

RESEARCH ARTICLE

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The Role of Food Security in Achieving Sustainable Development

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Received : 21/04/2025 ; Accepted : 26/10/2025 ; Published : 26/11/2025

ABSTRACT:

Food security constitutes a fundamental pillar of sustainable development, due to its close connection with human rights, social stability, and economic growth. It ensures the availability of adequate and safe food for all individuals, thereby guaranteeing a healthy and dignified life, as stipulated in international conventions.

States are obligated to take the necessary measures to ensure the production and equitable distribution of food, and to protect vulnerable groups from hunger and malnutrition. Sustainable development is based on balancing the needs of the present with the rights of future generations, through development policies that take into account environmental, social, and economic dimensions. The United Nations 2030 Agenda has given great importance to food security as a central element in achieving its objectives, foremost among them the eradication of hunger and the promotion of sustainable agriculture.

This relationship requires the establishment of an integrated legal framework that includes the protection of natural resources, support for sustainable agricultural policies, and the addressing of environmental and social challenges.

Keywords: Food security, sustainable development, human rights, rights of future generations, sustainable agriculture.

INTRODUCTION:

Food security is considered one of the major challenges facing the world in light of rapid environmental and economic changes. It focuses on ensuring individuals' access to sufficient and safe food as a fundamental human right.

Accordingly, interest has increased in recent years in several important aspects of human life, such as economic and living necessities, which requires serious efforts to advance the state toward progress and prosperity, as well as sustainable development. The latter is achieved through the combined efforts of individuals and society, across its various institutions, to

enhance different capacities and aspects of human, material, and moral activity in order to achieve well-being.

Food security constitutes one of the fundamental pillars of the Sustainable Development Goals, due to its direct impact on human health, well-being, and social stability. Therefore, addressing food-related issues requires the adoption of integrated policies and strategies that take into account environmental, economic, and social dimensions to ensure a more secure and just future.

This necessitates answering the following research question:

To what extent can food security contribute to achieving sustainable development?

In this study, we will rely on the descriptive-analytical method, as it is the most appropriate approach for explaining the details of the problem, the means of addressing it, and the mechanisms for preserving it, which will be clearly reflected in the sections of the research. Given the nature of the topic and the objectives associated with it, this research has been divided into two sections:

In the first section, we address the concept of food security and sustainable development, while in the second section, we address the mechanisms and means of confronting the challenges of food security.

FIRST SECTION: THE CONCEPT OF FOOD SECURITY AND SUSTAINABLE DEVELOPMENT

With the escalation of global crises related to food, climate, and resources, it has become necessary to address the issues of food security and sustainable development as two fundamental pillars for achieving stability and progress in societies. Food security is not limited to the mere availability of food; rather, it also includes the ability to access it, its quality, and its stability. This requires effective production and consumption systems that are environmentally friendly. In contrast, sustainable development seeks to achieve a balance between economic growth, the protection of natural resources, and the realization of social justice, which makes the relationship between the two concepts close and interrelated.

First: The Concept of Food Security

In light of rapid global changes, food security has become one of the most prominent issues raising concern among societies and states alike, due to its direct connection to social, health, and economic stability. Access to sufficient, safe, and nutritious food is considered one of the fundamental rights of every human being; however, this right has become threatened by multiple factors such as climate change, conflicts, rising prices, and the scarcity of natural resources. Hence, the need has emerged for a precise understanding of the concept of food security as a core element in achieving sustainable development and ensuring the well-being of individuals and societies.

A- Definition of Food Security

The term “food security” is considered a relatively modern concept that was first used at the beginning of the 1970s, specifically in 1972, when the problem and crisis of global food

security expanded and developed significantly at the international level. This term includes more than one meaning: “providing the food necessary for human life, achieving self-sufficiency in food, and the ability of a country to provide a stock of basic food commodities.”¹

Food security is the ability of a society to secure its consumption needs of basic commodities through local production or by importing them from abroad. It differs from the concept of achieving self-sufficiency, which often means producing all basic food needs locally.²

The Algerian legislator also defined food security in accordance with Law No. 08-16 relating to agricultural orientation, in Article 03, paragraph one, as follows: “Food security is the easy and regular access of every person to safe and sufficient food that allows them to enjoy an active life.”³

The Food and Agriculture Organization (FAO) considers that food security exists “when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences, and enables them to live an active and healthy life.”⁴

Based on the foregoing, it can be said that food security means the easy and regular access of every person to safe, sufficient, and healthy food, without any obstacle or barrier and under any circumstance, allowing them to enjoy good health and an active life.

B- Dimensions of Food Security

Food security includes the following four main dimensions:

1- The Temporal Dimension

The temporal dimension of food security refers to the extent of food availability and stability in the short and long term. It includes the ability to meet current and future food needs, while taking into account potential changes in conditions.

2- The Economic Dimension

The economic element has a direct relationship with food security, as it is embodied in agricultural production in both quantitative and qualitative terms, in accordance with human health requirements. However, the world of land and agriculture is closely linked to many other fields that influence the course of quantitative and qualitative agricultural productivity.

The connection of land and agriculture with biology, animal science, veterinary science, and others requires reliance on these sciences as they contribute to the development of organic agriculture. Accordingly, these diverse processes require significant funding, reflecting the priority of land and agriculture at the top of the state's scale of interests.⁵

Economically, food security is a process in which several elements intersect, including capital, labor or human resources, and finally agricultural land in terms of its area and quality.

3- The Social Dimension

Poverty, social injustice, and low levels of education are among the most prominent causes of hunger and malnutrition and the main obstacles to achieving food security⁶. Food security is also achieved by stopping migration from rural areas to cities through the establishment of programs that encourage rural development, revive the agricultural economy, and improve the living standards of rural populations. Rural areas constitute one of the fundamental pillars of agricultural development and, consequently, the supply of local markets with food products.⁷

4- The Political Dimension

It has become imperative for all governments, regardless of their political systems, to adopt strategies and develop plans to ensure the availability of food, particularly basic consumer goods, in order to guarantee healthy and complete nutrition for their populations. Today, food—especially basic consumer goods—has become a pressure tool used by some countries that produce a surplus beyond their local needs to ensure the dependency of other countries that have failed to produce and provide sufficient food to meet the needs of their populations, known as low-income food-deficit countries. Therefore, a state's ability to achieve its food security is a fundamental condition for its continuity and for maintaining its security and political stability.⁸

Second: The Concept of Sustainable Development

In light of the rapid changes at environmental, economic, and social levels, the need has emerged for a new development model that achieves a balance between the requirements of progress and the preservation of natural resources. From this perspective, the concept of sustainable development arose as a response to these challenges, expressing a global orientation aimed at achieving growth without harming the environment or undermining the rights of future generations. This concept is considered a cornerstone of modern policies seeking to build a more sustainable, inclusive, and just future.

A- Definition of Sustainable Development and Its Characteristics:

With the continuous increase in environmental, economic, and social challenges witnessed by the world today, it has become necessary to reconsider traditional development patterns that deplete resources and threaten the future of coming generations. From this standpoint, the concept of sustainable development emerged as a strategic option that balances the requirements of growth, environmental preservation, and the achievement of social justice. Accordingly, we will address the definition of sustainable development and highlight its main characteristics that make it a fundamental pillar of any long-term development plan.

1- Sustainable Development:

Development is a comprehensive economic, social, and political process aimed at the continuous improvement of the well-being of peoples. It is an integrated process, as contributing to the creation of favorable conditions for the development of a large part of humanity is an important matter.

The term “sustainable development” appeared in the early mid-1980s, and it was also highlighted during the 1972 Stockholm Conference on the Human Environment, which

emphasized the necessity of incorporating environmental considerations into development policies and the need to use natural resources in a way that ensures their preservation and continuity. However, it did not emerge at the global level until 1980, when the United Nations Environment Programme, the International Union for Conservation of Nature, and the World Wide Fund for Nature presented the International Conservation Strategy, emphasizing the importance of integrating environmental concerns into the development process ⁹.

From a social perspective, sustainable development means striving for population growth stability and raising the level of health and educational services, especially in rural areas. From an environmental perspective, it means protecting natural resources and ensuring the optimal use of agricultural land and water resources.

From a technological perspective, it involves transferring society toward an era of clean industries that use environmentally friendly technologies and produce minimal amounts of polluting and heat-trapping gases that are harmful to the ozone layer ¹⁰.

2- Characteristics of Sustainable Development:

- Sustainable development differs from conventional development in that it involves deeper intervention and greater complexity, particularly in the natural and social fields.
- Sustainable development primarily aims to meet the needs of the poor, and therefore seeks to reduce poverty.
- Sustainable development is keen on developing cultural aspects while preserving the civilization of each society.
- The elements of sustainable development cannot be separated, due to the strong interconnection between its quantitative and qualitative dimensions and components.

B- Dimensions of Sustainable Development

Sustainable development has various dimensions, as defined by the World Summit on Sustainable Development held in Johannesburg in 2002, namely: the economic dimension, the social dimension, and the environmental dimension.

The content of these dimensions can be addressed as follows:

1- The Economic Dimension:

For advanced industrial countries, sustainable development means achieving a deep and continuous reduction in energy consumption and the use of natural resources, implementing radical transformations in prevailing lifestyles, and abandoning the export of their industrial development model globally. As for poor countries, it means mobilizing resources to raise the living standards of the poorest populations in the South ¹¹.

Among the objectives of the economic dimension is self-sustained growth based on the principles of macroeconomic balance and achieving the maximum possible growth without excessive debt burdens that would be transferred to future generations ¹².

2- The Social Dimension:

Sustainable development gives particular importance to this dimension, as it represents the human dimension in its narrow sense. It makes growth a means of social cohesion and emphasizes the necessity of intergenerational equity. Present generations are required to recognize the importance and necessity of fairness and justice, and to make growth choices in accordance with their needs and the needs of future generations. Thus, both the environmental and economic dimensions are closely linked to the social dimension, which is represented by the human being or the individual. The main elements of the social dimension include ¹³:

- Equality in distribution.
- Social mobility and popular participation.
- Cultural diversity.
- Institutional sustainability.

3- The Environmental and Technological Dimension:

Sustainable development allows for the optimal and rational use of agricultural land and water resources worldwide, leading to the expansion of green areas across the globe, the protection of ecosystem integrity, proper management of natural resources, combating pollution, and preserving non-renewable resources by transferring natural capital to future generations ¹⁴. This is accompanied by limiting environmental degradation through reducing harmful gas emissions, relying on clean technology in industrial facilities, and addressing the phenomenon of global warming.

Second Section: Mechanisms and Means of Confronting the Challenges of Food Security

The world today faces increasing challenges in achieving food security as a result of factors such as rapid population growth, climate variability, and the scarcity of natural resources, in addition to economic crises and political conflicts.

In light of this reality, the need has emerged to search for effective solutions and sustainable mechanisms that enable states to secure adequate and safe food for their populations in both the short and long term.

Confronting food security challenges is no longer an option, but rather an urgent necessity to ensure social stability, reduce poverty, and achieve comprehensive development.

First: Challenges Facing Food Security

Many scholars and specialized researchers have classified the challenges facing food security into direct and indirect challenges.

A- Direct Challenges

Direct challenges are divided into several categories, including natural, social, and economic challenges.

1- Natural Challenges

- The threat of desertification to arable areas and urban sprawl ¹⁵, which reduces productivity and threatens food security.
- The problem of global warming and climate change, which has affected many agricultural crops, led to the deterioration of global agricultural production, and caused water-related problems.

2- Social Challenges

- Extensive urban expansion accompanied by migration from rural areas to cities, leading to an increase in the proportion of consumers compared to producers.

3- Political and Economic Challenges

- The rise in global prices and its repercussions on certain countries.

B- Indirect Challenges

These consist of a set of factors that indirectly threaten food security, including but not limited to the following:

- Population explosion: the population of Algeria is increasing at a rate that exceeds agricultural production rates, which negatively affects the availability of food per individual ¹⁶.
- Weakness of economic policies and economic dependency.
- The hunger crisis.

Second: Means of Confronting Food Security Challenges

Addressing these challenges requires joint efforts and long-term planning to ensure the stability of food supplies and to achieve food security for present and future generations. Achieving food security in Algeria is a strategic objective that is not limited to the agricultural sector alone; rather, it requires a comprehensive strategy that includes several other integrated sectors.

Among the most prominent sectors that play a pivotal role in achieving food security, in addition to the agricultural sector, are the following:

A- The Insurance Sector:

- Expanding insurance coverage to include small farmers, small enterprises, and investors in the agricultural field.
- Facilitating procedures for obtaining insurance and reducing costs.
- Providing insurance products specifically designed for agricultural risks.

B- The Investment Sector:

- Attracting Arab investments in the agricultural field.
- Exploiting the advantages of the Arab Free Trade Organization to establish joint agricultural projects with Arab countries.

- Supporting investment projects in infrastructure and modern technology ¹⁷.

C- The Knowledge and Technology Sector:

- Supporting scientific research and development.
- Adopting smart agriculture and modern irrigation techniques.
- Benefiting from technological progress to increase the productivity of the agricultural sector.

D- Improving Consumption Behaviors:

- Promoting a culture of responsible consumption.
- Adopting a balanced diet rich in nutrients.
- Rationalizing food consumption and combating food waste ¹⁸.

CONCLUSION:

Achieving food security in any society requires providing the basic foundations known as the components of food security, which are classified into productive components that include natural resources and others, as well as purchasing power components. It is also necessary to work toward achieving sustainable agricultural development by promoting investment in the agricultural sector.

Study Results:

Through addressing our topic, we have reached the following results:

1. A reduction in rates of malnutrition and the absence of acute food insecurity; however, we acknowledge that these results remain insufficient to achieve the Sustainable Development Goals, particularly with regard to Goal (2) of the 2030 Sustainable Development Plan, which focuses on alleviating poverty and hunger.
2. Healthy food is diversified, balanced, and clean food, and it can only be achieved if the state pays due attention to the agricultural, industrial, and commercial sectors in producing abundant food, imposes conditions on producers, and subjects food production activities to strict oversight, which would ensure quality and good standards beneficial to consumer health.
3. Achieving the Sustainable Development Goals is realized through attaining food security as a fundamental condition.
4. Food security is a fundamental issue for ensuring a sustainable future.
5. Enhancing innovation in the field of seeds and improving agricultural crops to difficult environmental conditions.

Recommendations:

Based on the previous results, and within the framework of achieving sustainable development through food security, several recommendations can be proposed, including:

1. Increasing investment in research and development to enhance agricultural technology, improve crop productivity, and strive to establish motivating foundations and legislation.
2. Encouraging international cooperation to exchange knowledge and technologies in the field of food security and to promote sustainability.
3. Launching broad awareness and education campaigns on the importance of transitioning toward sustainable food systems, as well as involving civil society and the private sector in food production development programs, whether in terms of food financing and marketing or in providing agricultural inputs and contributing to production processes.
4. Enacting government policies that encourage investment in sustainable agriculture and promote effective management of natural resources.
5. The necessity of strengthening scientific research and technology by supporting agricultural innovation and developing sustainable techniques to improve productivity, such as smart agriculture and modern irrigation technologies, and establishing specialized research centers to confront climatic and environmental challenges.

FOOTNOTES:

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