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Research Article

Government spending policies to reduce food security challenges in Iraq

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Abstract
The issue of food security was not born at present but was part of the policies of most of the countries of the world, and has taken greater attention since the Second World War when those countries put this among the priorities of their policies the need to provide a sizeable strategic reservoir of foodstuffs. However, the problem of food security has manifested itself in the last two decades due to many factors, the most important of which is the steady population growth and the consequent increasing demand for foodstuffs or The exploitation of additional areas of land for housing and reconstruction is often at the expense of agricultural land intended for the production of food, as well as the limited supply of agricultural land, as measured by population growth, the stability of agricultural production rates, and the lack of necessary water, due to demographic and environmental changes and the effects of political and international factors.

Keywords
Food Security, Iraqi Economy, reconstruction, Economic development.

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Introduction

The problem of food security has manifested itself in the last two decades due to many factors, the most important of which is the steady increase in the world's population. Even though the issue of food security has been around for some time, the focus on it has increased significantly since the end of World War II. Due to population growth, unstable agricultural production rates, and a lack of necessary water brought on by demographic and environmental changes, as well as political and international factors, the exploitation of additional areas of land for housing and reconstruction is often at the expense of agricultural land intended for the production of foodstuffs.
It is also known that Iraq has suffered from a food gap that has been growing since the beginning of the nineties of the last century and has reached its peak currently. The financing of food imports has become heavy on the financial budgets of the State, and this indicates the decline in the State of self-sufficiency, which threatens food security, which is an integral part of national security.
This research came to shed light on the reality of food security in Iraq to know the imbalances in the fact of the agricultural sector and the level of sufficiency that forms the cornerstone of food security, as well as to identify the challenges facing this based on the assumption that the country suffers from an imbalance between what it produces and consumes of food, thus diagnosing the food gap that undermines the achievement of sustainable food security, proposing some possible solutions, adopting an analytical and descriptive approach to reach the objectives of the research.

The structure of the research included six paragraphs:
First: The concept and elements of food security.
Second: Analysis of the contribution of the agricultural sector to the GDP.
Third: Some of the challenges facing achieving food security in Iraq.
Fourth: The food gap, the decline of self-sufficiency, and the problem of dependence on the outside.
Fifth: Food security and nutrition policies and programs in Iraq.
Sixth: The challenges of responding to policies to achieve food security in Iraq.
The research ended with a set of conclusions and recommendations.

First: The concept and elements of food security:

The availability of food, especially the basic basket of food, is the most critical issue that occupied the international arena in light of the changes it witnessed, and the interest in the global food crisis at the beginning of the seventies or in 1948 when it was included in the Declaration of World Human Rights (1), but much earlier it is not an emergency issue in economic thought, as it goes back to the ideas of the economist (Malthos) that he stressed in the book of In 1798, where agricultural output tends to increase in numerical sequence while the population increases in a geometric series that widens the gap between food supply and demand for E(2), the most important proposal of the food crisis was at the World Food Congress (FAO) held in 1974, where it was stressed that the lack of supply of food and the unstable prices of food is the main reason for this, and that economic thought has distinguished between the abundance of food on the one hand and the availabilityof food from On the other hand, the essence of the crescent is what **Sen Amartya** put forward in his famous book series, where he showed that famine is not necessarily hunger due to lack of food supplies but because they do not have complete control over food or access to it (3).
Therefore, international organizations, bodies, and Governments have adopted the concept of food security as a national necessity and strategy that strengthens the political support of the State, which is associated with economic independence, especially in a State that suffers from a low contribution of its economic sectors to GDP.4
The Food and Agriculture Organization of the United Nations (FAO) defined it in 1983 as "a guarantee that is available to all people at all times to obtain the basic food they need to be coupled with economic capacity," while the most specific concept is that which is mainly

related to production, with a focus on food-deficit countries and ensuring their access to supplies in all circumstances.5 Another definition of the United Nations has defined food security as "ensuring access to food security." Members
Society is on their adequacy of food to lead healthy, healthy and active lives and to obtain adequate calories while ensuring a stable and available food supply" (6).
The Arab Organization for Agricultural Development (AOAD) defined the concept of food security as " providing food in the quantity and quality necessary for activity and health based on local production and comparative advantage and being made available to citizens at prices commensurate with their incomes" (7).
The World Bank has defined food security as "people always having access to enough food for an active and healthy life." In contrast, USAID has described it as "All human beings at all times enjoy access to enough food to meet their needs for a productive and healthy life and within their material means" (8).
The researchers believe that food security is what man gets from sufficient quantitative and qualitative food to fill HajTeAnya and what is stored to face exceptional circumstances such as wars, disasters, and crises. Therefore food security includes the available and strategic stocks of food, and there are some concepts that must be put forward to complete the idea of food security from them, the concept of the food **gap**. It is the difference between what the State produces on its own and what it needs to consume from food, as expressed by the deficit in domestic production when imports from abroad cover the needs of consumers.9
There is a concept of average per capita agricultural production that illustrates the rural sector's efficiency in meeting the consumer needs of the population.10
The most critical factors on which the average per capita agricultural production depends are the increase in the farming output achieved, the number of inhabitants, the use of advanced techniques and the nature of agricultural policies, and the provision of the necessary facilities for private activity in agriculture, there is the concept of **self-sufficiency**, which refers to the ability of the country to provide its needs of food commodities through domestic production, and self-sufficiency is achieved in the case of balance between production and consumption. If this is not possible, the value of imports should not be greater than that of agricultural exports.11 In 1996, the participants at the World Food Conference held in Rome decided to support a joint initiative to build an information and mapping system on food insecurity by adopting this concept in terms of three essential elements:

1. Provision of food: Food is available physically to society and during a certain period of consumption from sources of GDP, strategic treasury, or trade.
2. Food availability: It expresses what people have access to food, whether physically, economically, or socially.
3. Food utilization means whether a person can secure their daily nutritional needs from available and available food.

This means that the elements of food security are in their entirety the equation of food security where:

Food Security = Food Availability + Food Availability + Food Access

The availability of food, even if it is necessary, but it is not enough to achieve food security if people do not have the ability to buy it, and if countries have been able to provide food and solve its problem, as happened in some developing countries where per capita food production has increased by 18% over the past years and has reached man enough food so that it exceeds the minimum calorie limit (200) calories, the problem of fair distribution has remained the concern of the authors Policies as well as purchasing power, there are (800) million people in the world in a state of hunger and about (240) million people suffer from malnutrition in Africa and there are (30%) of children born with less than the weight necessary to continue living in the continent of Asia(13), so undernutrition and malnutrition of children under the age of five and the estimated birth weight have become global indicators to measure food security, and some studies conducted in fifteen Arab countries have shown that (32) million people suffer from Food shortages, which constitute (12%) of the total

population of these countries in which the study was conducted, most of them live in Sudan, Yemen, Somalia and Iraq, and that the misdistribution was evident even in some rich Arab countries such as Kuwait and the United Arab Emirates, and that food security is not determined by local production, but there are countries where food security is achieved despite the fact that they import some food items from abroad provided that the markets of these materials are not subject to a high degree of Monopoly, hence the distinction between two types of food security, namely absolute food security, which means the production of food within a country or group of mutually reinforcing countries in excess of their domestic demand and thus the exports of this country or group of countries exceed their imports.14

As for relative or specific food security, it is the arrival of a particular country to a stage where it meets its needs of basic food through domestic production despite importing some materials from abroad (15).

Second: The decline in the contribution of the agricultural sector to the GDP is an indicator of the decline in food security in Iraq:

From Table 1, we note the sharp decline in the contribution of this agricultural sector to GDP, reaching about (8.3%) in 2003, while in 2014 it was (4.9%), while in 2014 it was recorded 20 percent (2%) of GDP, This indicates the decline in the contribution of agriculture to the GDP during the studied period, and the average contribution of the agricultural sector to the GDP for the studied period was (4.9%), as well as we note the decrease in the assistance of the industrial sector as well, which reached on average to (2.2%) during that period, while it clearly shows the dominance of the oil sector in the percentage of its contribution to the GDP, which reaches (49%) as an average during the said period, and this indicates that the Iraqi Economy has symptoms The Dutch disease represented by the total dependence on the rents derived from oil exports, which constitute 98% of the total exports and the revenue of oil exports includes about 90% of the total revenues of the general budget in Iraq.

And back to the beginning about the agricultural sector, which is not limited to economic value only but includes other matters of importance such as environmental issues and food security because Iraq is supposed to be self-sufficient in strategic cereal crops and from vegetable and fruit crops, not to mention the possibility of achieving self-sufficiency in animal products, but the contribution of the agricultural sector has reached very low percentages It does not fit with the available material resources, land, and water in the country, and this may be due to the poor planning of this sector and the lack of a realistic and viable strategy for the advancement of this vital sector on the one hand, not to mention the existence of challenges represented by the increase in the population and the high prices of agricultural inputs (seeds, fertilizers, pesticides. Moreover, climate changes such as scarcity of rainfall, extreme temperatures, plant diseases, and the lack of use of modern methods of irrigation and technology represented by agricultural mechanization on the other hand, all of this certainly reflect negatively on the Iraqi Economy in general and threaten the food security of man in particular.

Table (1).
Percentage of the contribution of economic sectors to the GDP in Iraq

Al, Sunna	Gross Domestic Product(GDP) (GDP)	Oil Sector	The relative importance of the oil sector%	Sector ButtonA, E	The relative importance of the agricultural sector %	Industrial Sector	The relative importance of the industrial sector %	Services Sector	The relative importance of the service sector %
2003	29.894.476	20.349.772	68.0	2.486.865	8.3	323.246	1.0	6.731.592	22.5
2004	53.499.238	30.808.541	57.6	3.693.768	6.9	985.132	1.8	18.011.796	33.6
2005	73.911.088	42.379.784	57.3	5.064.158	6.8	1.120.398	1.5	25.346.747	34.3
2006	96.067.160	52.851.810	55.2	5.568.985	5.8	1.652.403	1.7	35.994.774	37.4
2007	11.961.230	59.018.094	52.8	5.494.212	4.9	2.074.156	1.8	45.374.766	40.5
2008	158.443.584	87.166.401	55.0	6.042.017	3.8	2.998.972	1.8	64.638.996	39.2
2009	131.632.210	55.998.048	42.5	6.832.552	5.1	3.977.015	3.0	64.824.594	49.2
2010	218.104.739	72.905.000	44.7	8.366.232	5.1	4.343.633	2.6	77.489.344	47.5
2011	218.617.834	115.256.423	52.7	9.918.316	4.5	6.875.750	3.1	86.567.434	39.5
2012	255.727.068	126.435.557	49.4	10.484.949	4.1	7.709.566	3.0	111.096.995	43.4
2013	274.745.875	125.573.898	45.7	13.045.859	4.8	7.157.347	2.6	128.968.781	46.9
2014	267.262.787	116.852.335	43.7	13.128.622	4.9	5.504.880	2.0	131.776.949	49.3
2015	196.203.013	65.194.040	33.2	8.160.765	4.1	4.631.639	2.3	118.216.563	60.2
2016	198.774.369	67.400.216	33.9	7.832.046	3.9	4.833.117	2.4	118.708.989	59.7
2017	228.692.989	88.664.813	38.7	6.598.384	2.8	6.289.739	2.7	127.140.051	55.5
2018	254.366.708	117.856.343	46.3	4.897.589	1.9	4.851.583	1.9	126.761.494	49.8
2019	260.651.821	120.355.512	45.1	5.154.325	2.0	5.125.325	2.0	132.159.354	50.9
Average duration			48.6		4.9		2.2		44.3

Source: Prepared by the researcher relying on the Ministry of Planning, the Central Bureau of Statistics, and the Directorate of National Accounts.

Third: Some of the challenges facing achieving food security in Iraq:

The food security of any country represents the bond that makes both political and economic independence go in a synergistic manner through which the protection of the citizen is achieved at all levels, including security from external threats, as the power of the State stems from political independence based on a system of laws and ideological adoptions that remain resilient to the threats they face as long as they are protected by efficient economic frameworks that distance the State and society from the bargaining and dependency that the international arena is witnessing, as many countries have lost their political and social independence. The agricultural sector is the most vital link in achieving the security of the economic community, and no economy in the world has dispensed with this sector because of its importance in providing food and to supply other economic sectors with the necessary raw materials, so the governments of the world, especially the developed ones, have attached great importance to this sector, as investment and development in the field of infrastructure and technology paves the way for the development of this sector unlike many developing countries that It has slackened in the field of its development, especially the oil countries, including Iraq, which has shifted the direction towards dependence on oil revenues and sufficiency in them, forgetting that agriculture is a permanent oil and an inexhaustible resource in light of the material, human and natural wealth that could have been invested and out of the bottleneck imposed by the discovery of oil on the Economy, so dependence on oil and what comes from it has become the rule in dealing with economic performance and that the exception is to see a growing sector playing side by side with the oil sector In the management of the Economy, the agricultural industry has faced a set of challenges that have disturbed the security of the economic citizen for violating one of its contents, the combined causes and variables on the Iraqi scene led to a double deterioration in the production of this sector and a significant decrease in its contribution to the gross domestic product and the Iraqi market has become a hotbed and fertile ground for all foreign goods except Iraqi agricultural goods, and this indicates something that indicates a lack of vision that accompanied the planners of economic policy, especially after 2003 in this The vital sector, which faces a range of challenges and obstacles, including:

1- Poor use of agricultural technology:

Scientific techniques and applications have not been widely used in the agricultural sector despite the benefits of improved seeds in increasing production. Still, their local production has been limited, especially in the research possibilities that can find varieties more suitable for the agricultural environment of Iraq. Hence, there was no interest in the State until late, and they have suffered significant damage in the recent period.

2- Low level of use of agricultural mechanization:

The use of agricultural mechanization as an indicator of technological progress was low. Table (1) indicates the existence of (76895) tugs as an average for the period (2010-2018), and the deficit was (31587) tugs according to the global rate of tugs, which allocated a tug per (55) hectares, equivalent to 220 dunams, while the harvesters reached their speed for the said period (6309) harvesters and the deficit was (5230), harvester, so not to use Mechanization has led to a decrease in the efficiency of agricultural performance by about 14% from its efficiency in some developed countries.16

3- Failure to achieve self-sufficiency in fertilizers:

The most crucial element in achieving agricultural development is the adoption of modern methods in which Iraq has not yet reached the State of self-sufficiency, as studies have confirmed that chemical fertilizers, although their excesses lead to environmental effects and economic losses as a result of the loss of large quantities of it and water pollution as a

result of leakage (17), but theyincrease by about (20%) of the rate of productivity of the land, and it is estimated that the production of Iraq is equivalent to 30% From its need and that the deficit in fertilizers reaches almost 70% at present, which indicates a significant shortage in the country's needs of fertilizers despite the availability of raw materials involved in the manufacture of fertilizers such as phosphates, sulfur, urea, organic materials, limestone and others, so it is necessary to restart fertilizer factories to the previous such as the chemical fertilizer plant in Khor al-Zabir and the fertilizer manufacturing plant in Abu al-Khasib, and the fertilizer factories of the northern region and Akashat, for the purpose of Achieving self-sufficiency and even exporting phosphate fertilizers.18

Table (2)

Preparation of tractors and harvesters and the actual need for them for the period 2010-2018 in Iraq

Type of machines / Years	Tractors	Combines
2010	64676	6265
2011	72775	8366
2012	72775	8366
2013	78794	5522
2014	71538	5528
2015	69213	5502
2016	86788	4940
2017	87078	4730
2018	88413	7570
Actual need	120000	12800
Mechanization gap	31587	5230
Rate	76895	6309

Source: Arab Organization for Agricultural Development for years on a sporadic basis.

4- Low level of productivity:

As it is known that environmental risks are a significant obstacle in the process of agricultural development, the low productivity of the land is the result of overlapping factors, primarily environmental such as salinization and flooding of the soil, especially in the central and southern regions of Iraq, as well as the decline in agricultural processes, represented by the preparation of the land, the farm cycle, conservation agriculture and agricultural control, all factors that have participated and caused the decline in the yield of one acre of crops, especially the basic ones.19 Table 2 shows the average yield per acre of some products for the years (2012-20-19).

From the table above, we note the productivity per acre of wheat crop has gradually increased as well as the barley crop, but it has not reached the required rate, and this explains the slight increase in the contribution of the agricultural sector to the GDP of recent years, while the rice crop has maintained its level at the beginning of the studied period but has decreased in recent years, and this reflects a relative interest that does not correspond to the deterioration of this sector, and that looking at the activities of this sector in a way that Unbalanced State will lose a lot of the resources it desperately needs, and the amount of environmental pollution in Iraq affected the quantity and quality of various crops for the years before 2012 as productivity declined and continued on its downward trajectory until (2011) and then began to increase for wheat and barley crops, but the rice crop was regressive in terms of regression, despite the efforts made in this context but was below the level of ambition (20).

Table (3)
Average yield per acre for some staple crops in Iraq for the period 2012-2019 (kg per dunam)

Commodity / Year	Wheat	malt	Rice
2012	429.3	224.7	-
2013	442.9	292	-
2014	566.4	298.2	1177.2
2015	616.6	328.7	988.9
2016	825.7	470.2	1175.5
2017	705.5	369.4	1197
2018	690.5	317.1	838.4
2019	686.1	408.1	920

Source: Ministry of Planning, Statistical Group for different years**.**

In a report prepared by the Food and Agriculture Organization of the United Nations (FAO) and the World Food Programme (WFP) in Iraq in 2018, there were (6.5-10.1) million citizens suffering from food shortages during the period (2003-2016). Despite the slight improvement in 2007 in the rates of acute malnutrition and the change in the rate of chronic malnutrition,21 the average per capita share of energy, protein and oils remained modest, reaching about (2175) calories per day in 2010, according to data from the World Organization for Agricultural Development.22 This means that the Iraqi individual did not get the total required calories of (2500) calories. Still, in recent years there has been an improvement in this area commensurate with the marked rise in some segments of society's average per capita income. In contrast, groups with a low level of food security are still low-income due to unemployment, which reached 14%, and the poverty level, which was close to 25% in 2019.

The problem of food security will continue and may increase its rates due to the weakness of the policies followed and inefficient procedures, which appeared through the policy of flooding the Iraqi market with imported products, which lost the competitiveness of local production in exchange for those goods, not to mention the weak legal structure, which contributed to the lack of adoption of legislation that raises the competitiveness of the local product and did not reflect an investment vision, which prevented investors from entering with their money and technologies into the agricultural sector, and that environmental challenges Technological and legislative efforts to correct the course in this sector represented by its development by reducing the food gap, which is an essential link in achieving food security, especially in staple crops such as wheat, barley and rice, and the smaller the food gap, the greater the hope of reaching self-sufficiency, but table (4) indicates its figures otherwise. Through it, we note:

Fluctuation has been a feature of the production of significant crops yearly, with increasing demand due to population increase. We note that age watt (2005-2019) has a food gap in wheat production, and 2019 has seen the least dependence on the outside, where the self-sufficiency ratio is eliminated by 85%. The percentage of the food gap ranged as an expression of reliance on the outside. To provide wheat between (15%-58%), which is a considerable percentage and indicates the inability of the agricultural sector to give a loaf of bread to the people despite the expansion of irrigated and democratic agricultural land for the cultivation of wheat. This means that the efforts were not at the level of achieving self-sufficiency commensurate with the demand growth due to the increasing population.

As for rice production, we note the lack of self-realization of the AKF in the production of this crop for the entire period also studied. As a result, the percentage of the food gap as an expression of dependence on the outside to provide rice ranges between (48% - 82.5%), which is a huge percentage, as in Iraq, we have not reached the provision of half of our consumption of rice despite the available. Still, untapped possibilities. It meant that agricultural policy was in one valley and the need of citizens in another.

Table (4)
Production, consumption, self-sufficiency ratios and dependence on the outside for the main cereal crops in Iraq / (1000) tons

Year	Wheat					malt					Rice			
	Production	Consuming	Food gap	Self-sufficiency ratio	Percentage of dependence on the outside	Production	Consuming	Food gap	Self-sufficiency ratio	Rate of reliance on the outside	Production	Consuming	Food gap	Self-sufficiency ratio
2005	2228	4764	-2536	47	53	754	754	0	100	0	309	743	434-	41.5
2006	2086	4925	-2839	42	58	919	919	0	100	0	363	796.5	433.5-	45.5
2007	2203	5043	-2840	43.5	56.5	919	919	0	100	0	393	827	434-	47.5
2008	1255	3680	-2405	34	66	404	404	0	100	0	248	682	434-	36
2009	1700	3496	-1796	48	52	502	502	0	100	0	193	896	703-	21.5
2010	2749	4500	-1751	61	39	1137	1137	0	100	0	167	950	783-	17.5
1011	2757	4508.5	-1751.5	61	39	1144	1144	0	100	0	172	956.5	784.5-	18
1012	2765	4517	-1752	61	39	1151	1151	0	100	0	177	963	786-	18
2013	2773	4525	-1752	61	39	1158	1158	0	100	0	182	969.5	787.5-	19
2014	2781	4533	-1752	61	39	1165	1165	0	100	0	189.5	976	789.5-	19
2015	2789	4541	-1752	61.5	39.5	1172	1172	0	100	0	191	982.5	791.5-	19.5
2016	3053	4668	-1615	65	35	499	1204	-705	41	59	181	1010	829-	18

2017	2974	4798	-1824	62	38	303	1204	-901	25	75	266	1038	772-	25
2018	2178	4932	-2754	44	56	191	1204	-1013	16	84	182	1067	885-	17
2019	4343	5070	-721	85	15	1518	1237	280	100	0	574	1096	522-	52

Self-sufficiency = production/consumption* 100 Percentage of dependence on abroad = import/consumption * 100
Source: -The table was prepared by the researcher based on the following:
a) Food and Agriculture Organization of the United Nations (FAO) - Yearbook of Statistics (Production. Trade) FAO website www.fao.org
B- Arab Organization for Agricultural Development - Yearbook of Agricultural Statistics - FAO website on the International Information Network. www.aoad.org
C. Statistics and information devices in the countries of study.

As for the barley crop, self-sufficiency has been achieved, and this is a good situation, mainly if it is supported by the independence of wheat and rice crops. Otherwise, the food gap will remain like a chronic disease in agricultural policy that seriously threatens food security in Iraq.
Food security includes all agricultural and animal products necessary for the food basket to which the Iraqi citizen is accustomed. If self-sufficiency is achieved in some crops and some animal products except for essential crops, especially wheat and rice, food security is unrealized and sounds the alarm, which requires the adoption of an effective agricultural policy on the ground to exploit the available resources efficiently to achieve self-sufficiency at least, even if Mesopotamia has fertile land and abundant water. It is supposed to be an inexhaustible food basket for Arab and regional countries and not only to fill the need but to enter the field of export, as the period of the fifties and sixties of the last century indicates that Iraq took the concession to export grains on the world wheat exchange at the time, but the decline that occurred in the agricultural sector began to increase with the increase in dependence on oil.
It is worth mentioning that the government presented an agricultural initiative in 2008 to promote the reality of the farm sector and has set a ceiling for this initiative forten years and the goal was to achieve self-sufficiency of strategic crops, and includes a number of objectives, including the development of the agricultural sector and the reduction of unemployment in it, which amounted to 40% of the total workforce in the economic sectors, and was aimed at developing the agricultural sector and reducing the unemployment rate in it, which amounted to 40% of the total workforce in the economic sectors, and was aimed at Providing farmers with improved seeds, fertilizers and pesticides and working on a contract system to encourage new farmers through the allocation of land within contracts with the State to be used in the production of agricultural crops exclusively, and priorities have been set through this initiative with regard to government investments in irrigation and puncture projects, water entrepreneurship and the establishment of quality control units for agricultural plant and animal products, Capital distributed among farmers' lending funds to the Ministry of Agriculture and the Ministry of Water Resources has been allocated, but this has not led to tangible improvement and has not solved the problem of decline in agricultural production, which may be due to poor planning and follow-up as well as financial and administrative corruption.
The lack of food security means that the funds will be directed to meet the food needs of citizens through imports. This deprives other economic sectors of their development because achieving self-sufficiency is essential to solving different economic problems. For example, in Iraq, the agricultural industry needs financial funding and support that is conducive to advancing this vital sector to achieve self-sufficiency.

Fifth: Food Security and Nutrition Policies and Programs in Iraq:

The United Nations Programme (UNICEF) and the World Health Organization (WHO) have developed three strategies for the period 2012-2021 related to (Food Security Strategy, Nutrition Strategy, and Poverty Reduction Strategy) and those strategies in their magazine aim to raise the level of self-sufficiency of the Iraqi individual and improve the level of well-being. There are a set of **pillars** of the policy to achieve food and nutrition security (23):

Promoting sustainable agricultural production:

This pillar included a medium-term (three-year) program to develop agriculture in the affected areas, in addition to a significant investment program for (five years) to address critical problems such as weak and damaged infrastructure, weak agricultural and animal support services, and low level of technical training for farmers, as this pillar aims to make improvements to the value chain while promoting climate-smart agriculture and protecting natural resources including reclamation. Land and water provide better credit to farmers to diversify high-value crop and livestock products.

Reform of marketing, trade, and pricing policies: Trade policies for agricultural commodities relate to the market and non-market instruments, which are used to regulate food markets, and food markets must be highly efficient and transparent, with adequate control of food price inflation, in addition to providing the necessary protection for the Iraqi agricultural product.

Addressing the burden of malnutrition: The aim is to deal through an integrated approach that takes into account the issue of nutrition, including building awareness, especially among young people and women, of the importance of the existing diverse and nutritious diets, seasonal and local products produced for eating, access to clean drinking water and hygiene in the preparation and storage of adequate food.

The safety net tools: which are the review and integration of the two main protection network programs (the Public Distribution System and the Social Protection Network), and the goal is to make fundamental changes as a better target with a strong focus on the poor and the shift from physical processing to cash transfers or vouchers when needed and improve monitoring and evaluation, and review the ration card system, which includes the termination or reform of the ration card but it failed, remained the same, and the necessary reform was not done.

5- Increasing employment opportunities, especially among youth and women: The right to work, equal opportunities, and participation in social and political activities are essential components of the development process, and this right is emphasized in article 22 of the Iraqi Constitution of 2005, and Iraqi national efforts to overcome youth unemployment, promote employment opportunities and respond to challenges related to youth development, must focus by launching actions to enhance the skills of youth and women through vocational training and the establishment of a fund Agricultural and rural investment to help establish small and medium-sized enterprises.

Sixth: Challenges in response to policies to achieve food security in Iraq:

The National Committee prepared the strategy to achieve food security for Food Security, which was established in 2017 under the supervision of the Ministry of Agriculture and with the participation of 18 organizations in addition to the Ministry of Health and the Ministry of Planning in partnership with the Food and Agriculture Organization of the International Organization. This strategy is characterized by being a priority for the government because it has four pillars that are a road map, namely(24):

1- Strengthening the role of the National Committee for Food Security.
2- Develop a national strategy for food security.
3- Building an early system for the National Food Security Strategy.
4- Adopting the National Strategy for Food Security to achieve self-sufficiency.

Since the first three foundations are administrative and organizational, we should highlight the fourth point, the National Strategy for Sustainable Food Security. To achieve self-sufficiency, the Iraqi government should adopt the vision of developing comprehensive agricultural development

plans.
Develop an investment policy to develop infrastructure, social and economic, and land reclamation.
Supporting private sector investments, partnership with the public sector, and providing credit.
C. Securing the water quota and following modern irrigation methods.
Encouraging agricultural and veterinary graduates to establish agrarian companies.
D. Establishing agricultural cooperative service associations for financing, marketing, mechanization, warehouses... Etc.
From Figure 2, it is possible to know the challenges and the degree of policy response to achieve food security. First, we note that there are challenges or gaps **(general)**, which are related to the inadequacy of resources that support food and nutrition security and, second, associated with the ineffectiveness of the institutions concerned with food and nutrition security. The final challenge includes low productivity, poor use of agricultural technology, improved seeds and pesticides, inadequate supply and service systems, low investment, and decreasing exploited, arable land from 42 million dunams to 1,8 million dunams.
The challenges or gaps to the degree of response to achieving food security **(especially)** include the shortcomings in the pillars on which sustainable self-sufficiency depends, namely:
Gaps in the promotion of sustainable agricultural production. B- Gaps in marketing policies, pricing, and trade. c. Gaps in the treatment of malnutrition. d. Gaps in the improvement of safety net tools.
(e) Gaps in increasing employment opportunities, especially between young people and women.
1- The decline in the contribution of the agricultural sector to the GDP, which reached below 5% on average for the period 2003-2020, and this reflects a significant structural imbalance due to the dependence of the Iraqi Economy on oil rents, which requires structural reforms to increase the contribution of productive sectors to the GDP, especially the agricultural sector to reach self-sufficiency and achieve food security.
2 - The decline in achieving the level of food security in Iraq, mainly from strategic cereals, which often gets the food gap, especially wheat and rice crops, so a viable strategy must be developed to address this problem, especially since the components and possibilities of its treatments are not abundant but untapped.
3- The decline in agricultural productivity in Iraq from the standard range indicates that the production process in the farm sector deviates from the optimal situation, which requires the use of modern technologies to produce improved seeds, fertilizers, pesticides, and production requirements.
4 - Iraq has not reached the State of self-sufficiency in fertilizers. The deficit in fertilizers is about 70% at present, so we recommend the re-operation of fertilizer factories to the previous as absorbent chemical fertilizers in the southern, western, or northern regions to achieve self-sufficiency but to export them, especially phosphate fertilizers.
5 - The low level of use of agricultural mechanization as an indicator of technological progress, as the deficit in tugs reached about (31587) draws. In contrast, the harvesters went the debt (5230) harvesters. The lack of use of mechanization led to a decline in the efficiency of agricultural performance by about 14% from its efficiency in some developed countries, so we recommend the use of agricultural mechanization in most agricultural production processes by achieving the level of technological sufficiency.
6- Establishing the National Committee for Food Security is a step in the right direction. Still, it suffers from a range of challenges, including insufficient resources to support food and nutrition security, the ineffectiveness of the institution's concern in food security, and the last challenge includes low productivity, the ineffectiveness of supply and service systems, low investment, and decreasing exploited arable land from 3 2 million dunams to 1 8 million dunams, which requires the support of this committee in all fields to achieve its goals.

References and Margins

(1) Abdul Razzaq Mutlaq Fahd, Arab Food Security, Journal of the College of Education for Girls, Vol. 17, No. 3, 2019, p. 336.
(2) Rania Thabet Al-Douri, The Reality of Arab Food Security and the Potential Changes in the Light of Economic and International Changes, Damascus University Journal of Economic and Legal Sciences, Vol. 24, Issue I, 2018, p. 287.

(3) Sen ،A.K (1981) poverty and Famines An Essay on Entitlements and Deprivation Oxford: Clarendon Press. P16.
(4) Hassan Fahmy Jumaa, The Possibility of Developing Grain Production in the Arab World, Arab Organization for Agricultural Development, Khartoum, 1992, p. 5.
(5) Food and Agriculture Organization of the United Nations, Rome, 1985.
(6) Jamil Mohammed Jameel, In the Light of World Food Security, Local Production and Food Demand in the Arab World, Journal of Agricultural Engineer, Issue One, Tenth Year, 1979, p. 27.
(7) Abdul Ghafoor Ibrahim Ahmed, Food Security in Iraq and its Future Requirements, Bayt al-Hikma, Baghdad, 1999, p. 12.
(8) about. Hassan Najafi, Estimating and Analyzing Food Security Indicators in Selected Arab Countries for the period (1996-2012), Faculty of Administration and Economics, University of Mosul, Journal of Economic and Administrative Sciences, Vol. 21, No. 84, p. 301.
(9) Fatima Bakri, The Dilemmas of Achieving Food Security in the Arab World, Journal of Truth, Vol. 2, No. 10, 2017, p. 89.
(10) Arab Organization for Agricultural Development, The Situation of Arab Food Security, Arab State League, Khartoum, 2022, p. 25.
(11) AboutDr. Hassan Najafi, op. cit., p. 301.
(12) World Food Programme, Iraq Office, Comprehensive Analysis of Food Security and Vulnerable Groups in Iraq, 2019, p. 7.
(13) Ministry of Planning, Central Bureau of Statistics and Information Technology, Comprehensive Analysis of Food Security and Vulnerable Groups, Iraq, 2018, p. 6.
(14) Siham Kamel Mohammed Al-Musawi et al., The Impact of the Food Gap in Strategic Crops and the Achievement of Food Security in Iraq, Al-Mustansiriyah Journal of Arab and International Studies, No. 27, 2009, p. 196.
(15) Rania Thabet al-Douri, The Reality of Arab Security and its Changes, op. cit.2019, p. 288.
(16) Blasem Jamil Khalaf, The Reality of the Iraqi Economy and the Challenges of Direct Investment, research presented to the Faculty of Administration and Economics seminar, the encyclopedia The reality of the Iraqi Economy and the challenges of direct investment on 27/2/2010.
(17) Hassan Mohamed Rifai, The Environmental Dimension as a Cause of Poverty, Research Presented to the Third International Forum, Environmental Protection, and Poverty in Developing Countries, The Case of Algeria, Institute of Economic and Facilitation Sciences 2019, pp. 6-10.
(18) United Nations, Economic, and Social Commission for Western Asia, Food Security and Conflict in the ESCWA Region,2020, p. 42.
(19) Ministry of Agriculture, Challenges of the Agricultural Sector in Iraq, Ministry of Agriculture Workshop at the Conference on the Advancement of the Agricultural and Fiction Sector in the Provinces, Baghdad, December 16-17, 2009.
(20) Blasem Jamil Khalaf, The Importance of Agricultural Investment in Achieving Food Security in Iraq, College of Administration and Economics, University of Baghdad, Journal of the Baghdad College of Economic Sciences University, Special Issue of the Fifth Scientific Conference, 2018, p. 7.
(21) World Food Programme of the World Food and Agriculture Organization (WFP): WWW. WFP. Organic/2m=zoo،
(22) Arab Organization for Agricultural Development, Yearbook of Agricultural Statistics, Volume 29 /2019, p. 33.
23) WFP, Strategic Review of Food Security and Nutrition in Iraq, October 2018, p. 30.
24 Ibid., pp. 30-36.