



# The Efforts of the Algerian Government to Ensure Food Security in Light of Contemporary Crises

**Dr. Fella Zohra**

Specialization: Private Law

Faculty of Law and Political Science - University of Sousse - Tunisia

## **Abstract:**

The Russian-Ukrainian war had a significant impact in raising the sense of danger regarding shortages in the supply of basic foodstuffs or the rise in their prices as a result of political and security instability around the world. The Algerian state has firmly sought to strengthen food security through multiple and sustainable strategies aimed at enhancing local production, improving distribution chains, and reducing dependence on imports through the diversification of local production and the policy of supporting exports outside hydrocarbons. This matter had an impact on Algeria's foreign trade relations, as the Algerian authorities decided to stop importing some products that are produced locally. This prompted the European Union to adopt a negative position and express its dissatisfaction with this matter, which calls for the need to review the partnership agreement concluded in 2002 between the two parties in order to clarify Algeria's status as a partner and not merely a market. In order to strengthen national security, Algeria has made considerable efforts in recent years, represented in giving attention to the agricultural sector through the orientation toward Saharan agriculture and the adoption of reforms and policies to secure food stocks and rationalize consumption.

Algeria is well aware that the spread of hunger, unemployment, and poverty in many countries of the world inevitably leads to political and social instability, and even to the spread of revolutions such as those witnessed by many Arab countries in recent years, as well as armed conflicts in Africa. In order to achieve economic independence and reduce dependence on the outside world, there is no way to do so except by first fighting corruption and then adopting promising development policies and investments that attract, rather than repel, national and foreign capital, with the aim of ensuring food security and thus guaranteeing national security.

**Objectives:** The study aims to identify Algeria's efforts in confronting the challenges of contemporary crises in order to achieve its food security. **Method:** The current study differs from previous studies in terms of methodology, as it relies on analyzing the policies that addressed the topic through the descriptive analytical method. **Results:** The researcher reached a number of results, the most prominent of which is that the Russian-Ukrainian crisis had a significant impact in increasing awareness among developing countries of the need to pay attention to their food security. Population growth and limited resources are considered among the most important factors that increase the severity of poverty and malnutrition. Political conflicts and wars also play an important role in disrupting development and the movement of goods supply. Here, a strong transitive relationship appears between poverty, food shortages, and political and social instability.

**Keywords:** Food security, agriculture, economic development, contemporary crises, national security.

**Received :** 23/12/2025 ;

**Accepted :** 24/05/2026 ;

**Published :** 25/06/2026

## **Introduction:**

The spread of poverty in many parts of the world has caused the death of many people as a result of hunger and malnutrition. Since food is a necessity for human beings in order to be able to carry on their lives in a normal and active manner, it has become necessary for states and regimes to give this matter great attention in order to ensure stable food security for all segments of the people. Considering food security as a situation that is achieved when all people, at all times, have access to sufficient and safe food that meets their physical needs, it is therefore one of the most important challenges facing modern societies, and it is a central issue that should not be left to changing circumstances that appear unsafe. Major countries seek to keep developing peoples as consuming peoples who depend on imports to obtain their food, and in many cases they are subjected to blackmail by exchanging their local wealth for food. Development plans in developing countries are also seen by major countries as a threat to their interests, and they seek by all means to keep these countries as markets for their various products. Since whoever does not possess his sustenance does not possess his decision, many developing countries have become subordinate hostages, importing even their policies in managing their affairs in addition to their food. Food has also become a weapon used by major powers to suffocate and subjugate peoples.

Whenever any people's food needs are available in appropriate and stable quantities, life becomes easier, matters become stable, and the people turn toward construction, development, and the building of civilization. However, if matters become otherwise, and people become preoccupied with securing their daily sustenance, anxiety prevails, stability is shaken, and economic, social, and political problems emerge. From this standpoint, the value and importance of food security, which serious regimes seek to ensure, becomes clearly evident.

Accordingly, through this research, we will attempt to address the following problem: How can developing countries, under their current conditions and the characteristics that mark their economies, achieve the goals of sustainable development and food security in light of global developments and the rules of the new globalization led by developed countries? We also seek to clarify the close relationship linking food security to sustainable development and stability in its various forms.

## **Division of the Study:**

In order to answer the proposed problem, we will adopt the descriptive analytical method to examine data and statistics, analyze their content, and apply them to the prevailing situation in developing countries and Algeria in particular. We will then divide this study into two axes. In the first axis, we will address the nature of food security and the efforts made to achieve it, and we will divide it into three sections. In the first section, we will clarify the concept of food security and its various dimensions. In the second section, we will address the ways adopted by the Algerian government to strengthen food security. In the third section, we will shed light on the National Agricultural Development Plan adopted by Algeria.

As for the second axis, we will devote it to studying the development achieved by the agricultural sector in Algeria and divide it into three sections. In the first section, we will address the reality of agricultural lands and water resources in the world and Algeria. In the second section, we will deal with the policies adopted to achieve food security in Algeria. In the third section, we will study the extent of the contribution of the agricultural sector to the agricultural trade balance in Algeria.

### **1. The First Axis: The Nature of Food Security and the Efforts Made to Achieve It**

After the spread of poverty and hunger around the world at the beginning of the last century, as a result of declining living standards in many countries due to political instability and the resulting unemployment, poverty, and low standards of living, the international community officially recognized the problem of hunger in 1930. <sup>1</sup> Among the most important causes of food insecurity are the imbalance between production and population numbers, desertification, reliance on imports, and price support instead of production support. What is meant by the concept of food security is the ability of a country to provide the necessary food for individuals in the required quantity and at all times in order to ensure a healthy and active life for all citizens. <sup>2</sup>

## **1.1 The First Section: The Concept of Food Security**

Food security, which all countries of the world seek to achieve or maintain, is that self-sufficiency in food which meets the needs of the population in a way that guarantees them a healthy and active life.

### **1.1.1 The First Requirement: Definition of Food Security**

The concept of food security consists in the ability of individuals to obtain a sufficient quantity of healthy and safe food that meets the body's daily needs. <sup>3</sup> Food security is usually linked to the political, social, and economic conditions prevailing in society. Many definitions have been given to food security, including:

#### **1.1.1.1 The First Branch: Definition of the World Bank:**

In 1986, the World Bank adopted a comprehensive definition of food security that focuses on enabling individuals to obtain sufficient food for their activity and health at all times. It appears that this definition includes two basic pillars for ensuring food security in the country, namely a stable food supply and the ability to obtain it.

#### **1.1.1.2 The Second Branch: Definition of the Food and Agriculture Organization:**

The definition adopted by the Food and Agriculture Organization (FAO) states that food security is the condition in which all people, at all times, have access to sufficient and safe food that meets their dietary needs and preferences for an active and healthy life. <sup>4</sup> The Algerian legislator adopted the same definition in Article 03 of Law 08-16 by stating that: "Food security is the easy and regular obtaining and access of every person to safe and sufficient food that allows him to enjoy an active life."

#### **1.1.1.3 The Third Branch: Definition of the World Health Organization:**

The definition established by the World Health Organization states that food security is achieved when all the necessary conditions and standards are combined to ensure food that is safe, reliable from a health perspective, suitable for human consumption, and not harmful to the environment. It also represents local self-sufficiency in food according to the state's ability to provide the needs of all individuals for goods and foodstuffs through local production or importation. <sup>5</sup>

## **2 The Second Requirement: Distinguishing Between Self-Sufficiency and Food Security**

The difference between self-sufficiency and food security lies in the fact that the former is based on domestic production within the state without relying on imports, whereas food security is based on the state's ability to provide the necessary healthy food, whether through domestic production, imports, or both. Food security also consists in the state's ability to provide the foreign currency necessary to meet society's needs for food imports by importing them under various circumstances.

However, the financial aspect sometimes does not represent a reliable guarantee for obtaining food, because countries that possess it may, in some cases, resort to using it as a pressure card to obtain other advantages in these developing countries, or in cases where the global food supply declines, perhaps due to wars or natural disasters. Therefore, reliance on imports is considered dangerous to the security, stability, and sovereignty of the state. <sup>6</sup>

Through these definitions, food security can be considered an integral part of national security, which includes social security, economic security, and political stability in the country. Food security depends on a set of factors, including internal factors directly related to the internal conditions of the state, represented in the population size and the level of their needs, the possibility of domestic food production, real income in society, and the way it is distributed among individuals. There are also external factors related to the conditions surrounding the state's economy, represented in the foreign currency resources that can be obtained through exports, the availability of food in global markets and the stability of its prices, or its connection to aid provided by international bodies, in the most difficult circumstances. <sup>7</sup>

### **1.1.3 The Third Requirement: The Problem of the Absence of Food Security**

Many developing countries are still caught in the cycle of hunger and poverty, as estimates indicate that hunger has claimed the lives of millions of people around the world, and many civilizations have experienced food scarcity crises during close periods. The most recent was in the 1970s, when the crisis of hunger and malnutrition around the world led to the death of about 20 million people annually. More than 3 billion people suffered from a lack of healthy food in 2006, and the global financial crisis of 2008 caused nearly one billion people to suffer from hunger. Some reports also indicated that the poor spend between 50 and 75% of their income on food, and they are unable to adapt to the rise in its prices.<sup>8</sup> The causes of the spread of hunger and malnutrition in some poor countries are due to a set of factors, the most important of which are:

- 1/ Political and social instability, which produces terrorism and armed conflicts, and sometimes economic blockade by the international community (Iraq and Libya as examples).
- 2/ Fluctuating climatic conditions and natural disasters that cause the destruction of agricultural crops, such as droughts and floods.
- 3/ The excessive rise in prices as a result of speculation.
- 4/ The concentration of spending on armament by many developing countries.<sup>9</sup>

### **1.2 The Second Section: The Ways Adopted by the Algerian Government to Strengthen Food Security**

The Russian-Ukrainian war had a significant impact in raising the sense of danger regarding shortages in the supply of basic foodstuffs or the rise in their prices as a result of political and security instability around the world. The Algerian state firmly sought to strengthen food security through multiple and sustainable strategies aimed at enhancing local production, improving distribution chains, and reducing dependence on imports through the diversification of local production and the policy of supporting exports outside hydrocarbons. This matter had an impact on Algeria's foreign trade relations, as the Algerian authorities decided to stop importing some products that are produced locally. This prompted the European Union to adopt a negative position and express its dissatisfaction with this matter, which calls for the need to review the partnership agreement concluded in 2002 between the two parties in order to clarify Algeria's status as a partner and not merely a market. In order to strengthen national security, Algeria has made considerable efforts in recent years, represented in the following:

#### **1.2.1 The First Requirement: Interest in the Agricultural Sector**

The Algerian government took the initiative to strengthen agricultural production by providing various forms of support to farmers, offering facilitated loans, supplying cereal producers with seeds, and raising the fertilizer support rate to 50%, in addition to supporting the construction of wells and providing supplementary irrigation systems, which contributed to achieving a considerable cereal yield despite water challenges. The government allocated more than 400 thousand hectares of land in the southern provinces for intensive agriculture, with the aim of expanding cultivated areas in the south to reach one million hectares by the end of 2025. The state also paid attention to providing modern technologies and encouraging their use, as a total budget of 1.48 billion dinars was allocated for the acquisition of agricultural equipment to support increased production.<sup>10</sup> This is in addition to the Algerian government's interest, since the beginning of 1995, in agricultural electricity, as 13% of the classic electricity program directed toward meeting the needs of the population was allocated to the agricultural sector.<sup>11</sup>

#### **1.2.2 The Second Requirement: The Reforms Adopted**

Since independence, Algeria has adopted many strategic plans to develop the agricultural sector, starting from the stage of self-management of agricultural lands recovered from the settlers (1964-1971), which were estimated at 22037 farms, then the Agrarian Revolution Law (1971-1979), which introduced the idea of "land to those who work it," where the number of agricultural cooperatives increased to reach about 7000 cooperatives. The state also initiated, during the period between 1981 and 1990, the restructuring of

the agricultural sector, which included all forms of agricultural ownership represented in the cooperatives of the Agrarian Revolution, self-management cooperatives, and the private sector. However, these negative policies adopted by the state contributed only to weak agricultural production and the failure to meet the growing needs of the population. It then resorted to creating a new system for land reclamation, represented by the landholding through reclamation system (APFA) <sup>12</sup>, which included the acquisition of agricultural lands by individuals through their reclamation. By 1986, the government adopted new reforms by creating collective agricultural holdings, <sup>13</sup> which paved the way for the emergence of the privatization of the agricultural sector. <sup>14</sup>

### **1.2.3 The Third Requirement: Orientation Toward Saharan Agriculture**

The Algerian authorities worked to expand their productive capacities by valuing interest in Saharan lands due to their huge reserves of groundwater and their productive capacities, especially in the cereal sector. The state also initiated the creation of a special fund concerned with supporting and developing Saharan agriculture, through supporting farmers with loans, fertilizers, tax privileges, and important incentives for importing agricultural equipment. The Professional Association of Banks and Financial Institutions also signed an agreement with the Ministry of Agriculture, Rural Development, and Fisheries stipulating the initiation of financing directed to the agricultural sector at the level of all public banks starting from 2025.<sup>15</sup>

### **The Fourth Requirement: Securing the Stock**

The words of our Master Joseph in the Holy Qur'an referred to the importance of providing a strategic stock in anticipation of the seven hard years. <sup>16</sup> Accordingly, food security requires the provision of a strategic stock of basic foodstuffs such as cereals and legumes, which prompted the Algerian authorities in 2022 to acquire a large quantity of soft wheat estimated at about 700 thousand tons, and an additional three million tons of durum wheat, which contributed to raising the country's wheat stock to 10 months, while continuing to import this material at 7 million tons annually, in addition to local production to strengthen the stock of this strategic material. <sup>17</sup>

### **1.3 The Third Section: The National Agricultural Development Plan**

The Algerian state initiated deep reforms in agricultural and water policy in implementation of the National Agricultural and Rural Development Plan, which came in the Finance Law of 2000 <sup>18</sup>. It is a special mechanism aimed at promoting technical supervision and financial and regulatory support, with the aim of building a modern agricultural sector through the preservation, protection, and rational exploitation of natural resources, land reclamation, and the optimal exploitation of existing capacities. The state has set a number of objectives, including rationalizing the exploitation and protection of natural resources, production according to regional specialization, improving farmers' conditions, and promoting investment in the agricultural field. All of this is in pursuit of achieving food security through the development of national agricultural products and working toward the integration of Algerian agriculture into the international economy within the framework of the World Trade Organization (OMC). <sup>19</sup>

This national plan was established with the aim of defining the strategy and means of agricultural development and planning activities in time and space. <sup>20</sup> It also aimed to achieve a number of objectives, which can be summarized as follows:

- Rationalizing the use of natural resources and exploiting them rationally.
- Regional specialization of agricultural production and integration into the national economy.
- Promoting and improving agricultural production, increasing farmers' incomes, and improving their living conditions.
- Encouraging investment in the agricultural sector, with the aim of creating competition and integrating it into the global economy.

- Increasing the growth rate in agriculture by expanding the area of exploited and irrigated land through land reclamation by concession, which allows the valorization and preservation of natural resources, the development of investment, and the fight against desertification. <sup>21</sup>

### **1.3.1 The First Requirement: Mechanisms for Implementing the National Development Plan**

This plan included several axes represented in the launch of dam projects and seawater desalination projects, in addition to strengthening partnership with the private sector and foreign investors in the milk and fodder sector. These measures contributed to strengthening food diversity and reducing dependence on the outside world, as cereal production in 2021 reached about 41 million quintals, with expectations that the cultivated land area would rise in 2025 to 3.75 million hectares and production would increase to reach 55 million quintals. This prompted the state to accelerate the construction of modern silos for storing cereals across the various provinces of the country. <sup>22</sup>

The state also took the initiative to encourage farmers to invest in the cereal sector by raising the purchase price from farmers through the National Cereals Office by about 30%. This is in addition to supporting the livestock sector by supporting breeders with agricultural insurance, providing treatment and vaccination, and supplying them with fodder. It also took the initiative to work on developing local production of vegetable oils, sugar, and others, in addition to supporting local products and ensuring the stability of their prices by imposing intensive control over markets. <sup>23</sup>

The financial implementation of the National Development Plan involved the National Agricultural Mutual Fund (CNMA), which the Algerian authorities initiated the creation of in 1972. <sup>24</sup> Since the agricultural sector, like other sectors, is exposed to many risks that result in significant losses due to several factors, including climate, diseases, fires, and others, this sensitive sector must therefore be surrounded by special protection through agricultural insurance as a mechanism for reducing the damage resulting from the various risks that affect the agricultural sector. Agricultural insurance is defined as: “a shock-absorbing cushion for farmers and livestock breeders against the damage caused by natural disasters.” Agricultural insurance mainly aims to cover such damages in order to ensure the stability and security of society’s needs. <sup>25</sup>

In addition to the Reclamation Fund through Concession, which was established under the Finance Law of 1998, as well as the National Fund for Agricultural Regulation and Development (FNRDA), which was established under the Finance Law of 2000 <sup>26</sup> with the aim of supporting investments through financing farmers in order to develop the agricultural sector. Agricultural credit and economic insurance also contributed to the implementation of this program by providing the financial aspect for farmers through borrowing, as well as economic insurance and the accounting of public funds.

### **1.3.2 The Second Requirement: The Role of the Agricultural Sector in Reviving the National Economy and Achieving Food Security**

The agricultural sector is one of the basic pillars for promoting foreign trade outside hydrocarbons, which the Algerian government has striven to achieve. The agricultural sector was able to constitute one of the components of the national trade balance, and it constitutes the most important pillar in relying on oneself to provide food for citizens and ensure their food security. <sup>27</sup>

Algeria has also recently focused on promoting exports outside hydrocarbons, because this process would achieve the actual takeoff of the national economy. This can only be achieved through attention to developing the agricultural sector, which possesses the elements that enable it to contribute directly to reviving the national economy and achieving sustainable food security. The recent years between 2004 and 2018 revealed significant growth and diversification in national production in various sectors. This growth exceeded 5% in the 2017/2018 agricultural season compared to 1.6% in the previous season. <sup>28</sup> This growth is due to the policies and strategies adopted by the state to advance the agricultural sector, as well as to the favorable climatic conditions during that period.

The gross domestic product also witnessed significant growth since 2000, as the agricultural sector contributed 12% of the gross domestic product in 2019, equivalent to 3500 billion DZD. Cereal production increased during the 2018 season by 75%, and citrus production increased by 9.9%. However, with regard to white and red meat, milk, eggs, and fruits, their production declined during that year. <sup>29</sup>

### **1.3.3 The Third Requirement: The Reality of Food Security in Algeria**

Algeria took advantage of the abundance of external revenues resulting from the improvement in oil prices, and from the beginning of 2001 it began to establish many very important policies and programs in order to make up for the delay recorded in development caused by successive political, economic, and security crises, and to revive the pace of growth and investment in the country. Among these programs, we mention the following:

#### **1.3.3.1 The First Branch: The Program to Support Economic Recovery**

This program was also known as the three-year plan from 2001 to 2004, for which a considerable initial budget of 525 billion DZD, equivalent to 7 billion US dollars, was allocated. This amount doubled after the addition of other projects to become 1.216 billion DZD, equivalent to 16 billion US dollars, for the economic recovery program. The share of the agricultural sector was 65.4 billion DZD.

#### **1.3.3.2 The Second Branch: The Complementary Program to Support Growth**

This was followed by the Complementary Program to Support Growth, known as the first five-year plan during the period between 2005 and 2009, whose value amounted to 8.705 billion DZD, equivalent to 114 billion US dollars. The share of the agricultural sector amounted to 300 billion DZD.

#### **1.3.3.3 The Third Branch: The Economic Growth Consolidation Program**

This represents the second five-year plan 2010-2014, where the total financial allocations for the plan were estimated at 21213 billion DZD, and the share of the agricultural sector amounted to 1000 billion DZD. <sup>30</sup>

#### **1.3.3.4 The Fourth Branch: The Agricultural and Rural Renewal Policy for the Period 2007-2013**

This policy means ensuring the country's food security on a permanent basis. At the beginning of 2007, the Algerian state resorted to establishing a new policy to promote the agricultural sector based on the Agricultural Orientation Law issued in 2008. <sup>31</sup> Article 2 of this law stipulated the objectives it seeks to achieve, namely:

- The contribution of agricultural production to improving the level of food security.
- Working on the controlled development of the agricultural sector in order to preserve and promote its productive capacities, protect lands, and rationalize the use of water in irrigation.
- Continuing to consolidate the principle of the state's continuous support for plant and animal agricultural development. <sup>32</sup>

There were also other successive development programs, as the agricultural sector in Algeria was the subject of many reform policies and programs adopted by the state over the past two decades. This was done in order to face the most important challenges represented in population growth, national demand for food products, and ensuring national social stability on the one hand, and keeping pace with the transition to a market economy that has begun to use food as a weapon to bargain with poor countries to submit to the policies of rich countries and accept contracts for the plundering of their wealth in exchange for food aid, and the international competition imposed by globalization on the other hand. <sup>33</sup>

The objective of these policies was to develop the agricultural sector, accompany farmers in promoting their productive capacities, and modernize agricultural holdings in pursuit of ensuring food security. This program bore fruit by enabling the agricultural sector to achieve encouraging results through recording an improvement in animal and plant production. This appeared in the report of the National Economic, Social and Environmental Council for the year 2023. <sup>34</sup> The agriculture and fisheries sector benefited, in the 2001 program, from an amount of 65.4 billion DZD as support for the sector, in addition to the independent

program from which it benefited in 2000 within the framework of the National Agricultural Development Program (PNDA).<sup>35</sup>

## **2. The Second Axis: The Development Achieved in Order to Ensure Food Security**

The world recorded increasing growth in various agricultural crops at the end of the last century, through the adoption of integrated and purposeful agricultural strategies based on modern technological means, through seed improvement and genetic improvement of plants. This was in addition to rationalizing water consumption by adopting modern methods, whether with regard to water collection or its use through drip or sprinkler methods, in addition to incentives represented in government support for farmers and agricultural insurance to protect them from various risks.

### **2.1 The First Section: The Reality of Agricultural Lands and Water Resources in the World and in Algeria**

The reality of agricultural lands depends on a set of factors, including climate, agricultural policies, and investments in the agricultural sector. This reality is determined by the size of the areas available for agriculture, their quality, and the water resources available in the country.

#### **2.1.1 The First Requirement: Investment in Agricultural Lands**

A report by the Food and Agriculture Organization for the year 2011 on agricultural lands and water in the world indicates that the total cultivated areas in the world grew by 12% over the past fifty years. Irrigated lands also witnessed growth worldwide during the same period. This resulted in global agricultural production growing by two and a half times, and about 40% of the doubling of food production is concentrated in irrigated lands. From this, we conclude that high-quality agricultural lands are the most important element in the production equation.

As for Algeria, according to the report of the Ministry of Agriculture and Rural Development in 2022, the total land area is divided as follows:

- 1/ Arable lands are estimated at 43 million hectares, representing 18% of the total area.
- 2/ The area of used lands is estimated at 8.5 million hectares, representing 28% of arable lands.
- 3/ Pastoral lands are estimated at 32.91 million hectares, representing 13% of the total area.
- 4/ Unproductive lands include cities, squares, roads, valleys, and others, and are estimated at 2.03 million hectares, representing 407% of the total area.<sup>36</sup>

#### **1.1.2 The Second Requirement: Water Resources**

It should be noted that most agricultural production in the world depends on supplementary irrigation or rainfed agriculture. Agriculture is considered the largest consumer of water in the world, consuming more than 70% and 91% in developing countries. Water resources are divided according to their sources into three main resources, including:

A/ Rainwater, whose average annual level in Algeria is estimated at 12.5 billion m<sup>3</sup>, and is concentrated in the northern part of the country by 90%, followed by the High Plateaus region by 10%, then the desert region, where it decreases significantly.

B/ Exploitable groundwater, as Algeria has 147 groundwater aquifers. They are estimated at 7 billion m<sup>3</sup>, distributed between the north with 2 billion m<sup>3</sup> and the south with 5 billion m<sup>3</sup>. It also has 23 thousand deep wells, 60 thousand small wells, and about 60 thousand springs in various regions of the country. Algeria also has an underground water reserve located on its borders with neighboring countries, estimated at 40 thousand billion m<sup>3</sup>, 60% of which is located within Algerian territory.

C/ Surface waters in Algeria, whose volume is estimated at about 13.5 billion m<sup>3</sup> annually, and whose sources consist of basins and dams, then rivers and water quarries.

D/ The number of water treatment plants in Algeria reached 213 units at the national level, managed by the National Sanitation Office. The total capacity put into service reached the equivalent of 1.031 billion m<sup>3</sup> annually, with a daily flow of nearly 2.8 million m<sup>3</sup>, meaning that only 20% of used water is treated, while the rest does not reach treatment plants due to random discharge or defects in the networks.<sup>37</sup>

E/ The promotion of the agricultural sector is mainly based on qualified human resources, which are considered the main element in this equation. Despite the migration from Algerian rural areas during the black decade, about 11 million people still live in rural areas, 30% of whom are young people, although most of them are active outside the field of agriculture.

## **2.2 The Second Section: National Policies Adopted to Achieve Food Security in Algeria**

Algeria is among the countries that have made great strides in achieving food security through a set of promising strategies it has adopted to advance the agricultural sector, which has witnessed a qualitative leap over the past few years. The state adopted a set of development programs and policies supporting the sector.

### **2.2.1 The First Requirement: Price Regulation Policy**

Through the price policy, the state sought to work on providing foodstuffs at all times for all members of society through price ceilings and direct support. The state also works to create a strategic food stock to ensure price stability.<sup>38</sup> The price support policy adopted by some countries, including Algeria, would achieve the stability of food prices and their continuous flow. However, this policy often results in some difficulties, such as the smuggling of goods to neighboring countries and excessive consumption.

In this field, the Algerian authorities resorted to containing the oil crisis that occurred in 1986, which affected economic and social life in the country through the events of October 1988, by adopting reforms in many fields. This was done through the issuance of a successive legal arsenal through which the public authorities aimed to frame price freedom. This was done by establishing the Competition Council as a higher legal body, then Ordinance 03-03 relating to competition in Algeria, which was amended by Law 08-12 and was itself amended by Law 10-06, then Law 04-02, which defines the rules applicable to commercial practices. The principle of competition states that prices are determined according to the law of supply and demand, with the possibility of legally restricting this principle when it concerns strategic goods or when there is a serious disturbance that has led to price increases.

### **2.2.2 The Second Requirement: Consumption Rationalization Policy**

This policy requires the state to regulate the volume of consumption according to the available capabilities and individuals' food needs in line with international standards for achieving food security. It should be noted that this cannot be achieved except through a set of measures represented in the following:

- Adjusting and rationalizing support for foodstuffs, so that it includes only essential materials, provided that this support is directed only to vulnerable groups in society and low-income people.
- Rationalizing consumption through intensifying awareness programs aimed at rationalizing consumer behavior among individuals.
- Regulating and rationalizing imports so that only necessary materials that are not available in the domestic market are imported, while also focusing on studying prices and quality.<sup>39</sup>

### **2.2.3 The Third Requirement: Policy for Developing and Diversifying Local Food Production**

In its pursuit of achieving food self-sufficiency, Algeria resorted, within this framework, to working on increasing the areas of agricultural land through the process of reclamation, orientation toward Saharan agriculture, and development of livestock. This policy would protect the state from the deterioration of international economic relations or in the event of international food monopolies.

### **2.3 The Third Section: The Extent of the Contribution of the Agricultural Sector to the Algerian Agricultural Trade Balance**

What is meant by the contribution of the agricultural sector to the trade balance is the extent of the impact of agricultural activities on the difference between a country's exports and imports. The contribution of the agricultural sector to the trade balance is measured by comparing the volume of the country's exports of agricultural products with the volume of its imports of these products. The importance of this process lies in reducing dependence on the outside world whenever the country's productive capacities increase, and vice versa.

#### **2.3.1 The First Requirement: Definition of the Agricultural Trade Balance**

The agricultural trade balance of a country is the difference between the value of that country's agricultural imports and the value of its exports over a specific period. It is in surplus if the value of exports exceeds imports, and in deficit in the opposite case. The trade balance consists of visible elements, represented in the movement of goods, and invisible elements that are difficult to measure immediately when they occur, such as the exchange of services, returns on foreign investments, and remittances of expatriates or foreign residents.<sup>40</sup> Accordingly, the agricultural balance is considered one of the elements of the trade balance.

The Ukrainian-Russian crisis in 2021 revealed the fragility of food security in many countries, including Algeria, since these two countries are considered among the largest suppliers to the food basket of many countries around the world. As a result of the rise in food product prices in global markets and weak local production, the deficit in Algeria's agricultural balance increased between 2012 and 2022, where it exceeded 12 million dollars.

#### **2.3.2 The Second Requirement: The Development of the Agricultural Sector and Its Exports in Algeria**

Based on the impact caused by international and regional developments at the economic and political levels, Algeria focused all its efforts on diversifying agricultural crops in order to diversify its exports outside hydrocarbons, despite many climatic and economic challenges. The agricultural sector has witnessed remarkable development in recent years aimed at strengthening food security in the country.

##### **2.3.2.1 The First Branch: The Development of the Agricultural Sector in Algeria**

Algeria, like other countries that depend on a rentier economy, at one time relied on oil exports and did not give great attention to the agricultural sector, despite its great importance in forming the national income of the country. It is also an indicator that shows the rate of economic growth of the state and contributes to raising the individual's share of this income.

The average contribution of the agricultural sector to Algeria's gross domestic product between 1990 and 2022 reached a small percentage estimated at 10%, compared to the contribution rate of the hydrocarbons sector in creating wealth.

However, it experienced a revival after 2014 thanks to the efforts made by the state to modernize and promote the sector, as its contribution to the domestic product increased to reach 11.38% in 2022, despite the wave of fires that swept through various regions of the country in 2021, as well as the rise in prices witnessed by agricultural materials in international markets as a result of the decline in supply due to the Russian-Ukrainian war. The per capita share of foreign agricultural trade in 2013 was about 199 US dollars, while it reached its highest level in 2023, with a value of 324 dollars per person.<sup>41</sup>

##### **2.3.2.2 The Second Branch: The Development of Algerian Agricultural Exports**

It should be noted that Algeria has not been able to achieve self-sufficiency in the most important agricultural sectors, such as cereals, as the value of Algeria's agricultural exports did not exceed 552 million dollars over 32 years from 1990 to 2022, which is a very small value. Meanwhile, imports have continued to increase, causing a large deficit in the agricultural trade balance and leading to a rise in the food bill,

which significantly drained the reserves of the public treasury, exceeding 10 thousand million dollars in 2022.<sup>42</sup>

Thanks to the policies adopted by the Algerian government through regulating imports and limiting them to necessary materials only, without luxuries, it also focused on strengthening the agricultural sector and promoting local production. Algerian agricultural production was able to experience a revival, leading to a reduction in dependence on the outside world in meeting society's needs for agricultural goods. After the dependency rate was estimated at 64.86 during the period from 1995 to 1999, it decreased to a rate of 56.10% starting from 2020. The following table shows some indicators that clarify the efficiency of Algeria's foreign agricultural trade over 32 years during the period from (1990-2022).

#### The Most Important Efficiency Indicators of Algeria's Foreign Agricultural Trade

Period	Agricultural Dependency Rate	Marginal Propensity to Import	Average Propensity to Export	Agricultural Coverage Rate
1990-1994	49.38	6.84	1.31	2.63
1995-1999	64.86	75.87	1.94	3.37
2000-2004	56.89	42.86	2.31	4.06
2005-2009	54.92	77.47	1.67	3.04
2010-2014	52.06	44.69	1.47	2.78
2015-2019	59.00	55.49	2.53	4.28
2020-2022	59.10	489.81	2.16	3.89

**Source: Boubreima Chafik and Mustafawi Yassine, An Econometric Study of the Impact of Agricultural Exports and Imports on Real Gross Domestic Product in Algeria for the Period (1990-2022), Journal of Economic Issue Studies, Volume 15, Issue 2 (2024), p. 28.**

#### 2.3.3 The Third Requirement: The Current Algerian Economic Situation

The national economy recorded growth of 3.9% in the first half of 2024 compared to the same period in 2023, due to its support by the agricultural sector. The domestic market also witnessed price stability and recorded a decline in inflation to 4.03% during the first nine months of 2024, coinciding with a decline in the import bill. Foreign exchange reserves also reached 16.2 months of imports of goods and services up to September 2024.

Forecasts indicate that the recovery of the hydrocarbons sector and the increase in its export revenues will contribute to the recovery of growth in 2025. However, it is necessary to adopt a wise public spending policy during this year that would help reduce the budget deficit and limit the increase in public debt that may be caused by the rise in the volume of imports.<sup>43</sup>

#### 2.3.4 The Fourth Requirement: Algeria's Position According to the Global Food Security Index (GFSI)

The Global Food Security Index (GFSI) is an index designed by the British Economic Intelligence Unit. It has been issued annually since 2012 and covers 113 countries around the world. It aims to monitor food

security at the level of countries worldwide. Algeria ranked between 8/14 in the ranking of North African countries for the period (2015-2019), and ranked between 68/70 globally among 113 countries. After 2020, Algeria's position improved, ranking 8th in the Arab world out of 14 countries, and 54th globally in 2021. <sup>44</sup> The following table shows Algeria's ranking according to the Global Food Security Index (IMSA).

General Food Security Index				
Rank/113	Δ	Country	Score	Δ
51	2 ▼	Thailand	64.05	+0.9
52	1 ▲	Colombia	64.04	+3.9
53	8 ▼	Argentina	64.02	+1.1
54	1 ▲	Algeria	63.09	+2.3
55	8 ▲	Tunisia	62.07	+2.5
56	↔	Azerbaijan	62.06	+1.1
57	3 ▼	Morocco	62.05	+0.4
58	9 ▲	Ukraine	62.0	+3.2

Source: Economist Impact. (IMSA 2022 Model) at <http://www.impact.economist.com>

### 3. Conclusion:

Food security is a vital issue for all countries of the world, as it is directly linked to their political, social, and economic stability, and is also closely related to the national sovereignty of the state. Despite the major challenges facing developing countries, including Algeria, which still relies on imports to cover the deficit in some agricultural crops such as wheat, rice, and milk, its exports of some products have witnessed a remarkable recovery in recent years, such as dates, olive oil, and some fruits. There are also promising future prospects for strengthening food security through increasing local agricultural production, improving the management of water resources, and strengthening regional and international partnership and investment. Food security can only be achieved within the framework of comprehensive development in which there is an abundance of products, smooth distribution, and price stability.

#### 3.1 Results Reached:

Through this study, we reached a set of results, which we summarize as follows:

- The Russian-Ukrainian crisis had a significant impact in increasing awareness among developing countries of the need to pay attention to their food security.
- Population growth and limited resources are among the most important factors that increase the severity of poverty and malnutrition.
- Political conflicts and wars play an important role in disrupting development and the movement of goods supply.
- There is a strong transitive relationship between poverty, food shortages, and political and social instability.
- We also recorded the beginning of the spread of awareness among many developing countries of the need to pay attention to economic development.

- We also recorded a recovery in agricultural production in Algeria in recent years, and the government's adoption of a promising development policy, with attention to diversifying exports outside hydrocarbons and reducing dependence on the outside world.

### **3.2 Recommendations:**

- In order to achieve the desired objectives and build a secure future for future generations, joint efforts are required between the public sector, the private sector, and civil society.

- Supporting scientific research in the agricultural field.

- Paying attention to the agricultural sector by increasing investment spending directed to agriculture.

- Encouraging the private sector to invest in the agricultural sector and supporting it with agricultural insurance.

- Adopting policies that attract foreign investment in the agricultural field.

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