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SUSTAINABLE DEVELOPMENT (CONCEPTS, OBJECTIVES AND DIMENSIONS, INDICATORS OF MEASUREMENT)

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Abstract

This study seeks to provide a comprehensive analysis of the concept of sustainable development by exploring its objectives, dimensions and benchmarks. Initially, the historical evolution of the concept of development was reviewed, focusing on its essential role in improving quality of life and community service. In addition, different definitions and concepts of sustainable development have been analysed from a theoretical perspective, helping to clarify the nuances between different frameworks.

The study also included a practical application of theoretical frameworks for sustainable development through a specific case study, allowing a deeper understanding of how these frameworks are implemented on the ground. Through this approach, the close relationship between indicators, dimensions and challenges to sustainable development was highlighted, with a focus on how to overcome these challenges through optimal use of available resources.

Finally, the study aims to make new and useful contributions to sustainable development, providing practical recommendations to promote sustainable development in different societies, drawing on best practices and successful experiences to achieve environmental, social and economic sustainability.

Keywords: sustainable development, economic development, environmental development, social development.

This study aimed at exploring sustainable development in its concepts, objectives and dimensions, indicators of measurement, analysis of theoretical frameworks and their application to this particular context, Where a review of the historical development of development was presented, focusing on its role in the service of society, Definitions and concepts of sustainable development were also reviewed and analysed, and a practical case study of the application of those theoretical frameworks was presented, Later, as such, the research sought to shed light on the close relationship between indicators, dimensions and challenges and to make a useful contribution to understanding how to promote sustainable development through optimal utilization of the Earth's available resources.

First: the importance of research

The importance of research is to highlight the concepts of sustainable development, its dimensions, its measurement indicators and its direct impact on the ways in which it is achieved in society. The importance of the study is to explore its main profile, which contributes to understanding sustainable development in all its economic, social and environmental dimensions.

Second: Research objectives

The objective of the research is to highlight the importance of knowledge of sustainable development and ways to achieve sustainable growth, and to provide clarification of indicators and their alignment

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with the objectives as follows:

- 1- Understanding the emergence of targeted sustainable development.
- 2- Definition of sustainable development as provided by international conferences
- 3- Study indicators of measurement.
- 4- Understand the nature of its impact and why sustainability.

Third: The problem of research:

The problem of research revolves around the emergence of sustainable development and highlighting the global and international conferences for its founding. The analysis of the factors must be followed to overcome all the progress and sustainable development processes. In this spirit, the research attempts to answer the following questions:

- 1- What are sustainable development and what are its main indicators?
- 2- How do challenges affect sustainable development?

Fourth: Research hypothesis

The research's premise for sustainable development in its concept and indicators of achievement is positively linked to strong institutions, economic growth and social cohesion.

Fifth: Research curricula

The research used the descriptive analytical approach to provide a comprehensive study on the concept and genesis of sustainable development, drawing on a range of sources, annual reports and statistics.

Sixth: Research Plan

The research was divided into three demands. The first was entitled "The formation and concept of sustainable development". The second was entitled "Sustainable development goals and dimensions". The second was entitled "Sustainable development goals and dimensions". The conference was held to establish and define sustainable development and its economic, social and environmental dimensions.

First requirement:

formation and concept of sustainable development

The emergence of sustainable development was not only a leap in the vacuum, but reflected a journey of human development of a civilized and developmental nature, a journey that manifests itself as an intellectual appreciation of societies' attempts to improve their choices and assume their responsibilities. Sustainable development evolved with progress in the fields of economics, politics, society and science. This idea continued to evolve over long periods of time, as it had the opportunity to build strong foundations based on ideas based on human development.

At present, interest in achieving the sustainable development goals has emerged in preparation for a long dialogue, reflecting a historic process based on ideas that have spanned thousands of years and reflected in a review of some of the sources that have examined the emergence of sustainable development.

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First: The emergence of sustainable development:

- 1- Sustainable development has evolved as a result of long developments in the development context, with the development process experiencing multiple stages at the national and global levels. Between the end of the Second World War and the mid-1960s, the focus on development was usually understood as economic growth, since the concept of development was linked to higher national output and average per capita income, with a focus on high economic growth rates.(1)
- 2- The history of the idea of development dates back to 1960, when the idea of development was presented at the Rome meeting that revealed the dangers of demographic and economic growth and resource depletion, and was founded "The Club of Rome", in 1968, called for research on scientific development to determine the limits of growth in developed countries, and some researchers promised that the first real appearance of the idea of sustainable development was at the founding of the Club of Rome, which brought together scientists and economic thinkers from around the world and called for attention to the environment.(2)
- 3- In the 1970s, the rates of economic growth and consumption in capitalist States reached levels threatening energy sources and natural resources, and in this context, a book was written (growth limits) in 1972, which analysed the relationship between human behaviour and nature, with the authors' study of five rapidly changing factors showing that persistent current growth rates could result in nature failing to meet human needs at the end of the twentieth century.(3)
- 4- The idea of sustainable development emerged at the beginning of the 1980s, where it received renewed scientific and intellectual attention, The 1981 World Conservation Union report and the 1987 Conservation Strategy contributed to defining sustainable development as "the enduring quest to develop the quality of human life taking into account the capabilities and potential of the ecosystem that embraces life". s economic, social and environmental needs, defined as "development that meets the needs of the present without compromising the ability of the environment to respond to the needs of the present and the future".(4)

Second: Concept and definitions of sustainable development:

Sustainable development is the balancing of environmental, social and economic systems according to the concepts interpreted by them. Sustainable development is interpreted as contributing to the highest growth rates of the systems without the adverse effects of development on other systems. It can be considered "the constant pursuit of the quality of human life, taking into account the capabilities and

(1) Haider Jassim, Impact of the Principles of Comprehensive Quality Management in Achieving Sustainable Development Analytical Survey Study at Karbala University, Master's Thesis, Administrative Technical College, Middle Technical University, Iraq, 2022, p. 49.

⁽²⁾ Mustafa Ibrahim al-Samurai, Role of Local Administration in Achieving Sustainable Development Case Study in Salahuddin Governorate, High Diploma thesis, Faculty of Administration and Economics, Baghdad University, 2020, p. 39.

⁽³⁾ Mohammed Abdelaziz Rabi, Sustainable Community Development, Arabic Edition, Yazouri Scientific Publishing and Printing, Amman, Jordan, 2015, pp. 219.

⁽⁴⁾ World Commission on Environment and Development, Our Common Future, Translation of Mohammed Kamel Arif, Kuwait, 1989, p. 83.

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potential of the ecosystem that embraces life".(5)

The concept of sustainable development has been circulated in different circles, but its application and adoption differed from one medium to another, taking more than one concept according to the medium it uses. However, all views have been expressed to consolidate these concepts into a single concept: "Sustainable development is a renewed process that is not only short-term but long-term, but also not human-friendly economic life requirements such as economic well-being and economic growth rates, but also better social changes such as health care, education, adequate housing for individuals and respect for their rights to decision-making and implementation as well as environmental requirements".(6)

Second requirement:

sustainable development goals and dimensions

The goals and dimensions of sustainable development are integrated and indivisible, universal in nature and comprehensive in their application, Taking into account each country's different living conditions, capacities and level of development and respecting national policies and priorities and therefore the link between sustainable development and other ongoing processes related to it in the economic, social, environmental, technological and cultural fields must be taken into account, This message touched on goals and dimensions in recognition of each country's specific challenges in its pursuit of sustainable development. Agenda for Action ", those goals and dimensions galvanized work over the next seven years in areas of fundamental importance to humanity and the planet.

There are a series of international conferences aimed at talking about sustainable development issues at the economic, environmental and social levels. The sequence reflecting only the major conferences is addressed in this requirement. Other international conferences and events at different levels discuss sustainable development issues. The chronology of the most important conferences on sustainable development is as follows:

1- United Nations Conference on the Human Environment (1972): The Conference, held in Stockholm, Sweden, was described as the first major international conference on environment and sustainable development, with its provisions on the human environment. It produced a document entitled "Declaration of the Conference on the Human Environment", which contained twenty-six principles, all relating to environmental conservation and sustainable development, the most important of which: (7)

- A- Human right to a healthy life and a clean environment.
- B- Recognize that it is man's responsibility to protect and improve the environment.
- C- Stimulate the use of natural resources with caution and effectiveness.
- D- Encourage international cooperation to address various environmental challenges.

⁽⁵⁾ Ahmad Akla al-Qa 'la and Bahajat Radi, University and Sustainable Development in the Light of the Vision of the Kingdom 2030, Arab Knowledge Office, Cairo, 2020, p. 62.

⁽⁶⁾ Rabab Abdul Amir Abdul Reza, Population Growth and Its Impact on Some Indicators of Sustainable Development in Iraq for the Period 1990-2018, Master's Thesis, Faculty of Management and Economics, Department of Economics, Qadisiyah University, 2020, P.35.

⁽⁷⁾ United Nations Report on the Human Environment, Stockholm, 5-19 June 1972.

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2- The Earth Summit in Rio de Janeiro in 1992:

the Summit's objective was to identify strategies for balancing economic and social development and environmental conservation. The Summit's main objectives were to try to achieve sustainable development through attention to several environmental, economic and social issues, including:(8)

- A- Preparation of a road map for sustainable development.
- B- Lay the foundations for environmental regulation.
- C- Focus on the problem of climate change.
- D- Promoting biodiversity.

3-Earth Summit (2012):

The Summit was held in Rio de Janeiro in 2012, on the occasion of the twentieth anniversary of the Earth Summit in 1992, and was not aimed at setting new goals but rather at reaffirming States' commitment to sustainable development goals and assessing progress towards the implementation of the goals set earlier.(9)

4- The resolution adopted by the General Assembly of the United Nations on 25 September 2015 was aimed at transforming our world into a prosperous one. It also aimed to promote world peace and create a larger atmosphere of freedom In order to continue the Millennium Development Goals (MDGs), the plan was extended to seventeen goals announced at the same conference. Although the General Assembly stated that the Goals were integrated and indivisible, But it was reissued for reasons that I mentioned as technical on December 24 that same year, Here we will touch on the objectives fully and as they came from the General Assembly.(10)

- A- Eradication of poverty in all its forms everywhere
- B- Eradicating hunger, providing food security, improving nutrition and promoting sustainable agriculture
- C- Ensure that everyone enjoys healthy lifestyles and well-being at all ages
- D- Ensuring equitable and inclusive quality education and promoting lifelong learning opportunities for all
- E- Achieving gender equality and empowering all women and girls
- F- Ensuring the availability and sustainable management of water and sanitation for all
- G- Ensuring universal and affordable access to reliable and sustainable modern energy services
- H- Promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

⁽⁸⁾ United Nations Conference on Environment and Development, Rio de Janeiro, Brazil, 3-14 June 1992, website

https://www.un.org/ar/conferences/environment/rio1992

⁽⁹⁾ World Health Organization, United Nations Conference on Sustainable Development (Rio + 20), one hundred thirtieth session, item (6-26), 19 January 2012.

⁽¹⁰⁾ Report of the United Nations General Assembly, seventieth session, agenda items (15 and 116), 21 October 2015, p. 1/49, p. 18/49.

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- I- Building resilient infrastructure, stimulating inclusive sustainable industrialization and encouraging innovation
- J- Reducing inequality within and between countries
- k- Making cities and human settlements inclusive, safe, resilient and sustainable
- 1- Ensuring sustainable consumption and production patterns
- M- Urgent action to address climate change and its impacts
- N- Conservation and sustainable use of the oceans, sea and marine resources for sustainable developm
- O- Protecting and restoring land-based ecosystems and promoting their sustainable use, sustainable forest management, combating desertification, halting and reversing land degradation and halting the loss of biodiversity
- p- Promoting peaceful and inclusive societies for sustainable development, universal access to justice and effective, accountable and inclusive institutions at all levels
- Q- Strengthening and revitalizing the means of implementation of the Global Partnership for Sustainable Development

Dimensions of sustainable development:

Sustainable development has multiple dimensions aimed at creating a sustainable balance between the needs of the current and future generations. And these dimensions vary between economies through which economic growth must be achieved that is sustainable without harming the environment, and social through which to ensure the improvement of the quality of life of the individual and society and environmental focus on biodiversity conservation and environmental quality and sustainability, The dimensions of sustainable development also include social justice and a balance between societal classes to ensure an equitable distribution of opportunities and resources as well as institutional, cultural and technological aspects Sustainable development is therefore a major challenge requiring a sustainable balance between the economy, the environment, society, culture and technology and reflects the quest for a future in which development is ready to meet the needs of today's generations. (11)

Previous studies have shown that sustainable development is only a number of factors that must be mutually reinforcing; In order to achieve its intended purpose, we have touched here on the dimensions of sustainable development:

1-Economic dimension:

economic dimensions of sustainable development are clearly reflected in the impact of domestic economic policies as well as in economic relations among States, and the impact of these dimensions on sustainable development is reflected in their impact on global trade, macroeconomic policies and development economic dimension ", focusing on its current and future impacts on the environment, as

^{(&}lt;sup>11</sup>) Saad Amran, Environmental Education and Sustainable Development, Dar al-Thakr University, Egypt, Alexandria, pp. 74-75.

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well as requesting a review of all aspects of economic activity(12), the economic dimensions include(13):

- A- Stop the waste of natural resources.
- B- Achieving poverty eradication.
- C- Equity and equal distribution of income, both in a developed and developing country, contribute to reducing disparities between income levels.

2-Environmental dimension:

The environmental dimension has been incorporated into the new development paradigm that emerged after the Second World War and the development transformations that followed. This dimension has been linked to the preservation and strengthening of resources' physical and environmental foundations, focusing primarily on natural resource management.(14)

Sustainable development has required a balanced integration of economic, social and environmental dimensions. The 2030 Agenda for Sustainable Development emphasizes a global commitment to sustainability through its dimensions, although there is no legal commitment to the Plan's implementation, the United Nations Economic and Social Commission has established four criteria for promoting integration policy:(15)

- A- Basic conditions for social justice and ecological sustainability must be policy rather than marginal objectives.
- B- There should be a shift to a long-term policy horizon instead of a short-term one.
- C- Proposes replacing the focus on GDP as a measure of progress using measures covering the three dimensions of sustainable development.
- D- Policy should recognize that the planet's resources are limited, so technology cannot always address all constraints.

3-Social dimension:

Sustainable development has been characterized by a human third dimension in particular, making growth a means of social cohesion and promoting development in political decision-making, since such

⁽¹²⁾ Hamida Hassan Swadi Al-Jabouri, Impact of depleted resource returns in sustainable development International experiences with Iraq's own experiences, Master's thesis, Faculty of Administration and Economics, Karbala University, 2021, p. 38

^{(&}lt;sup>13</sup>) Shima Hamid Aboud Alawani, Impact of Foreign Trade Liberalization on Some Indicators of Iraq's Sustainable Development for the Period (2004-2018), Master's Thesis, Faculty of Administration and Economics, University of Fallujah, 2020, pp. 50-51.

^{(&}lt;sup>14</sup>) Reda Deeb-Suleiman Muhanna, Planning for Sustainable Development, Damascus University Journal of Engineering Sciences, No. 25, No. 1, 2009, p. 490.

⁽¹⁵⁾ Nur Zia Abd al-Razak, Role of Women's Economic Empowerment in Promoting Sustainable Development Selected Experiences with Reference to Iraq, Master's Thesis, Faculty of Administration and Economics, Karbala University, 2020, p. 29

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decisions must be a choice of intergenerational equity, in addition to equity among nations. $(^{16})$. This dimension includes the following: $(^{17})$

A- Stabilize demographic growth.

B- The importance of population distribution.

C- Full use of human resources.

D- Health and education.

E- The importance of women's role.

Institutional dimension: Moving towards sustainability requires the development of institutions with high organizational and decision-making capacity In the face of traditional institutions, the State has a great responsibility to address sustainability challenges. and the coordination of the three dimensions above requires effective institutions that contribute to such coordination for sustainability, The institutional dimension of government units must also play an important role. s capacity to form strong organizational structures that play their role in providing services to society with a view to achieving sustainability, It also highlights the important role of non-governmental and civil society units in this context.(18)

Third Requirement:

Indicators for measuring sustainable development and its challenges

Sustainable development indicators have been identified as a key tool for assessing States' progress in achieving sustainable development goals, centred on measurable and comparable criteria with other States' performance, highlighting several aspects, including the environmental dimension, social equality and many aspects of daily life.

In the context of the environment, the indicators assess States' environmental impact and efforts to preserve land and the environment in general. In addition, the indicators look at aspects of health, education, production, consumption, housing, safety, population and natural resources, and also focus on social equity and assessing the balance between different social groups. In the area of peace and justice, the indicators provide a comprehensive view of institutions' effectiveness in achieving stability and promoting justice in society.

I. Indicators for measuring sustainable development:

The main challenge for sustainable development has been how to identify indicators capable of measuring and evaluating progress towards the goal of an effective and reliable understanding of

(¹⁶) Ali Saad Amran, Environmental Education and Sustainable Development, former source, pp. 75-76.

⁽¹⁷⁾ Muntaz Fadil Sa 'ad al-Batat, Environmental Dimension in Sustainable Development in Selected Arab States, Doctoral Thesis, Faculty of Management and Economics, Basra University, 2006, p. 23.

⁽¹⁸⁾ Sabrin Karim Balasim al-Hajami, proposed model for achieving sustainability dimensions and its role in evaluating the performance of economic units in Iraq, doctoral thesis, Faculty of Management and Economics, University of Mustrasiriyah, 2020, 23.

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development, defined as a quantitative tool that provides a brief overview of a particular situation or situation, but how can good indicators be developed? What criteria should be taken into account to ensure the indicator's quality?

1-Stages of preparation of good indicators:

indicators for measuring sustainable development have passed through a series of phases, including:(19) A- Identify the stakeholders involved in the process of sustainable development in two ways, public, including government and private bodies, where the relevant entities in the private sector are involved. B- Identify the goals it seeks to achieve within the framework of national priorities.

- C- Develop an effective mechanism to ensure coordination and complementarity between these actors' roles.
- D- Identify the indicators used in the State or territory, as well as assess their current situation.
- E- Clarify the compatibility of these indicators with the United Nations' list for measuring sustainable development.
- F- Assess the availability of data on these indicators, as well as the possibility of collecting information not currently available.
- G- Data origin and verification of continued availability.
- H- Ability to easily access data and assess the realism of this possibility.

2- Benchmarks and characteristics of good indicators:

Most working groups have focused on upgrading benchmarks that can qualify the environment on factors that are effective indicators. The following list of benchmarks identifies how they can develop indicators and maximize compatibility to meet specific institutional needs:(20)

- A- Be a mirror of the essence of society's health both economically, socially, and environmentally over future generations.
- N- Be clear and easily understandable and acceptable by society.
- C- Be clear, easy to understand, measurable and predictable.
- D- Be of standard standards and carry achievable threshold value.
- E- Clarify the extent to which variables can be converted and controlled.
- F- The methods used to prepare any indicator must be clearly articulated, carefully ensured, socially and scientifically acceptable and easy to reproduce.
- G-Time sensitivity means that the indicator shows typical trends when used periodically.

(19) Saud Matar al-Shammari, Indicators of Sustainable Development (Challenges and Solutions),

power point, Ministry of Development Planning and Statistics, GCC Statistical Centre, Qatar, pp. 3-8. (20) Treki Abdel Rauf, Status of Renewed Obedience and its Role in Sustainable Development - The Case of Algeria, Master's Thesis, Faculty of Economics, Commercial Sciences and Management Sciences, University of Algiers, 2014, p. 29.

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Basic indicators of sustainable development can be summarized as follows:

- 1- Economic indicators: These indicators referred to a set of measurements that measure States' or societies' economic performance in a manner that takes into account environmental and social factors as well as traditional economic aspects, including:(21)
- A- GDP output: GDP can be analysed to measure economic growth and its impact on natural resources.
- B- Sustainable consumption indicators: includes measurements of resource consumption such as renewable energy consumption and resource efficiency.
- C- Innovation indicators: Measuring society's ability to develop new technologies and solutions that contribute to sustainable development.
- D- Green employment indicators: determining the impact of economic activity on the environment and how to improve employment in environmental sectors.
- E- Fair trade indicators: assess the environmental and social impact of international trade and ensure the balance of benefits.
- F- Indicators of poverty and equitable distribution of income: To ensure that sustainable development is achieved comprehensively and to improve the standard of living for all.
- G- Financial sustainability indicators: estimate the financial sustainability of long-term economic growth.

2- Social indicators:

Social indicators of sustainable development are diverse and include a set of measurements that reflect the social dimensions of development and its impact on society, including:(22)

- A- Poverty rate and equitable income distribution: highlights economic balance and opportunities for all in society.
- B- Education indicators: Includes the ratio of access to education, literacy rates, educational attainment rates and girls' participation in education.
- C- Public health: includes indicators such as infant mortality, birth rate and availability of basic health care.
- D- Social justice indicators: assessment of tolerance, diversity and equal rights and opportunities.
- E- Indicators of social life: assessment of the level of social well-being and social interactions in society.
- F- Civic participation and political representation: assessing citizens' effectiveness in decision-making and participation in the democratic process.
- G- Human rights and social justice: reflects the assessment of respect for human rights and the achievement of justice in society.
- H- Community peace: addresses the level of stability and social peace in society.

These indicators are part of an overview aimed at achieving sustainable development in a balanced manner in developed and developing societies.

⁽²¹⁾ Hamad Raqa al-Rajah Radi, University and Sustainable Development in the light of Vision 2030, a previous source, p. 84.

^{(&}lt;sup>22</sup>) Shima Hamid Aboud Alawani, Impact of Foreign Trade Liberalization on Some Indicators of Iraq's Sustainable Development for the Period (2004-2018), former source, p. 102.

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3- Environmental indicators:

environmental indicators reflect the health and sustainability of the environment and measure the impact of human activities on ecosystems, among them $\textcircled{3}^{23}$)

- A- Greenhouse gas emissions: Carbon emissions include carbon dioxide (CO2), nitrogen dioxide (NO2), methane (CH4), etc. These indicators reflect the extent to which human activities affect heat retention and climate change.
- B- Conservation of biodiversity: related to the protection of different flora, fauna and ecological species.
- C- Natural resource consumption: Includes quantities of water, energy and raw materials consumption.
- D- Air quality: Assessment of levels of air pollution and emissions of air pollutants.
- E- Waste management: Includes household and industrial waste quantities and recycling efforts.
- F- State of forests: forest coverage and deforestation rates.
- G- Water quality: assessment of surface and groundwater condition and pollution levels.
- H- Land and desert erosion: reflects the impact of changes in land use and desertification on the environment.
- I- Sustainable fishing: assessment of the sustainability of fishing practices and the state of marine resources.
- J- Marine environment: assessment of the state of the marine environment and levels of marine pollution.

Environmental indicators depend on a wide range of factors that vary across geographical, cultural and economic contexts.

4- Political indicators:

political indicators of sustainable development have been identified as signs or benchmarks used to assess political aspects affecting sustainable development. The use of these indicators aims to measure the efficiency of political systems in supporting economic growth and balancing society's current and future needs. Political indicators include a wide range of elements focusing on different aspects of the political system, such as:(24)

- A- Democracy: assessing the effectiveness of the democratic system and citizens' participation in decision-making and the election of their representatives.
- B- Human rights: measuring respect for human rights and fundamental freedoms, such as freedom of expression and assembly.
- C- Political stability: determining the country's degree of stability and the absence of internal conflicts hindering development.
- D- Anti-corruption: Measuring anti-corruption efforts and enhancing integrity in government performance.
- E- Legislation and law: the effectiveness of legal systems and legislation in achieving justice and

⁽²³⁾ Treki Abdel Rauf, The Status of Renewed Obedience and its Role in Achieving Sustainable Development - The Case of Algeria -, Former Source, pp. 34-35.

^{(&}lt;sup>24</sup>) Ghazal, Libraries and Information Centres in the Dimension of Sustainable Development 2030, facelibrary publications, Algeria, 2019, pp. 24-25.

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guaranteeing citizens' rights.

F- International cooperation: assessment of cooperation and interaction with the international community and international organizations.

There are evidence to measure the degree of political development that researchers have sought; With a view to establishing a multidimensional measurement of the political performance of governance systems, several key aspects are adopted:(25)

- 1- To what extent does the regime reflect the concept of democracy and the way power is transferred?
- 2- Steady political status.
- 3- The Authority's willingness to accept criticism, especially from the media.
- 4- The diversity of party affiliation.

Second: Sustainable development challenges:

These challenges manifest themselves in the face of climate changes and depletion of natural resources, rising poverty and inequality, population growth challenges, loss of biodiversity, and economic and technological challenges, as part of governance complexities, economic transformations and social tensions that require international interaction and joint effort.

To inform the future path towards achieving the sustainable development goals, we will review in this context several key challenges facing the international community's pursuit of development in its holistic sense, focusing in our points on environmental, economic and social dimensions, highlighting the impact of these challenges on development pathways and effective indicators in achieving sustainable development.

1- Technological challenges:

Sustainable development techniques are an important shift in how technology is used to achieve development that conserves natural resources, reduces adverse environmental impacts, and important challenges around sustainable development technology:(²⁶)

- A- Climate change and technology: using technology to address environmental challenges, such as developing renewable energy sources and improving consumption efficiency.
- B- Innovation, research and development: supporting technological innovation and scientific research to find sustainable solutions in areas such as agriculture and industry.
- C- Information and communications technology (INFOTEC): leveraging ICT progress to improve resource management and enhance communication and knowledge transfer.
- D- Artificial intelligence and data analysis: employing modern technology to examine data and make better decisions in the context of sustainable development.

⁽²⁵⁾ Zeid Adnan Mohsen Al-Akili, Arab political development between political reform and advocacy for external change, former source, p. 61.

⁽²⁶⁾ Ali Abdul Fattoni, Challenges of Modern Technology, article published in the International Information Center, website,

https://imhussain.com/arabic/section29/6719

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2- Economic challenges:

Economic challenges in sustainable development relate to a range of issues that directly or indirectly affect the economy and need to be addressed comprehensively and sustainably, including:(27)

A- Economic resources management: Improved management of financial and economic resources to promote financial sustainability and balance growth and resource conservation.

B- Inclusive economic development: promoting inclusive development across different economic sectors and providing sustainable employment opportunities.

C- Fair and sustainable trade: strengthening trade systems that support environmental and social principles, and balancing economic effectiveness and social justice.

D- Innovation in business models: Promoting innovation in business models to stimulate a circular economy and sustainable development.

3- Social challenges:

Social challenges in the context of sustainable development refer to issues and problems that affect society's social aspects and require sustainable measures to overcome them, including:(28)

A- Poverty and inequality: combating poverty and reducing income gaps and opportunities for social balance.

B- Education and empowerment: promoting education and empowering the individual to enhance his or her participation in development processes.

C- Health and well-being: improving health care and welfare services to ensure a healthy and dignified life for society.

D- Cultural and community diversity: preserving cultural diversity and promoting positive social interaction.

4- Political challenges:

Political challenges in the context of sustainable development point to policy issues and factors that can affect sustainable development efforts, including:(29)

A- International cooperation: strengthening international cooperation to address cross-border challenges and achieve sustainable development.

B- Government governance: promoting effective and transparent government governance to achieve sustainable development goals.

C- PPPs: Strengthening public-private cooperation to ensure effective participation in sustainable development.

(²⁷) Assad Faris Gharib, Analysis of the Interrelationship between Knowledge Economy and Sustainable Development: - Experiences of Selected Countries with Special Reference to Iraq for 2000-2016, Master's Thesis, Faculty of Business Economics, Nahrin University, 2019, pp. 33-35.

(²⁸) Fathiya El-Taoul, Environmental Education and its Role in Sustainable Development, Doctoral thesis, Faculty of Humanities and Social Sciences, University of Mohamed Khedir-Biskara, Algeria, 2013, p. 106-107.

(²⁹) Nabila Abdel Fattah Qashta, Sustainable Development (Goals and Challenges), Faculty of Law, University of Menoufia, Journal of Law and Political Science, vol. IX, No. 1, 2023, p. 9-10.

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D- Promoting political innovation: Promoting innovation in policies and legislation to support sustainable development.

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