13 DECEMBER 2024

The 'Grain from Ukraine' Initiative – A crucial contribution to African food security

Dr. Pavlo Martyshev Dr. Mariia Bogonos Valentyn Litvinov Roksolana Nazarkina



Credits: AFP

Table of contents

Executive Summary	3
Effects of Russia's full-scale invasion on Ukrainian agriculture	4
Ukraine's role in global food security and impact of Russia's full-scale invasion	5
Ukraine: Africa's potential breadbasket	8
'Grain from Ukraine' initiative: Major destinations and results	10
Hunger in the supported countries: Local context	14
Impact of the 'Grain from Ukraine' initiative on local food security	17
Prospects of the 'Grain from Ukraine' programme and policy implications	19
Endnotes	21

ABOUT THE AUTORS



Dr. Pavlo MartyshevResearcher at the Center for Food and Land
Use Research at Kyiv
School of Economics
(KSE Agrocenter)



Dr. Mariia Bogonos Head of KSE Agrocenter



Valentyn Litvinov Researcher at KSE Agrocenter



Roksolana Nazarkina Junior researcher at KSE Agrocenter

Executive summary

This discussion paper estimates the effect of Ukraine's 'Grain from Ukraine' humanitarian initiative on food security in African and MENA countries targeted by the programme. Ukraine is one of the largest exporters of agricultural produce, accounting for almost half of the world's sunflower oil exports, 13% of corn exports, and 8% of wheat exports in the 2020/21 marketing year. While Russia's war against Ukraine negatively affected global food security, it especially impacted African countries, since Ukraine is an essential contributor to local food security there. Of the total number of wheat and sunflower oil imports to Africa in 2021, those from Ukraine accounted for 16% and 23% respectively. Moreover, the growth of undernourishment on the continent is explained by a number of local factors: climate extremes, military conflicts, economic shocks, and disruption of food supply chains. The tight food supply in the region underscores the importance of Ukraine's presence on the local markets.

Our estimates, based on the World Food Programme methodology for calculating the number of people supported by the initiative, show that it has already supported around 16.2 million people in Africa and the Middle East over periods from 1 to 8 months. This is equivalent to feeding around 2 million people for one year. Using the acute food insecurity data from the Integrated Food Security Phase Classification (IPC) for 2023, we calculate that the programme reduced the number of people facing moderate to strong food insecurity (IPC 3-5) by 1.4% in the African and Middle Eastern countries supported in the period from November 2022 to August 2024. Meanwhile, the number of people facing intense food insecurity (IPC 4-5) decreased by about 8% during this period. Overall, the programme has

huge potential for development, which should be based on the humanitarian-development nexus that aims for a long-term reduction in hunger.

Four main policy options could be considered in this respect:

- 1. Integrating the development programmes into agricultural production in Africa
- 2. Pursuing facilitation of agri-food trade with African countries
- Increasing the supply of processed food products to low-income countries
- 4. Informing donors of the urgent priorities in maintaining African food security

Our estimates show that the 'Grain from Ukraine' initiative has already supported around 16.2 million people in Africa and the Middle East between November 2022 to August 2024.

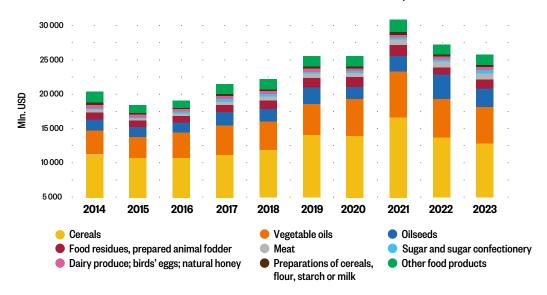
Effects of Russia's invasion on Ukrainian agriculture

There is significant evidence of the rising threats to global food security caused by Russia's full-scale war in Ukraine. In recent decades, Ukraine has strengthened its position as a global agricultural exporter. In the 2020/21 marketing year, it generated 46% of the world's sunflower oil exports, 13% of corn exports, and 8% of wheat exports. The transformation of Ukraine into a major agricultural supplier was due to

several factors: favourable natural conditions, proximity to import markets (the EU countries and MENA region), industrialisation of large-scale agriculture, and others. As Figure 1 shows, the value of agri-food exports from the country has more than doubled over the last decade, reaching almost \$28 billion in 2021. The main exports are cereals, sunflower oil, oilseeds, and poultry meat.

Figure 1.

AGRI-FOOD EXPORTS FROM UKRAINE BY COMMODITY, 2014-2023



Source: ITC Trade map

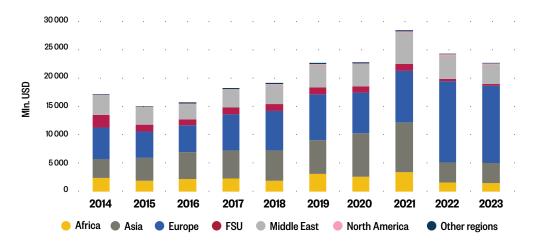
As Figure 2 indicates, the primary destinations for Ukrainian agri-food exports are Asian countries, the EU, the Middle East, and Africa. According to the ITC Trade Map data, the main importers in Asia are China, India, and Indonesia – they actively import Ukrainian sunflower oil, wheat, and corn. Before the full-scale war, the main importers in the EU were Spain, Netherlands, and Poland. Exports from Ukraine to these countries consisted mostly of sunflower oil, corn, rapeseed, and livestock products. The main buyers in the Middle East and Africa are Turkey, Egypt, Morocco, Yemen, Ethiopia, Saudi Arabia. They are focused mostly on cereals.³

Agriculture is one of the main sectors of the Ukrainian economy. In 2021, it accounted for 11% of GDP⁴ and employed 2.5 million people, around 14% of the total population.⁵ The war has had a huge impact on the agricultural sector. Losses are estimated at around \$80 billion for the period from February 2022 to December 2023. Around \$10 billion are direct damages (the combined value of the destroyed assets), while the indirect losses (lower output prices, drop in crop and livestock production, higher input prices) account for around \$70 billion.⁶ Indeed, the worst effect was caused by blocked seaports and the disruption of grain exports.

While trade flows were redirected to inland routes via Ukraine's western borders, the monthly transport capacity was limited to around 1.5 million tons – around four times lower than the pre-war export volumes. Furthermore, logistics costs increased from \$30/ton to more than \$150/ton, making grain exports unprofitable.

In August 2022, the UN-Türkiye brokered Black Sea Grain Initiative was launched. It established grain corridors from three Black Sea deep water ports (Odesa, Chornomorsk and Pivdennyi). The initiative allowed Ukraine to increase the volumes of its seaborne exports. However, these volumes were still much lower when compared to the pre-war level. Inspections of ships in the Bosphorus created a major bottleneck in grain corridors as the Russian part of the Commission purposefully slowed down the process.¹⁰ Russia withdrew from the Grain Initiative in July 2023. Nevertheless, Ukraine launched alternative Ukrainian Black Sea corridors in September 2023 without negotiations with Russia. In contrast to the UN-Türkiye brokered Grain Initiative, the Ukrainian Black Sea corridors allowed Kyiv to increase export volumes of both agricultural and non-agricultural commodities, and led to the reduction of transportation costs.11

AGRI-FOOD EXPORTS FROM UKRAINE BY REGION, 2014-2023



Source: ITC Trade map

Note: FSU stands for former Soviet Union countries.

Ukraine's role in global food security and the impact of Russia's full-scale invasion

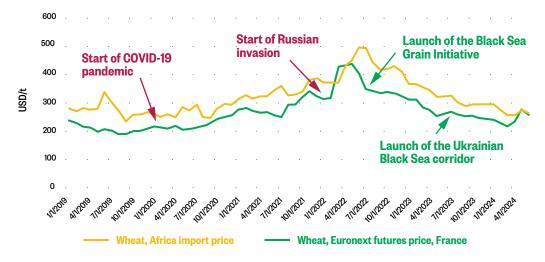
According to estimates from the analytical company Gro Intelligence, published by the World Food Programme (WFP), around 400 million people globally consumed Ukrainian food products each year before the start of the full-scale war. ¹² The war-related disruption of exports from Ukrainian sea ports caused agricultural prices to surge on the global market, and in particular, on the African continent. As Figure 3 shows, the war-related price shock contributed to the already existing food crisis triggered by

global inflation during and after the COVID-19 pandemic.

The launch of the Black Sea Grain Initiative in August 2022 prompted a decline in global food prices, thereby easing the situation to an extent. Apart from the recovery of exports from Ukraine, the downward trend was supported by the slowdown of the global economy¹³ and the reduction of climatic risks in the main grain producing regions, in particular in South America.¹⁴

Figure 3.

MILLING WHEAT PRICES ON GLOBAL AND AFRICAN MARKETS, 2019-2024



Source: Euronext exchange, ITC Trade Map

Notes: (1) We use the nearby futures contract on soft milling wheat on Euronext exchange (Paris) as a proxy for global wheat prices. (2) Africa import price of milling wheat is calculated as the weighted average import prices for all African states sourced from ITC Trade Map database. (3) Events threatening food security are marked in red; events supporting food security are marked in green.

Figure 3 also shows the close correlation between global and local prices in African countries. This confirms the dependence of local food security on global market shifts. In this respect, the self-regulation function of integrated markets reduces the importance of export destinations in maintaining global food security. This fact debunks Russian narratives regarding Ukraine's low contribution to global food security due to the relatively small share of low-income African countries in Ukraine's global food exports¹⁵. Indeed, the ITC Trade Map data shows that of all the destinations for Ukrainian exports in 2021, the share of those going to African countries was 32% for cereals and 4% for sunflower oil: most of these exports went to North African states experiencing a moderate level of food insecurity. Nevertheless, the disruption to Ukrainian agricultural exports even to non-African countries undermines food security on the African continent by reducing the global supply of grain and putting upward pressure on global prices. This was highlighted at the UN Security Council on 19 May 2022, when David Beasley, Executive Director of the WFP, stated: "When a country like Ukraine, which provides food for 400 million people, is out of the market, it creates market volatility."16

In general, measuring the true impact of the war on global food security raises a number of methodological issues. First, global markets were largely affected by factors not related to Ukraine (for example, climatic risks in the major grain-producing countries and recessional processes in the global economy). Second, the variety of assumptions for such estimations is quite wide: they can include not only the shortage of grain supply from Ukraine, but also different scenarios for Russian exports of grain, crude oil and fertiliser. Of course, the larger unknown remains: the duration of the war.

In March 2022, the WFP estimated an increase in people experiencing acute food insecurity¹⁷ in 81 countries in which it has operations. It did so according to two scenarios: the first envisaged the war ending in April 2022, and estimated the expected increase in the number of food-insecure people in 2022 at an additional 33 million from a pre-war baseline of 276 million. The

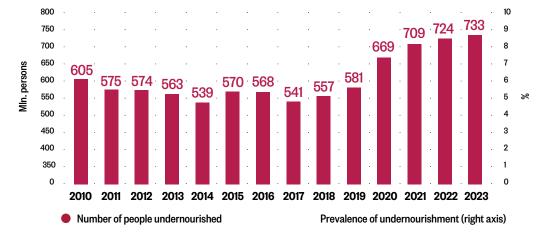
second scenario assumed the war would continue beyond April 2022, with an additional 47 million food insecure people for that year. 18 Obviously, the prolongation of the war might increase these numbers. Last, the experience of comparing the economic effect of previous food crises highlights the importance of measurement of very complex factors affecting agricultural markets. The examples of such factors are export restrictions, panic food buying (hoarding), macroeconomic shocks, shifts of consumer preferences, and so on.

The aggregated numbers of undernourished populations experiencing chronic food insecurity¹⁹ sourced from the database of the Food and Agriculture Organization of the United Nations (FAO) highlights the negative effect of the war on global food security. As Figure 4 shows, the number of undernourished people in the world has increased since 2017; the highest spike was in 2020 amidst the acceleration of global inflation during the COVID-19 pandemic. In 2022, the number increased by 15 million people. An additional 9 million people faced undernourishment in 2023 despite the decline in global food prices.²⁰ Meanwhile, the share of starving people in the total population (prevalence of undernourishment) increased from 9% to 9.1% in 2022 and remained at this level in 2023.

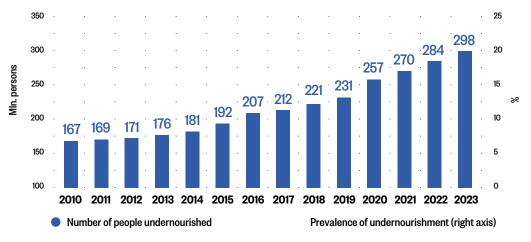
The slowed growth of undernourishment indicators could provide a misleading view about the effect of the war in Ukraine on global food security. But the aggregated numbers do not reflect increasingly unequal access to food throughout the different regions of the world. Indeed, the war-induced shocks have the most pronounced effect on low-income countries in Africa. In 2022, the number of undernourished people in the region increased by around 14 million people (Figure 5), which is more than 90% of the global total. Moreover, the increase in 2023 was at the same level, which is more than 150% of the global increase. This means that while other regions showed improvements in food security indicators, the situation in Africa continued to deteriorate. In 2023, almost 300 million people on the continent faced a deficit of calories. As for the prevalence of undernourishment, in 2022 it increased by 0.6% to 19.9%, and in 2023, by 0.5%.

Figure 4.

NUMBER OF PEOPLE UNDERNOURISHED AND PREVALENCE OF UNDERNOURISHMENT IN THE WORLD, 2010-2023



NUMBER OF PEOPLE UNDERNOURISHED AND THE PREVALENCE OF UNDERNOURISHMENT ON THE AFRICAN CONTINENT, 2010-2023



Source: FAOSTAT

The dichotomy between the worsening food security situation on the African continent and improved access to food in the other regions implies that hunger in African countries is grounded in both global and local factors. As we will see, the war in Ukraine affects both groups of factors. This increases the role of humanitarian interventions to mitigate war-related shocks in African states.

War-induced shocks have the most pronounced effect on low-income countries in Africa: in 2022, the number of undernourished people in the region increased by around 14 million people.

Box 1. Methodological note. For the analysis of food security, we use the indicators calculated within the **Integrated Food Security Phase Classification (IPC)**. IPC is a set of standardised procedures used by governments, UN agencies, NGOs, and other institutions for measuring the intensity of food insecurity for evidence-based strategic decision-making.²¹

There are two different approaches used for measuring food insecurity within the IPC system. The first approach measures so-called **chronic food insecurity**, which is defined as "a structural, long-term situation of food deprivation." The chronic food insecurity indicators are based on statistical measurements that are representative of the whole population across the countries; they reflect the inability to meet minimum dietary requirements of calories and nutrients. The primary source for data on chronic food insecurity is the FAOSTAT database.²² The methodology of calculating chronic food insecurity indicators is described, among other sources, in Annex 1B of **The State of Food Security and Nutrition in the World (SOFI)** 2023 report,²³ which provides a broad overview of global food security.

The second approach measures acute food insecurity. This provides a deeper and more local view of undernourishment in countries experiencing food crises. The methodology of calculating acute food insecurity is a statistical one. As mentioned in the SOFI report, it is "the result of a process of convergence of evidence reached by a country team of analysts, based on the most recent available information from various sources." Acute food insecurity is measured on a five - phase scale that reflects the different severities of undernourishment: IPC 1 - Minimal; IPC 2 - Stressed; IPC 3 – Crisis; IPC 4 – Emergency; IPC 5 – Famine.²⁴ In IPC 3, 4, and 5, humanitarian assistance is urgently required. The methodology for estimating acute food insecurity is described in Technical Manual Version 3.1. **Evidence and Standards for Better Food Security and Nutrition Decisions.**25

In our analysis, we use chronic food insecurity indicators to overview the general picture regarding the food security situation, and acute food insecurity indicators to provide local level insights in the most vulnerable countries.

Ukraine: Africa's potential breadbasket

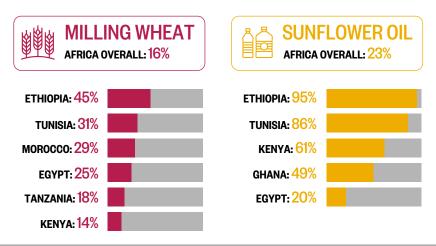
In recent years, Ukraine's export volumes to African states with moderate and low levels of food security have gradually increased. According to the ITC Trade Map, in 2021 Ukraine exported agri-food products valued at \$4.6 billion to 52 out of the 58 African countries (around 4% of the total agri-food imports to Africa). African states are the most reliant on import of two commodities from Ukraine: wheat and sunflower oil (Figure 6).

Indeed, cereals and vegetable oils accounted for more than 80% of Ukraine's agricultural exports to Africa. Ukraine's exports to the region dropped in 2022 due to the slowed seaborne trade, but partially recovered in 2023 (Figure 7). Positive improvements for exports remain in 2024. According to Ukrainian Grain Association data, export volumes for January-October

2024 exceeded the indicators for the same period of 2023 by approximately 10 million tons. Such success is largely based on the smooth functioning of the Ukrainian Black Sea corridors. Meanwhile, the essential exporting potential is grounded on the projections of post-war recovery of Ukrainian agriculture. According to estimates by the Centre for Food and Land Use Research at Kyiv School of Economics (KSE Agrocenter), cereals' production in Ukraine is projected to increase by 42% in the 2023-2033 period, reaching more than 76 million tons. Oilseed production is meanwhile projected to increase by 64%, to around 33 million tons. The other fast-growing sector is poultry production: the total output is projected to grow by 28%.26 Therefore, the part of this additional production is expected to be exported to African markets.

Figure 6.

AFRICA'S IMPORT DEPENDENCE ON UKRAINIAN WHEAT AND SUNFLOWER OIL IN 2021



Source: ITC Trade Map

Figure 8 shows how Ukrainian agri-food exports are distributed across African states. Egypt was the largest importer of Ukrainian agri-food products (42% of total Ukrainian exports to Africa in 2021). The other important destinations for Ukrainian exports were Libya, Morocco, Tunisia, Ethiopia, Algeria, Nigeria, Kenya, Djibouti, and Sudan. While there is no strong causality proving that the presence of active diplomatic missions in Africa facilitates trade, there is some correlation between diplomatic missions in certain African states and export volumes to them. This in turn indicates the level of political and economic openness of the countries.

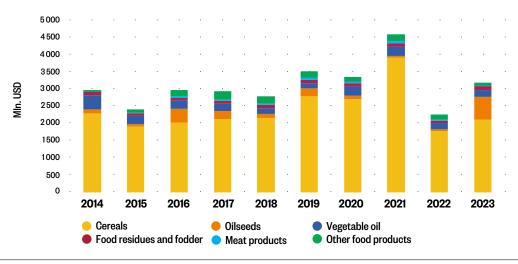
According to the ITC Trade Map database, of the total figure for African imports of cereals in 2021, **12%** were from Ukraine. The main importers of Ukrainian wheat were Ethiopia (45%), Tunisia (31%), Morocco (29%), and Egypt (25%). The other major grain suppliers to the African region are the Russian Federation, the EU countries, Brazil, Canada, and Argentina. During

the first few months of the war, Ukrainian grain was substituted by grain of other origins, but only to an extent. For example, Ukrainian wheat to Egypt was partially replaced by Russian and French wheat, and to Morocco, by Canadian and French wheat. Overall, there is evidence that countries in the region try to diversify their own grain imports to reduce risks to local food security induced by the war.²⁷

As Figure 9 shows, in 2022 Egypt received fewer agricultural exports from Ukraine, while those to other destinations increased. However, in 2023, Ukraine partially recovered its presence in the Egyptian market, while it decreased in other African states. Overall, in both pre-war and wartime periods, the main destinations for Ukrainian exports were geographically close countries with access to the sea. Therefore, one of the goals of humanitarian programmes is to partially redirect commodity flows to more remote and lowincome regions.

Figure 7.

UKRAINE'S AGRI-FOOD EXPORTS TO AFRICAN COUNTRIES, 2014-2023



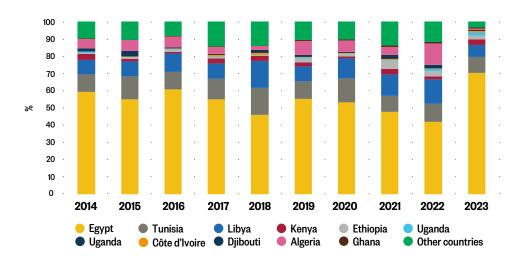
Source: ITC Trade Map



Source: KSE Agrocenter, State Customs Service of Ukraine, MFA of Ukraine

Figure 9.

GEOGRAPHICAL STRUCTURE OF UKRAINE'S AGRI-FOOD EXPORTS TO AFRICA, 2014-2023



Source: ITC Trade Map

'Grain from Ukraine' initiative: major destinations and results

The challenges to implementing the Black Sea Grain Initiative in 2022 showed that Ukrainian exports to most low-income states in sub-Saharan Africa are problematic. Private traders mostly re-oriented themselves to closer destinations such as EU and MENA countries to avoid losses associated with high logistics costs.

In response to the war-induced food crisis, Ukrainian President Volodymyr Zelenskyy launched the humanitarian programme 'Grain from Ukraine' on 26 November 2022. The programme is organised as an initiative within the WFP. Its primary goal is to overcome the humanitarian and economic consequences of the global food crisis caused by Russia's war of aggression against Ukraine. The initiative operates in the general WFP framework, where the donor countries provide finance to purchase agricultural commodities on a competitive basis and then provide food assistance to low-income countries. At the start of the initiative, over 30 donor countries and international organisations accumulated around \$220 million for humanitarian purposes.²⁸

Generally, the bilateral assistance from a donor country to a recipient country accounts for the majority of the WFP funds. This is also true for the 'Grain from Ukraine' initiative. By contrast, flexible multilateral funding, 29 which is fully managed by the WFP in line with its strategic priorities, represents a small share of the overall aid budget (9% in 2022 and 14% in 2023).30 The limited flexibility of WFP assistance means that food assistance cannot always be optimally distributed among the undernourished population (this approach has long been criticised31). Nevertheless, this assistance prioritises aid for the starving population and usually does not target people with relatively high incomes. This feature makes the humanitarian flows different from the commercial export flows, which are directed to populations that can afford to buy food at market prices.

The data provided by WFP allows for a comprehensive evaluation of the contribution of the 'Grain from Ukraine' initiative to African food security. During the period from November 2022 to August 2024, 10 vessels were

Table 1.

SHIPMENTS UNDER THE 'GRAIN FROM UKRAINE' INITIATIVE, NOVEMBER 2022- AUGUST 2024

Country	Ship name	Cargo	Port of departure	Shipping period	Port of arrival	Number of people supported (WFP estimation)	Number of people supported (1-year equivalent)
Ethiopia	Nord Wind	27,000 tons of milling wheat	Odessa	December 2022	Doraleh (Djibouti)	1500 thsd. people for 1 month	125 thsd. people
Ethiopia	Callisto	30000 tons of milling wheat	Chornomorsk	December 2022	Doraleh (Djibouti)	1666 thsd. people for 1 month	138 thsd. people
Somalia	Neva	25000 tons of milling wheat	Odessa	December 2022	Berbera (Somalie)	450 thsd. people for 5 months	187.5 thsd. people
Ethiopia	Amira Hana	30000 tons of milling wheat	Chornomorsk	February 2023	Djibouti	1666 thsd. people for 1 months	138 thsd. people
Kenya	Valsamitis	30000 tons of milling wheat	Chornomorsk	March 2023	Mombasa	820.67 thsd. people for 3 months	205.167 thsd. people
Yemen	Negmar Cicek	30000 tons of milling wheat	Chornomorsk	April 2023	Salif (Yemen)	3700 thsd. people for 1 month	308 thsd. people
Nigeria*	Fuat Sezgin	25000 tons of milling wheat	Samsun (Turkey)	January 2024	Harcourt (Nigeria)	820.67 thsd. people for 3 months	205.167 thsd. people
Sudan*	Ocean Dream	7665 tons of wheat flour	Samsun (Turkey)	February 2024	Khartoum (Sudan)	773.7 thsd. people for 1 month	64.48 thsd. people
Sudan*	Future ID	14600 tons of wheat flour	Samsun (Turkey)	March 2024	Khartoum (Sudan)	1474 thsd. people for 1 month	122.83 thsd. people
Jordan	Med Cesme	1000 tons of wheat flour	Samsun (Turkey)	July 2024	Aqaba (Jordan)	101 thsd. people for 1 month	8.42 thsd. people
Total	-	-	-	-	-	12972.04 thsd. people for 1-5 months	1502.564 thsd. people for 12 months

Source: WFP data, own estimations (for 1-year equivalent).

Note: *For shipments to Nigeria and Sudan, WFP estimates of the number of people fed are not available. Therefore, numbers were calculated using the equivalent volumes of milling wheat and wheat flour supplied to other states.

dispatched within the initiative's framework.³² They delivered **220**, **200** tons of agricultural products, including 197,000 tons of milling wheat (accounting for about 3.6%, or 540,000 tons, of Ukraine's total wheat exports to Africa, as shown by the ITC Trade Map) and 23, 200 tons of wheat flour (Table 1).

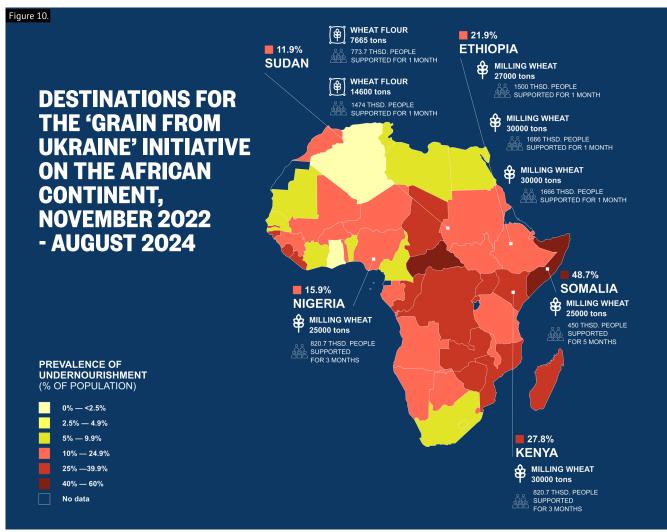
The number of people fed by the initiative in its first five months is almost 13 million. The lengths of these periods indicate the timeframe for providing food assistance under the particular consignments. This timeframe is defined by WFP with respect to the intensity of local food insecurity. To make this number more comparable to food security indicators, which are calculated on the yearly basis, we recalculate the number of people supported in the 1-year equivalent. This number shows how many people are fed by the programme over the 12-month period. The figure is calculated by multiplying the number of people fed by a particular operation by the duration of that operation in months, then dividing by 12 months. It is estimated that the food assistance supplied under the allocations finished as of August 2024 could feed around 1.5 million people for one year.

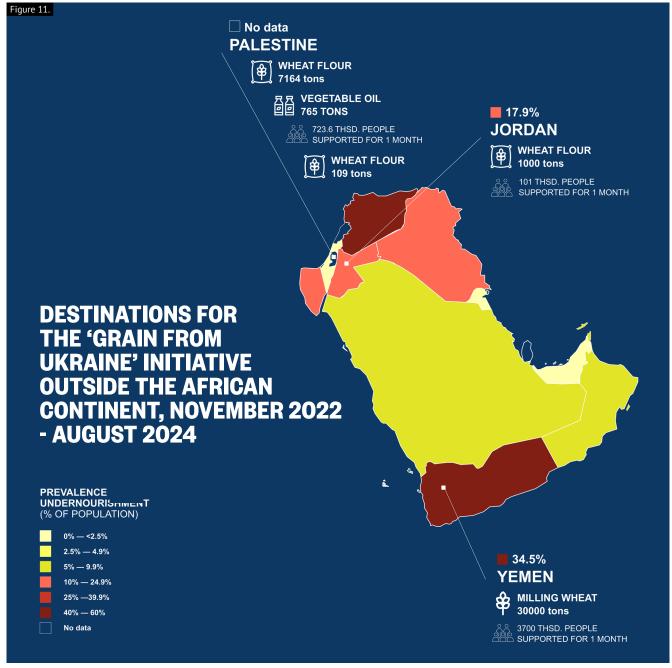
Figure 10 is a map that displays shipments to African countries under the 'Grain from Ukraine' initiative ended as of August 2024. The operations target countries with moderate and to high levels of food insecurity where the

prevalence of undernourishment exceeds 10%. Before August 2024, food assistance was provided mostly to states with access to the sea (except Ethiopia, which received grain via Doraleh port, located in Djibouti). The dominance of sea routes can be explained by the fact that much of the food assistance comes in the form of unprocessed wheat, which from a technical and economic standpoint is not very suitable for inland transportation.

Besides African countries, the programme targeted vulnerable populations in Palestine, Jordan and Yemen, which is one of the most food-insecure countries in the Middle East (Figure 11).

While other regions showed improvements in food security indicators, the situation in Africa continued to deteriorate. In 2023, almost 300 million people on the continent faced a deficit of calories.



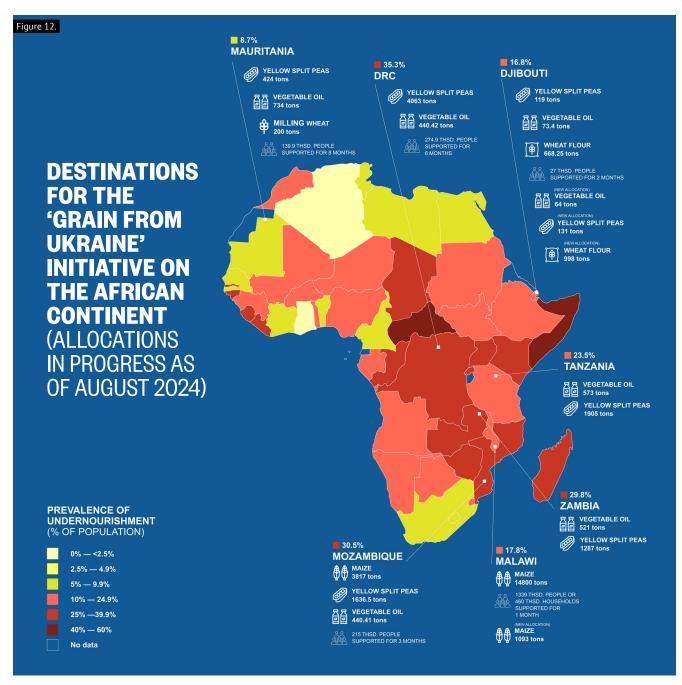


Source: Created by authors based on WFP data

At the same time, Figure 12 shows the volumes and geography of operations, which were in progress as of August 2024. The map indicates the evolution of the programme in respect to commodity structure and geography. First, the initiative has started to provide more value-added processed products such as wheat flour, vegetable oil (sunflower oil) and vellow split peas. Milling wheat barely features, while maize does. Such product structure is not only efficient in terms of calorie density of cargo, it also addresses the malnutrition problem by supplying more nutrient-rich food. Fortified wheat flour, sunflower oil and yellow split peas are solid sources of vitamins, minerals, essential acids and protein. The addition of processed products also allows for food assistance to reach land-locked states, such as the Democratic Republic of Congo (DRC) and Zambia.

It is estimated that the food assistance supplied under the allocations finished as of August 2024 could feed around

1.5 million people for one year.



Source: Created by authors based on WFP data

The allocations which were in the pipeline as of August 2024 covered 42, 400 tons of food products, including 19,700 tons of maize, 3,600 tons of vegetable oil, 200 tons of wheat, 8,800 tons of wheat flour, and 10,000 tons of yellow split peas. According to WFP estimates, these volumes can feed around 3.2 million people for 1-8 month periods. In the one -year equivalent, the number of people fed is around 0.5 million.

Overall, as of August 2024, pending and completed allocations within the programme have fed around 16.2 million people for the periods from 1 to 8 months. This is equivalent to feeding around 2 million people for one year.

Overall, as of August 2024, pending and completed allocations within the programme have fed around 16.2 million people for the periods from 1 to 8 months.

Hunger in the supported countries: local context

As mentioned, the growth of undernourishment in African countries is driven by a mix of global and local factors. Understanding the local context for food security allows for better insight into the importance of humanitarian food programmes, since these programmes address problems which cannot be fixed by market mechanisms. Based on open sources, it is possible to identify the main local drivers of food insecurity in countries targeted by the 'Grain from Ukraine' initiative. As Table 2 shows, these factors include:

- a) Military conflicts; growing number of refugees and internally displaced persons (IDPs)
- b) Climate instability (mainly droughts and floods)
- c) Weak macroeconomic environment
- d) Disruptions of supply chains for food products and inputs of agricultural production.

Table 2.

LOCAL FACTORS AFFECTING FOOD SECURITY IN COUNTRIES SUPPORTED BY THE 'GRAIN FROM UKRAINE' INITIATIVE

Country	Local drivers of food insecurity (2021-2023)
Ethiopia	 Severe drought in 2022 and 2023 increased the number of people requiring urgent food assistance by about 4 million³³ Strong floods induced by the El Niño weather pattern that affected around 1.5 million people in 2023³⁴ Outbreaks of malaria, measles, and cholera Military conflict in the Amhara Region in 2023³⁵ Economic turbulence in 2023-2024 (almost twofold Birr depreciation, inflation, trade deficit)³⁶
Kenya	- Several consecutive poor rainy seasons since 2020 - Conflict among communities in arid and semi-arid lands - Inflow of refugees from Somalia and South Sudan ³⁷ - Fragile macroeconomic environment ³⁸
Tanzania	- Decreased crop production amidst prolonged drought and lack of fertilisers - Increased number of refugees from Burundi and DR Congo ³⁹
Somalia	- Several consecutive poor rainy seasons since 2020 - Floods in southern and central regions - The intensification of civil war in southern and central regions ⁴⁰ - Growth of IDPs (3.9 million in 2023) ⁴¹
Djibouti	- Strong dependence on imports; disruptions of food supply chains in 2022-2023 - Drop in agricultural production due to dry weather conditions ⁴²
DR Congo	 Spread of crop and livestock diseases Intensive floods in northern and central regions⁴³ Escalation of military conflict; growth of IDPs to 6.1 million (2023)⁴⁴ High number of refugees around (0.5 million) amidst conflict in neighbouring Central African Republic and Rwanda⁴⁵
Sudan	 The eruption of civil war in April 2023 Suspension of some humanitarian food distribution operations due to security reasons Growing number of IDPs (9.1 million in 2023)⁴⁶ Collapse of banking system; inflation⁴⁷
Nigeria	 Insurgency in northeastern Nigeria⁴⁸ Long-lasting farmer-pastoralist conflicts⁴⁹ Local floods in riverine areas Strong depreciation of the Nigerian Naira exchange rate (by around 70%); outbreak of inflation⁵⁰
Palestine	- Escalation of conflict in October 2023 - Disruption of food value chains (2.2 million people or 100% of the Gaza population faced high levels of acute food insecurity – GRFC 2024 report)
Yemen	- Armed conflict; growing number of IDPs (4.5 million people in 2023) ⁵¹ - Financial turmoil; depreciation of the Yemeni Rial ⁵² - Persistent drought

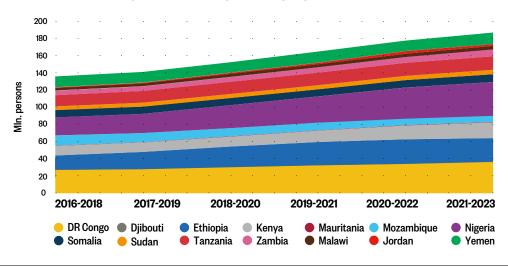
Source: Created by authors

Table 2 confirms the notion that food security in some African countries cannot be easily improved by only facilitating food trade. Military conflicts, extreme weather and macroeconomic fragility undermine local demand. Therefore, the easing of world prices can only provide limited improvement to local food security. Figure 13 indicates that the total

number of undernourished people in supported countries increased by 36% over the 2016-2023 period, reaching 187 million people in the 2021-2023 period (according to the IPC's chronic food insecurity methodology). Only Mozambique showed a decline in the number of starving people, while other countries faced essential growth.

Figure 13.

NUMBER OF UNDERNOURISHED PERSONS IN COUNTRIES TARGETED BY THE 'GRAIN FROM UKRAINE' INITIATIVE



Source: FAOSTAT

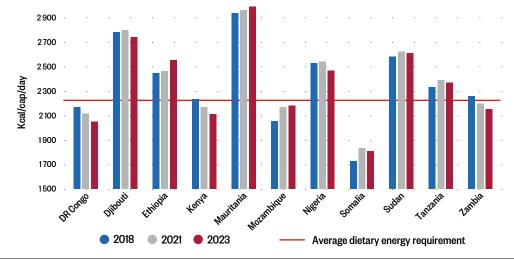
Note: To illustrate food insecurity dynamics, this chart uses the IPC chronic food insecurity methodology, which encompasses all the studied countries, whereas the acute food insecurity methodology does not.

Figure 14 shows the calorie gap between the average calorie supply and average dietary energy requirement in the selected countries. First, we see that the supply of calories in most countries declined in 2023 versus 2021. Second, in some countries, this supply does not meet the average dietary energy requirement for the

African region (slightly more than 2200 Kcal per person per day). Among the countries studied, Mauritania shows the highest calorie supply, almost two times higher than the average dietary energy requirement. Somalia has the lowest calorie supply, indicating a high level of hunger.

Figure 14.

AVERAGE CALORIE SUPPLY VERSUS AVERAGE DIETARY ENERGY REQUIREMENT IN COUNTRIES TARGETED BY THE 'GRAIN FROM UKRAINE' INITIATIVE



Source: FAOSTAT

Although the average calorie supply is one of the most efficient proxies for food security, it does not reflect the inequality in food distribution among the population. To understand the intensity of the food deficit, acute food insecurity indicators have been used (see Box 1). Note that because these indicators are calculated using different methodologies to those used for chronic food insecurity indicators, the number of undernourished persons in these methodologies is different. From a methodological perspective, some persons in the group with moderate level of acute food insecurity (IPC 1 – Minimal, IPC 2 – Stressed) are not considered food insecure people in the chronic insecurity methodology.

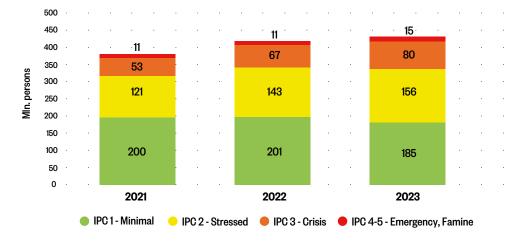
As Figure 15 indicates, the intensity of food insecurity increased in 2022 and 2023 with more people experiencing moderate and to high levels of food insecurity (IPC 2-5). In relative terms, the strongest increase was for IPC 3 – Crisis

(around 1.5 times). In 2023, the number of people facing hunger (IPC 4-5 – Emergency, Famine) increased from 11 to 15 million people, which underscores the importance of humanitarian food assistance at the local level.

The intensity of food insecurity increased in 2022 and 2023 with more people experiencing moderate and (to) high levels of food insecurity.

Figure 15.

THE INTENSITY OF FOOD INSECURITY IN COUNTRIES TARGETED BY THE 'GRAIN FROM UKRAINE' INITIATIVE



Source: Integrated Food Security Phase Classification

Note: The data covers the following African countries: DR Congo, Djibouti, Kenya, Somalia, Malawi, Mauritania, Mozambique, Sudan, Nigeria, Tanzania, Zambia. Ethiopia, Palestine, Jordan, and Yemen are not included in the IPC scale due to the lack of detailed data. For these territories, the aggregated numbers of people facing a strong level of acute food insecurity (IPC 3+) for the analysis of the 'Grain from Ukraine' initiative's contribution to local food security were applied.

Impact of the 'Grain from Ukraine' initiative on local food security

As mentioned above, the completed and pending operations within the initiative could feed around 16.2 million people for a period of several months, which is equivalent to feeding 2 million people for one year. At this stage, we can estimate the contribution of the programme in absolute and relative terms at the country level. As the benchmarks of food insecure people in the countries' assistance, IPC numbers for acute food insecurity in 2023 are used. This is justified according to three reasons:

First, one of the primary functions of IPC indicators of acute food insecurity is that they can calculate the effect of humanitarian programmes. Indeed, food assistance is prioritised for people facing emergency (IPC 4) and famine (IPC 5). After fulfilling the needs of this population, food programmes are targeted to IPC 3. At the same time, people experiencing IPC 1-2 are usually not supported by these programmes.

Second, the period for comparison must be justified. The actual supply of food assistance to destination ports started in 2023. Therefore, the 2022 numbers are not very relevant to the measurement of the programme's efficiency. Besides, the outbreak of undernourishment in 2022 was largely based on the relatively short-term spikes in global prices. By contrast, 2023 indicators are measured in the period of moderate prices. Therefore,

they represent a more sustainable trend of food security.

Third, at the point of writing, IPC numbers for 2024 are not calculated for the whole country on a yearly basis. Therefore, 2023 numbers are better suited, even for operations conducted in 2024.

Table 3 represents the country-specific food allocations for the states included in IPC scales of acute food insecurity, with a focus on moderate and strong food insecurity (IPC 3-5). As we can see, not all countries are included in this list due to the absence of IPC statistics (for example, Ethiopia and Jordan). The number of people supported ranges from 4,500 (Djibouti) to 205, 167 (Kenya and Nigeria) in the one -year equivalent. The column titled 'Contribution of the programme' shows the share of people supported as a percentage of the total number of people facing IPC 3-5 stages of undernourishment. This share is the lowest for states with high populations and therefore high numbers of undernourished people (Democratic Republic of Congo, Sudan, Nigeria). By contrast, Mauritania is an outlier with almost 22% of undernourished people targeted by the programme. This aligns with the data in Figure 10, which shows this country to have the highest calorie supply. The average contribution of the programme to the reduction of acute food insecurity at IPC 3-5 stages is around **1.4%**.

Table 3.

REDUCTION OF MODERATE AND STRONG FOOD INSECURITY (IPC 3-5) IN STATES SUPPORTED BY THE 'GRAIN FROM UKRAINE' INITIATIVE, NOVEMBER 2022 - AUGUST 2024

Country	Number of people supported (1-year equivalent), thsd. persons	Number of people facing moderate and strong food insecurity (IPC 3-5) in 2023, thsd. persons	Contribution of the programme, %
Somalia	187.5	5 600	3.3
Kenya	205.167	5 400	3.8
Yemen	308	18 000	1.7
Nigeria	205.167	24 800	0.8
Sudan	187.31	20 300	0.9
DRC	137.461	25 900	0.5
Mozambique	53.75	3300	1.6
Palestine	60.3	2 800	2.2
Djibouti	4.5	300	1.5
Mauritania	93.257	430	21.7
Malawi	111.583	4 400	2.5
Overall	1 554	111 230	1.4

Source: Calculated by authors using data from Integrated Food Security Phase Classification, WFP

Table 4 shows the contribution of the programme to the mitigation of more severe food insecurity (IPC 4-5). In this table, we exclude Palestine and Yemen, since there is no detailed dropdown across IPC 3, IPC 4, and IPC 5 phases for these territories. For the rest of the countries, the contribution of the initiative ranges from 3% (Sudan) to 37.2% (Malawi). Overall, the 'Grain from Ukraine' initiative reduced severe food insecurity in targeted countries by **8**% over the period that the initiative has been in action.

The 'Grain from Ukraine' initiative reduced severe food insecurity in targeted countries by 8% over the period that the initiative has been in action.

Table 4.

REDUCTION OF SERIOUS FOOD INSECURITY (IPC 4-5) IN STATES SUPPORTED BY THE 'GRAIN FROM UKRAINE' INITIATIVE, NOVEMBER 2022 - AUGUST 2024

Country	Number of people supported (1-year equivalent), thsd. persons	Number of people facing moderate and strong food insecurity (IPC 4-5), thsd. persons	Contribution of the programme, %
Somalia	187.5	1 900	9.9
Kenya	205.167	1 200	17.1
Nigeria	205.167	1 100	18.7
Sudan	187.31	6 300	3
DRC	137.461	3 400	4
Mozambique	53.75	200	26.9
Djibouti	4.5	100	4.5
Mauritania	93.257	300	31.1
Malawi	111.583	300	37.2
Overall	1185.7	14 800	8

Source: Calculated by authors using the data from Integrated Food Security Phase Classification, WFP

Prospects and policy implications of the 'Grain from Ukraine' programme

Our estimations show the growing role of the 'Grain from Ukraine' initiative in maintaining food security in the selected countries in Africa and the MENA region. While the absolute numbers of people assisted by the programme are quite precise and based on previous WFP estimates, how the contribution of the programme as measured in relative terms is understood depends largely on the methodology used. Using the IPC scale of measuring acute food insecurity, we estimate that the initiative reduced moderate and strong food insecurity (IPC 3-5) by 1.4% and strong food insecurity (IPC 4-5) by 8% in the November 2022 - August 2024 period.

The current projections of hunger rates in the world highlight the importance of further developing the initiative. FAO's SOFI report shows that around **582 million people** (or around 7% of the population) are projected to face undernourishment in 2030, and about half of this number will be in Africa. The challenges in achieving SDG 2 (Zero Hunger) are associated, in particular, with short-sighted policy measures within humanitarian programmes. Indeed, the retrospective analysis shows that orientation to short-term responses in food assistance undermines the long-term sustainability of food systems. There is evidence that the severity of the 2022 food crisis is rooted in the short-term policy orientation of humanitarian programmes during previous food crises, particularly in 2008. While short-term assistance is highly dependent on donors' contributions, the long-term policy of supporting agriculture and food supply chains in recipient countries demonstrates a more sustainable pattern for maintaining food security.53

Therefore, the future evolution of the 'Grain from Ukraine' initiative could be based on the creation of a **humanitarian-development nexus** that decreases humanitarian needs in the future due to investments right now in long-term food security goals. Such harmonisation of short-term and long-term priorities could be implemented via several channels:

1. Integrating development programmes into agricultural production in Africa. There is substantial potential for more integrated programmes aimed at increasing the resilience of African food systems. A successful example of such an integrated approach is the Feed the Future Programme funded by the U.S. Agency for International Development (USAID) and intended to reduce poverty and strengthen food security in certain regions of Ethiopia.⁵⁴ As for the Ukraine-Africa partnership in agriculture, the research conducted by the KSE Agrocenter highlights several perspective directions for such cooperation. They include (a) the

development of irrigation systems; (b) the transfer of agricultural technologies (precision agriculture, agronomy and crop selection, zero and minimum tillage technologies for crop production, veterinary, food waste management, etc); (c) common educational and scientific projects in agriculture; the formation of agricultural extension services in African states. ⁵⁵ Therefore, integrated programming with mixed public-private funding will ensure a more sustainable approach to addressing food security in recipient countries.

2. Pursuing facilitation of agri-food trade with **African countries.** Since the humanitarian food flows take only a small share of food supplied to the African continent and MENA region, the facilitation of Ukrainian agri-food exports to the region could improve local food security. In this respect, the 'Grain from Ukraine' programme could also be the platform for long-term policy dialogue between Ukraine and African states aimed at liberalising bilateral trade regimes. Indeed, the reduction in import duty rates for Ukrainian products within the regional trade areas such as The African Continental Free Trade Area (AfCFTA) or the East African Community (EAC) would substantially increase the presence of Ukrainian food exporters in African markets. On the operational level, the 'Grain from Ukraine' initiative could collaborate with other initiatives intended to open African markets to Ukrainian exporters. An example of such an initiative is the state-owned Ukrainian-African Trade Mission, headed by Ukraine's Ministry of Agrarian Policy and Food. The enterprise was created in 2023 to ensure Ukraine's foreign economic interests in African states and provide advisory services for humanitarian assistance.⁵⁶ Undoubtedly, collaboration between the 'Grain from Ukraine' initiative and business initiatives will create a positive synergy effect for Ukrainian agribusiness that will help increase its own presence in African markets.

The current projections of hunger rates in the world highlight the importance of further developing the initiative.

- 3. Increasing the supply of processed food products to low-income countries. According to the analysis above, providing food assistance in the form of nutrient-rich processed food is much more efficient for maintaining food security from both economic and social perspectives. The development of food processing in Ukraine is one of the priorities of the Strategy for the Development of Agriculture and Rural Areas in Ukraine for the period until 2030,57 which is aligned with the EU's Ukraine Facility Plan.⁵⁸ Therefore, the production and distribution of value-added food products provides essential opportunities for Ukrainian businesses. While some initiatives related to food processing and fortification (for wheat flour) are already implemented in Ukraine, the increasing production of specialised nutritious **foods**⁵⁹ could be one of the priorities of WFP in Ukraine within the 'Grain from Ukraine' initiative.
- 4. Informing donors regarding urgent priorities in maintaining African food security. Constant evidence-based dialogue with donor countries will increase the efficiency of food assistance within the programme. First, it could reduce (to some extent) the outflow of funding, which is usual after food crises. Second, providing donors with updated information on acute food insecurity at a regional level could enable a more flexible in-demand approach and the efficient geographical redistribution of humanitarian flows. This flexibility is in line with the priorities of the WFP management plan (2025–2027), aimed at increasing the capacity to accumulate non-earmarked funds to address emergencies in regions with low food security.

There is substantial potential for more integrated programs aimed at increasing the resilience of African food systems.

- ¹ U.S. Department of Agriculture. Commodity Marketing Years
- ² U.S. Department of Agriculture. Foreign Agricultural Service. Production, Supply, and Distribution (PSD)
- 3 ITC Trade Map database
- ⁴ State Statistics Service of Ukraine. GDP indicators
- ⁵ State Statistics Service of Ukraine, Employment indicators
- ⁶ Ukraine Third Rapid Damage and Needs Assessment (RDNA3): February 2022 - December 2023
- ⁷ <u>Ukrainian Grain Association. Export statistics</u>
- Pavlo Martyshev, Oleg Nivievskyi, and Mariia Bogonos. <u>Regional</u> war, global consequences: Mounting damages to Ukraine's agriculture and growing challenges for global food security. <u>IFPRI Blog: Guest Post (March 27, 2023)</u>
- ⁹ <u>Ukrainian Grain Association. Results of the grain corridor work</u>
- Grain Initiative: Russia artificially slows down inspection of ships in Bosphorus. Ukrainska Pravda (January 19, 2023)
- Yuriy Grigorenko. <u>Ukrainian sea corridor performance for half a year. GMK Center (February 15, 2024)</u>
- ¹² UN Press. <u>Lack of Grain Exports Driving Global Hunger to Famine Levels</u>, as War in Ukraine Continues, Speakers Warn Security Council. 9036th Meeting (AM & PM) (May 19, 2022)
- UN. 5 things you need to know about the global economy in 2023
- World Grain. IGC sees record total grains output in 2023-24
- KSE Agrocenter. <u>Debunking Russian narratives around the Black Sea Grain Initiative</u> (August 2023)
- UN Press. Lack of Grain Exports Driving Global Hunger to Famine Levels, as War in Ukraine Continues, Speakers Warn Security Council (May 2022)
- According to Global Report on Food Crises (GRFC) 2024, acute food insecurity «refers to a situation in which populations face food deprivation that threatens their lives or livelihoods, regardless of the causes, context or duration». More information on the acute food insecurity is provided in Box 1.
- WFP. Projected increase in acute food insecurity due to war in Ukraine (March 31, 2022)
- Chronic food insecurity refers to medium- and long-term inability to access food. According to FAO, chronic food insecurity «results from structural problems and as such cannot be overcome by periodic interventions of food from the reserve» (by contrast to acute food insecurity). More information on the chronic food insecurity is provided in Box 1.
- ²⁰ FAO Food Price Index
- ²¹ IPC overview and classification system
- ²² FAOSTAT. Suite of Food Security Indicators
- FAO, IFAD, UNICEF, WFP and WHO. <u>The State of Food Security and Nutrition in the World 2023.</u>
 - Urbanization, agrifood systems transformation and healthy diets across the rural—urban continuum. Rome, FAO (2023)
- ²⁴ IPC. Explainer for acute food insecurity
- 25 IPC. Technical Manual Version 3.1. Evidence and Standards for Better Food Security and Nutrition Decisions
- KSE Agrocenter. <u>Agricultural Outlook Ukraine 2024-2033. Reportsummary</u>
- 27 KSE Agrocenter. Can Ukrainian wheat be easily replaced? Analysis of trade flows (August 2, 2022)
- Ministry of Foreign Affairs of Ukraine. <u>Grain from Ukraine</u>. <u>Humanitarian Programme</u>

- According to the WFP Management Plan, the term "flexible funding" includes unearmarked multilateral contributions, contributions to life-saving activities made through the Immediate Response Account (IRA), and softly earmarked contributions directed to the regional and thematic levels.
- WFP management plan (2025–2027). Executive Board Second regular session, Rome (November 18–21, 2024)
- Edward Clay. Responding to Change: WFP and the Global Food Aid System. Development Policy Review, 2003
- President of Ukraine. <u>Ukraine Sent Flour to Palestine under the Grain from Ukraine Program (July 18, 2024)</u>
- UN OCHA. Ethiopia Situation Report. (January 10, 2024)
- ReliefWeb. Ethiopia: Floods Nov 2023
- International Crisis Group. <u>Ethiopia's Ominous New War in Amhara</u> (November 16, 2023)
- Health Poverty Action. <u>Economic updates from Ethiopia. The unwinding impacts of IMF—and World Bank—backed economic reforms</u> (August 15, 2024)
- 37 ACAPS. Kenya
- ³⁸ African Development Bank Group. Kenya Economic Outlook
- Food Security Information Network. <u>Global Report on Food Crisis</u> 2023
- 40 Human Rights Watch. Somalia
- ⁴¹ Internal Displacement Monitoring Centre. Somalia
- 42 Food Security Information Network. <u>Global Report on Food Crisis</u>
- FAO. The Democratic Republic of the Congo. Data in Emergencies Monitoring brief, round 5 (May 2023)
- ReliefWeb. <u>Democratic Republic of the Congo: Internally displaced persons and returnees</u> (July 2023)
- ReliefWeb. The Democratic Republic of the Congo: Refugee Policy Review Framework Country Summary (June 2023)
- ReliefWeb. IOM | Sudan Displacement Tracking Matrix (DTM)
- 47 UN OCHA. <u>Sudan: Seven months of conflict Key Facts and Figures</u> (November 15, 2023)
- 48 ACLED. A Decade After Chibok: Assessing Nigeria's Regional Response to Boko Haram (April 16, 2024)
- Daniel Tuki. <u>Pastoral conflicts and (dis)trust: Evidence from Nigeria using an instrumental variable approach</u>, Berlin Social Science Center (January 2023)
- Reuters. Nigeria's latest devaluation may be 'turning point' in currency reform drive (February 5, 2024)
- ⁵¹ Internal Displacement Monitoring Centre. <u>Yemen</u>
- FAO. Banking Sector Crisis Projected to Escalate Households Food Insecurity in Yemen (July 24, 2024)
- CARE International. Knowing Better, Responding Worse: How Mistakes from 2008 Led to the Food Crisis of Today. Policy paper (May 2023)
- 54 Feed the Future
- KSE Agrocenter. The African Countries and Ukraine Partnership
- Interfax Ukraine. <u>Ukraine to establish state-owned Ukrainian-</u> African Trade Mission LCC. June 19, 2023
- Strategy for the Development of Agriculture and Rural Areas in Ukraine for the period until 2030
- ⁵⁸ <u>Ukraine Facility Plan</u>
- 59 WFP. Specialized nutritious food

NOTES		

NOTES		

MISSION STATEMENT

The **European Policy Centre** is an independent, not-for-profit think tank dedicated to fostering European integration through analysis and debate, supporting and challenging European decison-makers at all levels to make informed decisions based on sound evidence and analysis, and providing a platform for engaging partners, stakeholders and citizens in EU policymaking and in the debate about the future of Europe.





