supplied by an outside source, with the total categorized based on the sources of surface and abstracted water withdrawals			
		Grouping the total water withdrawal, expressed in million liters, from all sources specified in Requirements 3-303a and 3-303b into the following categories: • Freshwater total dissolved solids (≤ 1000 mg/L) • Total dissolved solids (~1000			

		mg/L) in other water types			
		Any background information, such as standards, procedures, and presumptions, is required to comprehend how the data was gathered.			
	4- Water drainage	According to the following sources, if any, we estimate the total water discharge from all regions to be one million liters. • Water sources: underground, the surface, the sea, produced, and externally provided. Excess water is shared with other organizations.			
		The classification of the total water discharge from each source is based on the following categories: • Water fresh total dissolved solids (≤ 1000 mg/L). • Water with a total dissolved solid level below 1000 mg/L.			
		The total water discharge from areas suffering from water stress is estimated at a million liters and classified this total according to the following categories: • Total dissolved solids in freshwater ≤ 1000 mg/L • Total dissolved solids in other water < 1000 mg/L			
		The following are priority discharge-causing chemicals. • Identify priority compounds and apply official lists, international standards, or criteria. • Determine discharge limits for priority substances; • Track non-compliance cases.			
		Any background information, such as standards, methodologies, and assumptions, is required to completely comprehend the data collection process.			
		The total amount of water used in all areas that are water-scarce, expressed in million litres.			
		If it is determined that water storage has a significant impact on water, it can be measured in a million liters.			

	5- usage of water	It is essential to comprehend the context in which the data was collected, including the method of calculation, estimation, formation, or direct measurement, as well as any sector-specific factors that were employed. This includes any standards, methodologies, and assumptions that were employed.			
Biological diversity	1- Owned, leased, or managed operating sites within protected areas, as well as locations with high biodiversity value that are located outside or adjacent to them.	The information describes each operational site owned, leased, or managed in or near protected areas and outside protected areas with high biodiversity value. Geolocation: The company may own, lease, or manage subsurface lands. • Protected areas can be inside, adjacent to, or containing parts of them, or high-value biodiversity regions outside protected areas. • Operation type: office, manufacturing, production, or extraction. • Site size (square kilometres or other unit). • Biodiversity value is based on protected areas in terrestrial, freshwater, and marine ecosystems, as well as inclusion in protected lists (e.g., Ramsar Convention, IUCN, and state legislation).			
	2- Key effects on biodiversity of goods, services, and activities as well as	The following factors have significant direct and indirect impacts on biological diversity. • The building or using factories, mines, and transportation infrastructure • Invasive biological species, pests, and pathogens are introduced. • Pollution (the introduction of substances that do not occur naturally into habitats from point or non-point sources) • Conservation of biological species • Convert habitat to anything else. • Alterations in environmental processes beyond the normal scope of fluctuation, such as deviations in salinity or shifts in groundwater levels)			

	policies.	Discuss the significant positive or negative, direct or indirect impacts. Biological species affected • The extent of affected areas • Duration of effects • The effects may or may not be reversible.			
	3- Protected or rehabilitated habitats	Describe all protected or rehabilitated habitat areas' sizes and locations, as well as whether independent external specialists have certified the effectiveness of the rehabilitation measures.			
		Whether the company has formed relationships with external parties to safeguard or rehabilitate habitat areas other than those where the restoration or protection measures were supervised and implemented.			
		The situation of each region at the end of the reporting period determines its status.			
		Any established criteria, methodologies, and fundamental assumptions.			
	4- Operations impact habitats of biological species on the IUCN Red List and those on the National Conservation List.	The number of National Conservation List and IUCN Red List species whose habitats are affected by activities and at risk of extinction. • Highly endangered • Endangered • At risk • ordering on menacing • Slightly less concerning			
	Direct greenhouse	The total amount of greenhouse gases emitted directly (Scope 1), measured in metric tonnes of carbon dioxide equivalent.			
		The following gases are considered in the calculation: CO2, NF3, SF6, PFCS, N2O, and CH4.			
		Use metric tonnes of carbon dioxide equivalent to estimate biological carbon dioxide emissions. .			
		Emissions-collecting methods used capital share, financial, or operational control.			

Emissions	gas emissions (scope 1)	If applicable, include the following account base years: Justification for base-year selection; base-year emission data; explain any substantial changes in emissions requiring recalculation.			
		The source of emission factors and (GWP) rates, or global warming potential reference.			
		No standards, techniques, assumptions, or mathematical tools were utilised.			
	2- Indirect energy greenhouse gas emissions (Scope 2)	Determine the total quantity of site-related indirect energy greenhouse gas emissions (Scope 2) measured in metric tonnes of carbon dioxide equivalent.			
		Estimates are based on market total, indirect energy greenhouse gas emissions (Scope 2) in metric tonnes of carbon dioxide equivalent.			
		Gases included in the calculation are CO2, NF3, SF6, PFCS, N2O, and CH4.			
		Source or reference of emission factors and (GWP) rates.			
		Methods of gathering emissions data: ownership share, financial authority, or operational authority.			
		When selecting a base year, include the rationale, emissions, and any noteworthy changes that necessitated recalculations.			
		Any standards, methodologies, assumptions, or calculation tools used			
	3- Others (Scope 3) indirect greenhouse gas emissions	In metric tonnes of carbon dioxide equivalent, estimate additional indirect greenhouse gas emissions (Scope 3).			
		The calculation encompasses the following gases: CO2, NF3, SF6, PFCS, N2O, and CH4.			
		The calculation includes other indirect greenhouse gas emissions, categories, and activities (Scope 3).			
		Estimate biological carbon dioxide emissions in metric tonnes of carbon dioxide equivalent.			
		The source of emission factors and GWP, or global warming potential.			

		Specify the base year, including its justification, emissions, and any noteworthy changes that necessitated recalculations.			
	4- Greenhouse gas emissions intensity	The company's greenhouse gas emissions intensity ratio.			
		Company metrics are used to compute the ratio.			
		The density ratio calculates direct (Scope 1), indirect (Scope 2), and indirect greenhouse gas emissions.			
		Calculated gases include CO2, NF3, SF6, PFCS, N2O, and CH4.			
	5- Reducing greenhouse gas emissions	Greenhouse gas emissions in metric tonnes of CO2 equivalent have decreased as a result of emission-reduction measures.			
		The calculation encompasses the following gases: CO2, NF3, SF6, PFCS, N2O, and CH4.			
		The selected baseline or year is chosen, along with the reasoning behind its selection.			
		Reduced direct, indirect, and other indirect emissions (Scopes 1, 3, and 3).			
		Any employed methods, standards, or assumptions			
	6- Emissions of substances that deplete the ozone layer	Estimate production, import, and export quantities of substances that deplete the ozone layer in metric tonnes of trichlorofluoromethane equivalent.			
		The source for the emission factors used.			
		Materials included in the account.			
		Any standards, methodologies, or assumptions used.			
	7- Oxides of nitrogeSn, sulphur, and other critical air pollutants	For each of the following, estimate large emissions into the air in kilograms or multiples thereof: • Nitrogen oxides • Sulphur oxides، • POPs • Dangerous air pollutants • Potentially harmful molecules • Particles • As per regulations, other standard air emission categories			
		The source of employed			

		emission factors.			
		Any standards, methods, assumptions, or calculating tools utilized.			
Waste	1- Waste production and the significant repercussions linked to waste	Here is the company's current and projected impact description: • Inputs, actions, and out puts that have the capacity to produce these consequences. • Whether the organisation generates trash or its primary or advanced manufacturing phases result in waste, the repercussions are crucial.			
	2- Managing significant impacts related to waste	Explain how the company will reduce waste development during operations, early production, and advanced production phases of its value chain, including circular measures, and manage its major consequences.			
		The protocol outlines whether the third party is responsible for managing the waste generated by the company's operations based on contractual or legal obligations.			
		The methodologies employed to gather and oversee waste data.			
	3- Waste generated	Calculate the aggregate weight of the refuse generated in metric tonnes. The total is specified in accordance with the waste's composition.			
		Contextual information must be clarified in order to understand the data and its collection process.			
	4- Waste transferred from disposal	Calculate the aggregate weight of refuse that was transferred from disposal in metric tonnes. The total is specified in accordance with the waste's composition.			
		Determine the metric tonnes of hazardous waste transferred from the disposal site. The recovery operations offer a comprehensive breakdown of this sum: • Reuse preparation • Recycling • Additional recoveries.			

		Calculate the metric tonnes of non-hazardous garbage moved from the disposal site. The recovery methods below expand on this sum: • Prepare for reuse. • Reusing materials. • Recycling in addition			
		The recovery operations outlined in requirements 306-4b and 306-4t indicate the precise amount, measured in metric tonnes, of both hazardous and non-hazardous trash that is to be removed from disposal. • On-site • Off-site			
		Contextual information is needed to comprehend data acquisition.			
	5- Waste destined for disposal	Determine whether the total weight of waste scheduled for disposal in metric tonnes is specific to the waste's composition.			
		Calculate the aggregate mass of dangerous waste that is planned for disposal, measured in metric tonnes. The sum is itemised based on the following methods of disposal: • Incineration with energy retrieval; Incineration without energy retrieval; Landfilling waste; Other recoveries.			
		Calculate the aggregate mass of non-hazardous garbage that will be dumped in metric tonnes. This sum is itemised based on the following disposal procedures: • Combustion energy recuperation; • Combustion without energy recuperation ; • Disposal waste ; • Additional waste recovery methods			
		The quantity of both hazardous and non-hazardous trash that is prevented from being disposed of is specified in standards 306-5B and 306-5T and is measured in metric tonnes. • On-site • Off-site			
		The contextual information is			

			essential for comprehending the data and its collection process.			
The	The environmental assessment of suppliers	1- New suppliers who underwent auditing according to environmental standards	Performed an audit to ascertain the percentage of newly acquired suppliers who comply with environmental standards.			
		2- Supply chain's detrimental effects on the environment and the steps taken	The quantity of vendors whose environmental impact was evaluated.			
			The quantity of vendors recognised as having noteworthy and maybe detrimental effects on the environment . .			
			The supply chains existing and potential negative environmental implications were identified.			
			Modifications were made in accordance with the review's determination of the percentage of suppliers who had actual or prospective negative environmental consequences.			
			Assessment's findings and associated causes determined the percentage of suppliers whose ties ended due to significant actual or projected detrimental environmental impacts.			
	Total					
	The percentage of requirements that are met and those that are not met					

environmental standards of the Global Reporting Initiative (GRI 300) consist of seven standards and (31) indicators in addition to the requirements related to each indicator of the environmental standards, as these standards show the company's sustainable performance associated with the ecological dimension by the requirements for measuring sustainable development based on the GRI standards, as explained. In Figure (1) below.

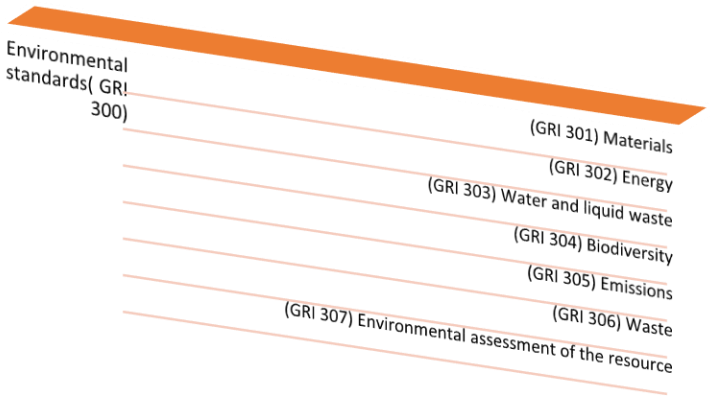

Figure (1) Global Reporting Initiative environmental standards

Each of the environmental standards will be clarified in Figure (1) above, which was based on the design of the proposed framework, and they are as follows:

Materials GRI 301: specifies reporting requirements related to materials and includes three indicators: materials used by weight or volume, materials used from recycled input materials, and recovered products and their packaging materials.

Energy GRI 302: It specifies the reporting requirements for energy and includes five indicators: energy consumption within the company, energy consumption outside the company, energy density, reducing energy consumption, and reducing the energy required for products and services.

Water and Liquid Waste GRI 303: Specifies reporting requirements for water and liquid waste and includes five indicators: dealings with water as a shared resource, managing impacts related to water discharge, water withdrawal, discharge, and water consumption.

Biodiversity GRI 304: Specifies reporting requirements for biodiversity and includes four indicators: operating sites owned, leased or managed or adjacent to protected areas and areas of high diversity value, significant impacts of activities, products and services on biodiversity, protected or restored habitats, total number Species included in the International Union for Conservation of Nature (IUCN) Red List and species on national conservation lists in areas affected by operations, classified according to their level of extinction risk.

Emissions GRI 305: specifies reporting requirements for emissions and includes seven indicators: direct greenhouse gas emissions (Scope 1), indirect energy greenhouse gas emissions (Scope 2), other indirect greenhouse gas emissions (Scope 3), and greenhouse gas emissions intensity. , Reducing greenhouse gas emissions, emissions of ozone depleting substances, nitrogen oxides, sulfur oxides and other essential air emissions.

Waste GRI 306: specifies the reporting requirements for waste and includes five indicators: waste generation and significant waste-related impacts, management of substantial waste-related impacts, generated waste, waste diverted from disposal, and waste destined for disposal.

Supplier Environmental Assessment GRI 307: specifies the reporting requirements for supplier environmental assessments and includes two indicators: new suppliers who have been audited using environmental standards, the actual and potential negative environmental impacts of the supply chain, and the actions taken.

4.2. Benefits of the proposed framework

This framework has benefits that help companies operating in various sectors to:

1- Measuring its environmental performance from carrying out its activities.

2- Assessing its environmental performance to know what percentage of sustainable development requirements have been met regarding the ecological dimension.

3- Disclosing its environmental performance through preparing sustainability reports to provide helpful information to all concerned parties.
4- It enhances the company's reputation and value because investors and other parties are interested in non-financial aspects such as environmental and social performance. Companies that provide information about their non-financial performance become the focus of attention and attraction to investors.
5- It helps companies comply with environmental laws and regulations because it provides the best practices and information related to environmental performance. It gained that preference building it based on GRI standards.
6- This framework is a basis for researchers, academics, and professionals interested in studying environmental performance and its impact on sustainable development because it helps them measure, evaluate, and disclose ecological performance.

5- Conclusion:

The basic idea behind sustainable development is to ensure the quality of life for all inhabitants of the planet, regardless of whether it is the current generation or the next. From this perspective, our study concentrated on the environmental dimension, which is deemed the most detrimental to both the environment and society. Therefore, the source of this damage is companies operating in various industrial or commercial sectors, which requires them to preserve the environment by reducing the damage and environmental pollution resulting from it. As a result, it must be more environmentally sustainable, which necessitates measuring its ecological performance to determine the extent of its contribution to sustainable development while also learning about the damages it causes. To contribute to solving this problem, this study came up with a proposal for a framework for measuring the environmental dimension of sustainable development by Global Reporting Initiative standards, which helps the company know how to measure and evaluate its performance and disclose it to the concerned parties to provide the best information about the company. In the face of fierce competition, this enhances the company's reputation and market value.

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