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Blueprint for an Agricultural Recovery Plan for Ukraine

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Introduction

Russia's full-scale invasion of Ukraine in February 2022 significantly disrupted Ukraine's agriculture sector, which is a pillar of its national economy and a key player in global food trade. It could take years or even decades for Ukraine's farmland, agricultural infrastructure, logistics routes, agricultural labor force, and agribusiness environment to recover from the destruction suffered throughout the war. This report aims to provide the government of Ukraine and its partners with a sequenced road map for Ukraine's agricultural recovery that positions the sector for a sustainable and economically competitive future.

From 2014 to 2022, agriculture contributed, on average, 10 percent of Ukraine's GDP. In 2021, agricultural exports accounted for $27.7 billion, or 41 percent, of Ukraine's export earnings. Agricultural exports increased as a proportion of total export revenue in 2024—representing over 59 percent—although their actual value **decreased** to $24.7 billion. Despite damages and losses from the war, Ukraine's agriculture sector continued to produce and export food products to domestic and foreign markets. In fact, in 2024, Ukraine was the **top exporter** of sunflower oil and sunflower meal, the third-largest exporter of rapeseed, fourth-largest exporter of corn and walnuts, fifth-largest exporter of barley, and sixth-largest exporter of wheat, soybeans, and poultry to global markets. The restoration of Ukraine's agriculture sector is not only the foundation for the country's economic recovery, but also critical for global food security and a promising direction for international cooperation and investment.

Since Russia's full-scale invasion of Ukraine, several agencies and organizations have developed strategic plans for Ukraine's reconstruction, recovery, and transformation. In July 2022, the National Recovery Council's New Agrarian Policy working group released a **Draft Ukraine Recovery Plan**. This document proposes a three-stage recovery approach: The first phase (2022) is focused on meeting urgent agricultural needs, the second (2023–25) on structural rebuilding, and the third (2026–32) on growth and modernization. A medium-term perspective is outlined in the **Food Security Strategy of Ukraine Until 2030**, developed by the Ministry of Economy. The strategy identifies tasks such as

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ensuring stable access to quality food, increasing domestic production, reducing import dependency, and enhancing the food system's resilience to crises and external shocks. More wide-ranging road maps like the ***Ukraine Facility Plan 2024–2027***, developed in cooperation with the European Union, outline long-term planning for rural development, EU integration, agricultural demining, the green transition, land governance reform, and digitalization. Other plans, such as the ***Emergency and Early Recovery Response Plan 2025–2026*** from the UN Food and Agriculture Organization (FAO), focus on meeting the urgent needs of small- and medium-scale producers.

Several sector-specific initiatives also deserve attention, such as the 2024 ***Action Plans for the Green Recovery and Transformation of the Ukrainian Food Industries***, developed with support from the UN Industrial Development Organization (UNIDO). This initiative focuses on energy-efficient technologies, reducing greenhouse gas emissions, and modernizing the food industry. Additional resources include a **white paper** from the European Business Association on economic recovery and EU market integration; the CEPA report ***Resilience, Reconstruction, Recovery: The Path Ahead for Ukraine***; the FAO's 2023 ***Ukraine: Response Programme***; the Centre for Economic Policy Research's 2022 publication ***A Blueprint for the Reconstruction of Ukraine***; and the National Recovery Council's 2022 **Ukraine's National Recovery Plan**. Together, these documents have suggested comprehensive policy frameworks for rebuilding Ukraine's agricultural potential that have been taken into consideration by the government of Ukraine. In November 2024, the Cabinet of Ministers approved Ukraine's **Strategy for the Development of Agriculture and Rural Areas through 2030**. The comprehensive blueprint put forward in this report aligns with and supports this strategy.

Since early 2022, the situation in Ukraine has significantly changed, particularly in the agriculture sector. The scale of destruction has intensified due to ongoing hostilities, drastically impacting rural infrastructure, farmland, and production facilities. Logistics chains have been restructured, especially following the blockade of the Black Sea, which disrupted grain exports and access to global markets. At the same time, climate and environmental challenges have become more acute, with growing issues related to droughts, soil degradation, and water scarcity in many regions. These factors have compounded the urgency of Ukraine's European integration, as aligning with EU standards and mechanisms offers long-term support for agricultural resilience and sustainability. In light of these evolving conditions, the existing recovery and development plans require revisions to better reflect current risks and to ensure the effective reconstruction and modernization of Ukraine's agri-food system.

This report builds on recovery and reconstruction plans developed throughout the full-scale war and presents the elements of a comprehensive plan for Ukraine's agricultural recovery. When a ceasefire is reached, this blueprint could serve as the basis for a formal plan for Ukraine's agricultural recovery, endorsed by the Ukrainian government and its partners. Absent a ceasefire plan, the blueprint could still help guide investments from Ukraine's partners in the country's agriculture sector. Priorities for agricultural investment are organized into four stages: urgent (0–1 years), short term (1–3 years), medium term (3–5 years), and long term (5+ years). Cross-cutting measures are put forward to optimize Ukraine's agricultural recovery within the country's overall reconstruction efforts.

Table 1: Framework for an Agricultural Recovery Plan for Ukraine

Stage	Priorities	Objective
Urgent (0–1 years)	Restore production, transportation, storage, and irrigation infrastructure	To restore core sector functions, demine agricultural land, and repair essential infrastructure
	Recultivate farmland and develop the land market	
	Secure financial assistance for farmers	
Short-term (1–3 years)	Develop export support and market diversification	To stabilize production, expand economic opportunities for farmers, and improve logistics routes
	Develop agricultural labor force and education	
Medium-term (3–5 years)	Strengthen rural communities and small-scale farmers	To lay the foundation for a sustainable, modernized, and competitive agriculture sector
	Develop the livestock industry	
Long-term (5+ years)	Integrate Ukraine's agriculture sector into the European Union	To strengthen Ukraine's integration into the global agricultural economy and attract long-term international partners
	Adapt the agriculture sector for climate change	
	Develop the food processing industry	

Urgent Measures (0-1 Year)

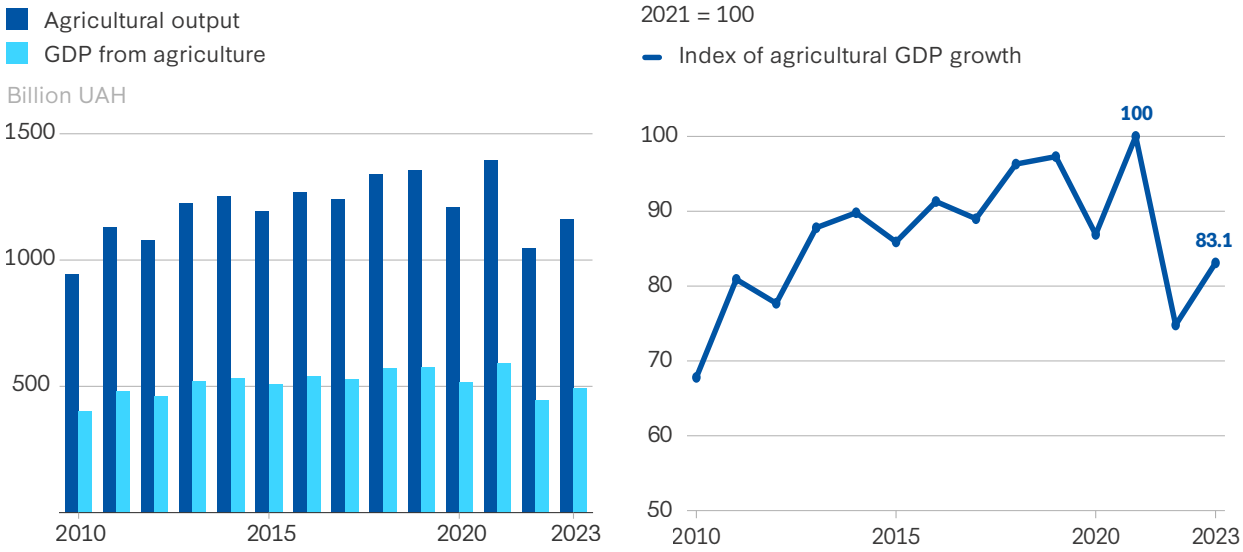
Urgent measures for immediate implementation should focus on restoring the basic functions of Ukraine's agriculture sector and ensuring Ukraine's food exports reach global markets. The three priority areas outlined below are (1) restoration of production infrastructure, storage, and logistics, (2) recultivation and security measures for agricultural areas and development of the land market, and (3) financial support for agricultural producers and access to soft loans.

Restoration of Production Infrastructure, Storage, and Logistics

Restoring production and transport infrastructure is the most immediately effective measure to increase productivity, provide continuous supply to domestic and foreign markets, reduce production costs, and increase profitability. Constructing new elevators in regions of growing agricultural production and near land borders and ports will increase storage volumes and product quality, reduce losses, and ensure sufficient ending stocks. Restoring irrigation systems will increase yields and help producers adapt agriculture to climate change. According to some **forecasts**, after restoring this key infrastructure, production volumes in territories currently under Ukrainian control could increase by 20-30 percent within the first five years following the end of the war. In the long term, agricultural production could return to prewar levels and even exceed them with the implementation of innovative irrigation recovery efforts.

Background

Figure 1: Output and GDP from Agriculture in Ukraine (2021 constant UAH)



Note: This figure excludes temporarily occupied territories.

Source: Authors' creation based on data from the State Statistics Service of Ukraine.

The value of total agricultural production as well as agriculture's contribution to Ukraine's GDP decreased by nearly 17 percent from 2021 to 2023 (see Figure 1). A primary driver of this decline is damage to production facilities, infrastructure, and logistics. The World Bank and Kyiv School of Economics' Fourth Rapid Damage and Needs Assessment (RDNA4) estimated that as of December 31, 2024, total direct damage to the agriculture sector **amounted to $11.2 billion**, with machinery and equipment damage accounting for the largest share of total damage (58 percent), followed by storage facility damage (17 percent) and stolen agricultural inputs and outputs (17 percent). As of 2021, 1,355 grain elevators with over 57 million metric tons of storage capacity were **available** in Ukraine. Approximately 11.4 million metric tons of grain storage capacity were fully **destroyed** and another

3.3 million metric tons were partially damaged due to the invasion, reducing farmers' ability to store their crops in proper conditions. Alongside numerous other complications to the sector brought on by the war, damaged facilities, infrastructure, and logistics have **contributed** approximately $72.7 billion in indirect losses. Indirect losses include the loss to farm income due to foregone or reduced production, lower farm gate prices due to export logistic disruptions, higher farm production costs due to higher input prices, and costs of land recultivation due to contamination from explosives and debris from damaged infrastructure. Ukraine's irrigation and drainage infrastructure have suffered extensive damages throughout the war, including the Kakhovka Dam collapse and damage to canals, pumps, and reservoirs across the country, severely affecting farmers' use of irrigation resources. Frequent power outages at pumping stations and high energy prices limiting farmers' budgets for water resources compound the deterioration of Ukraine's irrigation and water governance capacity. From 2021 to 2023, operational irrigation **fell** drastically from 600,000 to 134,000 hectares (ha), weakening agricultural productivity.

Damage to transport infrastructure significantly complicates the logistics of internal and external supply of agricultural products and inputs. Approximately 30 percent of Ukraine's railway infrastructure remains in a damage-repair cycle, according to the RDNA4, and more than 26,000 kilometers of roads and 344 bridges of state, local, or municipal importance have been **destroyed**. The widespread scale of destruction to transportation infrastructure makes logistics more difficult and expensive, thus reducing farmers' income and limiting their ability to increase agricultural production. Of the utmost importance for agricultural export logistics is preserving port infrastructure and ensuring uninterrupted port operations. Before the war, as many as 8 million metric tons of agricultural products passed through Ukraine's Black Sea ports in a given month, with a 2021 monthly **average** of 5 million metric tons. In 2022, this figure was halved, averaging 2.5 million metric tons per month, following the complete blockade at the beginning of the war and the later resumption of operations of three greater Odesa ports as part of the Black Sea Grain Initiative. The lost Black Sea port capacity was partially compensated for by the Danube River ports, which **increased** their transshipment from 0.2 million metric tons in 2021 to 1.2 million metric tons in 2022 and a record 2.2 million metric tons after termination of the grain initiative in August 2023, but Ukraine still has not reached prewar export levels.

According to the RDNA4, the total recovery and reconstruction needs in the agriculture sector are **estimated at $55.5 billion over 10 years** (2025-35), including $2.3 million for restoring destroyed grain storage facilities. This estimate includes the reconstruction or replacement of damaged assets as well as debris removal and demolition of damaged property—while accommodating the "build back better" principle, which integrates improvements in energy efficiency, modernization, and sustainability into reconstruction efforts.

Recent Initiatives

Restoring transportation and logistics infrastructure has remained a national priority throughout the war. The government of Ukraine and its EU partners have established Solidarity Lanes—road, river, and rail export routes that function as alternatives to maritime export routes, which remain a primary target of Russian attacks—and Ukraine has restored the flow of trade through its Black Sea ports with the Ukrainian Corridor. Together, the Ukrainian Corridor and Danube River cluster **shipped** 97.2 million

metric tons of cargo in 2024, including 60.3 million metric tons of grain. Compared to 2023, general cargo exports increased by 56.8 percent and grain exports increased by 32.5 percent.

Further, from 2022 to 2024, over 2,000 kilometers of roads underwent emergency repairs, roughly 326 kilometers of railway tracks were rebuilt, and 115 road bridges were restored using temporary structures. Progress to repair and restore this infrastructure remains fragile, however, as continuous Russian attacks frequently damage and destroy infrastructure across the country.

To improve irrigation infrastructure, the Ukrainian government **introduced** new legislation regarding water users' organizations (WUOs) and the stimulation of hydrotechnical land reclamation. The legislation's main tasks are aimed at creating a legal framework for the formation and operation of organizations or associations of farmers who use water for land reclamation. The legislation transfers management functions for part of the land reclamation infrastructure facilities to these organizations and creates legal mechanisms for making investments in the existing land reclamation infrastructure. As of January 2025, 54 WUOs were **registered**, 22 of them in 2024 alone, indicating that reform in the field of hydrotechnical land reclamation is gaining momentum.

In order to support agricultural production in Ukraine and ensure national and global food security during the ongoing war, the Ukrainian government collaborated with international partners on a number of rapid measures, among them providing farmers with plastic grain bags (sleeves) as a temporary solution for storing harvest. In 2022, Agriculture Growing Rural Opportunities Activity (AGRO) from the U.S. Agency for International Development (USAID) **provided** Ukrainian farmers with 7,800 sleeves, capable of storing a total of 1.5 million metric tons of grain, along with equipment for packing grain into sleeves (29 grain packing machines and 30 hoppers) and 36 modular grain storage facilities. In 2024, USAID's Harvest Program and the FAO **announced** they would distribute another 7,000 plastic grain bags, which could store 1.4 million metric tons of grain.

At the same time, where possible, work was carried out to repair damaged elevators, increase the capacity of existing ones, and build new ones. During the first two years of the war, Ukraine's elevator capacity **increased** by 2 million metric tons, including approximately 65 new or upgraded facilities. In addition, several new transshipment terminals recently built along Ukraine's border with EU countries (e.g., the **Vadul-Syret** terminal in Chernivtsi Oblast, the **Chornotisiv terminal** in Zakarpattia Oblast, and the **Mostyska** dry port in Lviv Oblast) provide additional storage capacities and alternative logistics. The Howard Buffett Foundation and other investors **supported** this initiative.

Current and Future Priorities

Restoring production infrastructure, storage, and logistics must remain a priority even as the war continues. Beyond support already provided, further restoration of production and transport infrastructure based on the "build back better" principle would ensure an increase in agricultural production, uninterrupted supply to domestic and foreign markets, reduction in production costs, and an increase in profitability.

- **Construct new grain elevators.** More grain elevators in regions of growing agricultural production and near land borders and ports will increase storage volumes and help improve product quality, reduce losses, ensure sufficient ending stocks, and improve export logistics for agricultural products. Due to the increase in production of certain crops in relatively safe

regions, changes in crop rotations, a shift to oilseeds, and the potential expansion of processing, as well as the redirection of export routes, the strategic location of grain and oil storage facilities is particularly important.

- **Redesign transportation networks.** Although transportation infrastructure is an indirect component of the agriculture sector, it is critical for agricultural sustainability. To ensure a reliable supply of agricultural inputs, affected transport networks will have to be redesigned not only in accordance with EU standards and climate change requirements, but also in a way that reflects the movement of people and industries since Russia's invasion. In parallel, the transportation sector will require profound reforms, including port governance improvements, railway restructuring, and concessions of highways that will attract private investment. Although the transportation sector of Ukraine has undergone an organizational transformation and administrative functions have been transferred from the government to sectoral executive bodies, state agencies, and private enterprises, the framework of public-private partnership and regulation of the legal status of transportation lands and facilities require further improvement.
- **Restore irrigation systems.** The creation of WUOs in different regions of Ukraine, especially in the south, opens an opportunity for attracting investments for the modernization, renovation, and enhancement of irrigation systems to increase yields and adapt to climate change. The use of low-pressure sprinkler systems with electric trolley drives, drip irrigation systems, closed-type networks for water delivery, and other modern technologies will reduce the use of irrigation water and electricity for its supply. Sustainable agriculture production through improvement of local small irrigation systems is an important way to compensate for the production losses of the occupied and frontline areas where irrigation is no longer possible due to the destruction of irrigation systems.

Recultivation and Security Measures for Agricultural Areas and Development of the Land Market

The sustainable recovery of Ukraine's agriculture sector depends on land demining, environmental restoration, and land market development. The large-scale contamination of farmland with mines and unexploded ordnance remains a major challenge, affecting 25 percent of Ukraine's territory and requiring extensive clearance efforts. Government initiatives aim to reduce demining costs, accelerate land restoration, and support farmers in resuming agricultural activities. Simultaneously, expansion of Ukraine's land market is facilitating investment and infrastructure reconstruction in war-affected regions. Strengthening international cooperation, securing additional financial resources, and integrating advanced technologies will be essential for restoring agricultural productivity, ensuring food security, and promoting long-term economic stability.

Background

Ukraine is known as a **breadbasket** due to its wealth of fertile black soil, which has long supported high levels of agricultural productivity. Since gaining independence, Ukraine has undergone significant reforms in land governance, including a moratorium on the sale of agricultural land that lasted for nearly two decades. In 2021, the official opening of the land market allowed private individuals to buy and sell farmland under regulated conditions. This marked a crucial step toward attracting investment, improving land use efficiency, and aligning Ukraine's agriculture sector with European market standards. Even despite the ongoing war, the land market continues to **function** and remains a vital component of the agriculture sector's future development.

Russia's invasion, however, has imposed significant physical and chemical damage to Ukraine's agricultural land. Approximately 25 percent of Ukraine's total territory—156,000 square kilometers—is potentially **contaminated** with landmines and unexploded ordnance, posing serious risks to agricultural production and farmers' safety. Beyond severe humanitarian consequences, explosive hazards have significantly limited the use of potentially contaminated land, hindering agricultural activity and slowing Ukraine's broader economic recovery. For example, in Kharkiv Oblast, which was partially **occupied**, nearly half of all farmland remains contaminated, severely straining local agricultural producers.

The economic consequences are substantial. Ukraine's annual GDP **losses** from this contamination exceed $11 billion, or about 5.6 percent of its national GDP. By the beginning of 2025, more than 7,500 environmental violations had been **documented**, causing estimated damages of approximately $87 billion. Despite these extensive challenges, Ukraine's agriculture sector remains a cornerstone of national economic stability and global food security. Therefore, effective land monitoring, demining, and restoration of agricultural lands are critical tasks for ensuring food system stability, supporting economic recovery, and fostering international cooperation.

Recent Initiatives

The Ukrainian government, in collaboration with international partners, is implementing large-scale programs aimed at humanitarian demining, environmental monitoring, and land market development. Since 2024, a state compensation program has supported farmers engaged in agricultural land demining. This program **covers** 100 percent of planned demining costs and reimburses 80 percent of expenses for already cleared land, provided the required documentation is submitted. In 2024, the Ukrainian government **allocated** over $13.5 million for this initiative, and an additional $27 million is budgeted for 2025.

Ukraine is **conducting** extensive humanitarian demining operations in cooperation with international organizations (HALO Trust, Danish Demining Group, Swiss Foundation for Mine Action, Demining Solutions, and others) to mitigate the risks posed by explosive remnants of war and to facilitate the rehabilitation of agricultural and residential areas. As of 2025, the **estimated cost** of demining war-affected territories in Ukraine stands at approximately $29.8 billion. Achieving full demining would also require the **deployment** of more than 10,000 trained specialists. These operations are supported by advanced detection technologies, specialized equipment, and highly trained manual demining teams. Simultaneously, organizations such as the FAO, the **Sokolovsky Institute of Soil Science and Agrochemistry**, and the **Howard Buffett Foundation**, among **others**, are helping to conduct **environmental assessments** in Ukraine. These initiatives evaluate contamination impacts, inform

land reclamation strategies, and ensure the safe and productive reintegration of cleared areas into agricultural and economic use.

Beyond demining, land market reform remains a key priority, as the absence of a transparent and functional land market has long hindered investment, modernization, and financial access for farmers in Ukraine. In the context of postwar recovery, a fully operational land market will be essential for boosting agricultural productivity, revitalizing rural areas, and ensuring food security. Between the land market's opening in 2021 and the end of 2023, private individuals **completed** nearly 250,000 land transactions. During its first year of operation from July 2021 to July 2022, the State Land Cadastre recorded over 200,000 land sale, and sustained demand for land resources has been demonstrated since the land market's opening. In January 2024, legal entities were granted the right to purchase agricultural land and foster investment in the reconstruction and development of war-affected territories. Land transactions increased further as a result, and by February 2025, the total number of transactions had increased to more than 396,400, **covering** 877,805 ha. These figures reflect growing trust in the land market, as transparent land ownership attracts investment, enables credit access, and drives agricultural modernization—supporting recovery and rural development and aligning land values with European levels.

Despite the ongoing war, Ukraine's land market continues to function, contributing to economic development and providing new opportunities for farmers. The introduction of the Prozorro electronic auction system has ensured transparency and competitiveness in land transactions, representing a crucial step in combating illicit practices in the market. Despite the challenges posed by the war, agricultural land prices have **increased** by 30 percent since the market's launch, reflecting the sector's high adaptability. However, regional disparities in land prices remain significant due to both economic and security factors.

Current and Future Priorities

The further recovery of Ukraine's agricultural land requires the expansion of government policy measures and enhanced international support. Key priorities include increasing funding for demining programs, expanding international assistance, and developing the land market to improve agricultural productivity and economic stability.

- **Expand humanitarian demining efforts.** International support remains critically important for accelerating humanitarian demining in Ukraine, particularly through the provision of modern technologies such as drones, robotic systems, and specialized armored equipment that enhance the safety and effectiveness of operations. Given the large-scale contamination of agricultural land, additional investment is needed in demining infrastructure, specialist training, and technical capacity building. To ensure quality and accountability, the Ukrainian government must reform the certification system for demining operators, establish clear safety standards, and provide protections preventing certified deminers from being mobilized to the front line. Close collaboration with international partners will support the adoption of best practices, including the use of geospatial technologies and AI-based systems to more accurately detect hazardous areas.
- **Provide financial support to affected farmers.** The Ukrainian government has already **allocated** $81 million to compensate farmers engaged in humanitarian demining of agricultural land, aiming to reduce financial burdens and accelerate the restoration of safe agricultural production. Expanding financial support programs for farmers affected by land contamination is essential to help them resume operations without bearing unsustainable financial burdens. Such

assistance should be closely coordinated with demining efforts to ensure timely land access and enable investments in recovery and future productivity.

- **Attracting foreign investment into the land market.** In the context of postwar recovery, the Ukrainian government should consider the potential benefits of opening the agricultural land market to foreign investors (with the exception of citizens and entities from aggressor states). This issue extends beyond land valuation, as the presence of international investors would contribute not only financial capital but also managerial expertise and advanced agricultural technologies. A crucial aspect of such a policy shift is that foreign investors could serve as strategic advocates for Ukraine in their respective countries, strengthening international support and countering geopolitical threats. The integration of foreign capital into the agricultural land market could generate multifaceted advantages, fostering economic revitalization and strengthening Ukraine's integration into global agricultural and financial systems.
- **Legalize land ownership and incentivize investment.** Currently, over 3.3 million ha of land is cultivated by companies with foreign investment under long-term lease agreements, effectively creating a quasi-ownership market. The formalization of such relations through legislative amendments would enable foreign investors to secure property rights, thereby incentivizing long-term capital inflows essential for the reconstruction and modernization of Ukraine's agriculture sector. Moreover, introducing foreign ownership rights while maintaining regulatory safeguards could enhance land market competitiveness, attract strategic investments in agri-food processing and infrastructure, and contribute to the overall resilience of the national economy. Given the country's substantial war-related losses and its growing need for investment, further government policy interventions aimed at facilitating foreign participation in the land market could play a decisive role in **ensuring** the sustainable recovery of Ukraine's agriculture sector. Meanwhile, the continued implementation of government programs and international support remain crucial for environmental monitoring, demining, and land market development, ensuring the recovery of Ukraine's agriculture sector, food security, and economic growth. Strengthening institutional frameworks for land governance and promoting investment-friendly policies will contribute to the sustainable development of rural areas, fostering long-term resilience and economic revitalization.

Financial Support for Agricultural Producers and Access to Soft Loans

Financial stability and access to affordable credit are critical for the resilience and modernization of Ukraine's agriculture sector. Wartime disruptions have significantly impacted small- and medium-sized enterprises, increasing production costs and limiting access to essential financial resources. Government programs such as the Affordable Loans 5-7-9 initiative and the Partial Credit Guarantee Fund for Agriculture have played a crucial role in providing financial assistance for operational costs, land purchases, and equipment modernization. Further expansion of preferential financing, flexible loan mechanisms, and financial advisory support will be essential for ensuring long-term stability, encouraging innovation, and enhancing Ukraine's agricultural competitiveness.

Background

The war in Ukraine has created unprecedented challenges for agricultural producers, disrupting supply chains, increasing production costs, and limiting access to essential resources. Small- and medium-sized agricultural enterprises have been particularly **affected**. In addition to damaged land, destroyed assets, and increased prices for inputs, agricultural enterprises are facing financial constraints, particularly limited access to the credit resources they need to maintain operational activities during the war. The high cost of loans and inflation risks further **complicate** their ability to invest in development, modernize equipment, and implement innovations.

In the initial stage of the war, many agricultural producers faced significant difficulties in marketing their harvested products due to the collapse of domestic demand and the disruption of export channels. This resulted in substantial income losses and created uncertainty regarding future planting campaigns. Additionally, the costs of fuel, crop protection products, and fertilizers increased significantly, while logistical challenges—caused by damaged infrastructure and the blockade of maritime routes—further complicated the transportation of agricultural goods to both domestic and international consumers.

Despite these hardships, many farmers actively supported Ukraine's armed forces by supplying food and assisting with technical operations for defense needs. In several communities, agricultural enterprises played a crucial role in clearing roads, restoring electricity supply, and supporting essential local services. As a result, the agriculture sector became not only an economic but also a social pillar of rural territories during the early stages of the war. However, these additional burdens, along with direct war-related damages, significantly undermined their agricultural and production capacities.

Recent Initiatives

To support agricultural producers in Ukraine, the Ukrainian government has introduced several financial programs to facilitate access to credit and improve the financial sustainability of agribusinesses. One of the key initiatives is the Affordable Loans 5-7-9 program, which provides micro and small enterprises, including farmers, with simplified access to bank loans. In 2024, the conditions of this program were revised: The maximum loan amount for working capital replenishment was limited to $140,000, while the limit for processing industry enterprises and investment projects remained at over $4 million, **supporting** modernization and agribusiness expansion. Under this program, agricultural producers can receive loans of up to $1.4 million for a period of three to five years, depending on the financing objectives, at preferential interest rates ranging from 5 percent to 9 percent per annum. As of early 2025, a total of 33,306 loan agreements had been signed under this program, amounting to $3.5 billion, with $900,000 specifically allocated to **support** agricultural producers, allowing them to sustain operations and invest in modernization.

Another significant government initiative is the Partial Credit Guarantee Fund for Agriculture, which was established in 2022 to provide financial guarantees for farmers cultivating up to 500 ha of land. The fund collaborates with banks that **provide** credit to farmers and guarantees the coverage of 50 percent of loan obligations. Borrowers can obtain working capital loans for up to three years, investment loans for up to seven years, and land purchase loans for up to ten years, with a maximum loan amount of $810,000 per borrower. The fund also **conducts** consultative meetings with farmers on financing conditions and business planning. These measures are crucial for ensuring the financial stability of the agriculture sector, particularly for small- and medium-sized farms struggling to secure traditional bank loans. Through

these financial support initiatives, the Ukrainian government aims to enhance the competitiveness of the agriculture sector, enabling small- and medium-sized enterprises to overcome economic challenges, invest in new technologies, and maintain stable production despite wartime constraints.

Current and Future Priorities

Ensuring sustainable financing for agricultural producers and expanding access to preferential loans remains a strategic priority for the long-term development of Ukraine's agriculture sector.

- **Expand access to preferential financing.** A key direction for future policy initiatives should be broadening access to preferential financing for a wider range of farmers, particularly through improvements and adaptations of the Affordable Loans 5-7-9 program. Alternative financing methods that are successfully used in the United States and European Union, such as agricultural credit unions and contract farming (with processing enterprises and supermarkets), can also play an important role.
- **Enhance loan program conditions.** Improving the conditions of loan programs is an important factor in supporting agricultural producers during wartime and post-war recovery. In particular, the government should consider further enhancement of the Affordable Loans 5-7-9 program, including lower interest rates and revised repayment schedules, to contribute to strengthening the financial resilience of the agriculture sector and its capacity to invest in development.
- **Strengthen advisory services and financial literacy.** Strengthening advisory services and expanding financial literacy initiatives like the Partial Credit Guarantee Fund for Agriculture will increase the ability of small- and medium-sized agricultural producers to access credit resources on favorable terms.
- **Promote agricultural insurance and international training.** Beyond credit programs, the development of agricultural insurance schemes and the integration of international training initiatives aimed at enhancing farmers' financial literacy will play an important role in ensuring the long-term stability and competitiveness of Ukraine's agriculture sector.

Short-Term Measures (1-3 Years)

Short-term measures should focus on ensuring Ukraine's stability and expanding economic opportunities in the agriculture sector. The two priority areas outlined below are (1) export support and market diversification and (2) development of human resources and education in the agriculture sector.

Export Support and Market Diversification

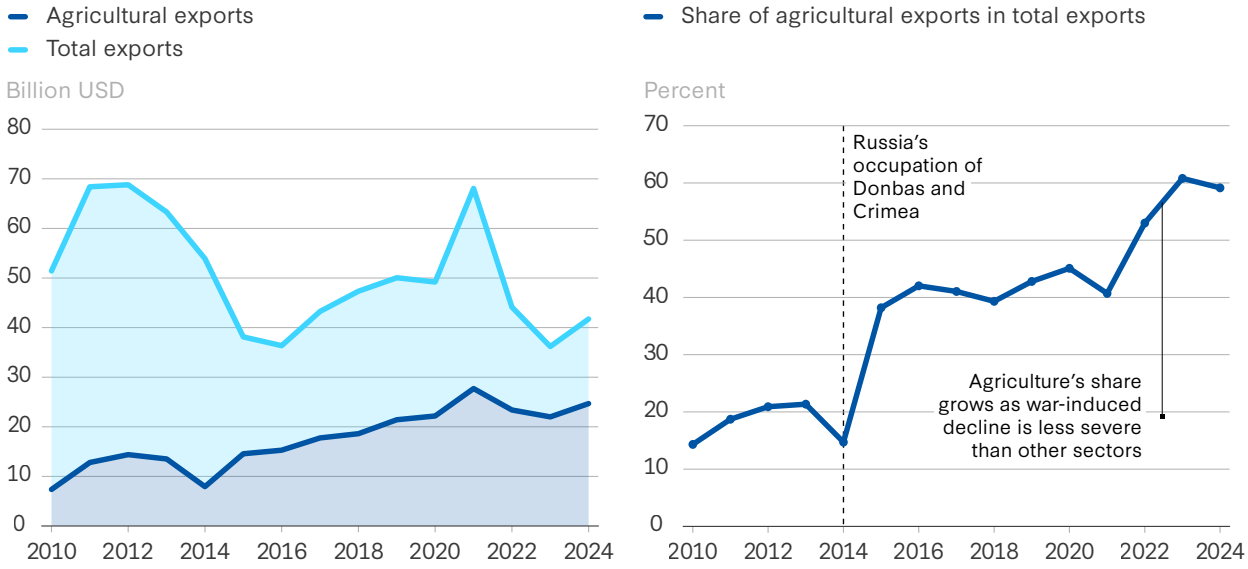
The restoration and improvement of export infrastructure and trade regulations are two of the key prerequisites for the sustainable export of agricultural products. Building additional transshipment hubs and terminals near ports and land borders with the European Union will increase export capacity. Diversifying export markets by establishing new trade partnerships in Africa, Asia, and Latin America will reduce dependency on specific markets and improve export stability. Furthermore, improving product quality in line with international standards will increase the competitiveness of Ukrainian agricultural products in European markets.

Background

Ukraine's agriculture sector, particularly grain and oilseed production, is export oriented. Following Russia's 2014 occupation of the Donbas and annexation of Crimea—both regions that were previously dominated by heavy industry—agriculture's share of Ukraine's total exports rose from below 25 percent to over 40 percent. In 2021, Ukrainian agricultural exports **totaled** $27.7 billion, with grain exports accounting for $12.3 billion. Although the actual dollar amount of agricultural exports has **decreased** since the full-scale invasion, due in large part to declining global prices for grains and oilseeds since 2020, the decline has been less severe than in other sectors. As a result, agriculture's share of Ukraine's total exports increased to nearly 60 percent in 2024 (see Figure 2).

The structure of Ukraine's agricultural exports is geographically diverse. Prior to the war, Ukraine **supplied** food to over 170 countries, **feeding** roughly 400 million people annually. Continued attacks on civilian port infrastructure threaten to disrupt the supply of food to countries in acute need and to drive up global food prices, as seen during the initial blockade of Black Sea ports in early 2022, when **global food prices** reached all-time nominal highs. Therefore, ensuring the development and diversification of agricultural exports, alongside the stable and efficient functioning of agricultural markets, is critical to global food security and Ukraine's economic stability.

Figure 2: Agricultural Exports vs. Total Exports in Ukraine, 2001–2024



Source: Created by the authors based on data from the State Statistics Service of Ukraine and Ministry of Agrarian Policy and Food of Ukraine.

Russia's blockade of Black Sea ports at the beginning of the war significantly threatened food security in import-dependent countries, as Ukraine was unable to continue exporting agricultural products to its traditional markets. The resulting shortage of grain supply in global markets led to an immediate price spike. At the same time, Ukraine **accumulated** significant ending stocks of grain and oilseeds that caused a shortage of domestic storage capacity for the 2022 harvest. With Black Sea ports accounting for more than 90 percent of Ukraine's agricultural exports prior to the 2022 invasion, Ukraine was forced to develop alternative export routes that have significantly changed its trade patterns throughout the war. However, Ukraine faces a number of issues that prevent it from realizing its export capacity

without the Black Sea ports, including wider railway track gauges than in Europe, a shortage of railway grain cars, a shortage of lorries and drivers for export by roads, and the low transshipment capacity of Danube River ports and land border crossing points.

Recent Initiatives

The European Union's early measures in support of Ukraine included the **Solidarity Lanes**, which are export routes **connecting** Ukraine with European countries and Moldova via roads, rivers, and railways. By January 2024, the Solidarity Lanes had **facilitated** the export of roughly 68 million metric tons of agricultural products, representing 60 percent of Ukraine's wartime agricultural exports. The **Black Sea Grain Initiative**, an agreement between Ukraine and Russia that was brokered by the United Nations and Turkey, temporarily restarted the operation of the greater Odesa ports on the Black Sea. During the initiative's 12 months of implementation (July 2022–July 2023), Ukraine supplied 32.9 million metric tons of agricultural products to 45 countries across three continents, including 725,000 metric tons (8 percent of Ukraine's total exported wheat) for the UN World Food Programme, which was distributed to people in need in Afghanistan, Ethiopia, Kenya, Somalia, Sudan, and Yemen. After Russia's withdrawal from the initiative, Ukraine nonetheless continued exports from the greater Odesa ports. Ukrainian air defense capabilities have enabled the ports' operations despite frequent Russian missile and drone attacks. Since its development 18 months ago, the Ukrainian maritime corridor has **exported** 100 million metric tons of cargos to 53 countries, including 65 million metric tons of agricultural products.

Logistical challenges and the export diversification brought on by the war affected the geographical structure of Ukrainian agricultural exports as Ukraine was forced to search for alternative markets. While the Solidarity Lanes were intended to facilitate Ukrainian products' export to markets around the world, a glut of Ukrainian agricultural products accumulated in European markets. In 2021, the share of Ukraine's agricultural exports to Europe was 32.4 percent; following the redirection of export routes, it **increased** to 55.2 percent in 2022 and 60.7 percent in 2023. At the same time, Ukraine's exports to other regions fell due to complicated and expensive logistics. The share of Ukrainian exports to African countries shrank from 13.5 percent in 2021 to 7.1 percent in 2023; in this same period, exports to Asia fell from 19.4 percent to 10.9 percent, and exports to Southeast Asia fell from 12.7 percent to 4.7 percent. To stabilize European markets amid their **oversaturation** with Ukrainian products, the European Union agreed to significant export **restrictions** for certain agricultural products, which rebalanced Ukraine's trade to global markets. Diversifying export opportunities remains a strategic objective for Ukraine as it continues to balance traditional maritime exports with the alternative trade routes developed throughout the war.

The expansion of agricultural exports, especially to highly developed countries, requires improving quality and implementing product certification, which will increase the competitiveness of Ukrainian products on foreign markets. In 2024, Ukrainian producers **gained** access to new foreign markets for sixteen groups of goods in nine countries around the world. Ukraine is also **introducing** Hazard Analysis Critical Control Point (HACCP) to harmonize legislation with the European Union in the field of food safety and quality; however, certification of agricultural and food products is optional. At the same time, many importing countries require quality certificates and compliance with their standards.

Current and Future Priorities

Implementing an agricultural export strategy requires an integrated approach toward the agriculture sector and international trade. Numerous direct and indirect measures aim to improve the competitiveness of Ukrainian products, ensure uninterrupted supply and stable demand, and increase Ukraine's export earnings from agriculture, creating a multiplier effect for the sector's development.

- **Improve seaport infrastructure and navigation safety.** Restoration and further improvement of seaport infrastructure and guarantee of navigation safety are some of the key prerequisites for sustainable and diversified exports of agricultural products. Recently, the Ukrainian Sea Port Authority released a strategy for development that will require significant investment. It is seeking international assistance from the World Bank and the European Union to improve Ukraine's seaport capacity for exports, which includes restoring critical port infrastructure, installing special equipment at port facilities and in the water areas, purchasing specialized port fleets and transshipment equipment, and dredging the Danube River ports' water areas to allow deeper-sea vessels to enter. As part of this strategy, the Ukrainian Sea Port Authority also plans to **purchase** floating barriers through funding from the Howard Buffett Foundation, including underwater nets, to protect from penetration.
- **Construct additional transshipment hubs.** The planned addition of new transshipment hubs, specifically dry ports, within Ukraine and along its border with EU countries will ensure more convenient logistics for agricultural products and increase Ukraine's export capacity. These new hubs will have the ability to receive grain from trucks, grain wagons, semi-wagons, and containers and transfer it to European standard wagons. A planned extension of European tracks (gauge 1435 millimeter) in Ukraine's territory and Ukrainian tracks (gauge 1520 millimeter) in the European Union will further support this goal.
- **Diversify export markets.** The establishment of new trade partnerships for Ukraine across Africa, the Middle East, Asia, and Latin America will reduce agricultural export dependency on the European Union and ensure export stability. This could be mutually beneficial for importers, as they will **reduce** their import dependence on dominant partners and receive high-quality and relatively low-cost agricultural products, given the affordability of Ukrainian products relative to global prices. Export diversification also involves expanding the range of agricultural exports and improving their quality to meet international standards and increase competitiveness in European markets. Continued work on opening new markets for a range of Ukrainian products—such as poultry products, live cattle and sheep, beef and pork, milk and dairy products, honey, apples, blueberries and cherries, peas and beans, onions, wheat flour, and fish and fish products—would accelerate support of agricultural producers in Ukraine.
- **Improve competitiveness of Ukrainian agricultural products in foreign markets.** Policymakers should consider export subsidies, value-added tax compensations for exported goods, tax exemptions, and other fiscal measures to help export-oriented agricultural producers reduce their costs and increase marginal profit. Certification and compliance with phytosanitary standards will contribute to quality improvement and facilitate the promotion of products to the markets of higher-income countries.

Development of Human Resources and Education in the Agriculture Sector

Ukraine's agriculture sector is experiencing a labor deficit due to forced population displacement, the conscription of men into Ukraine's armed forces, and causalities that have resulted from Russia's war. This deficit is especially acute for high-skilled and experienced agricultural workers. At the same time, the workloads of women and youth on farms have **increased** as they take on the responsibilities of their husbands and fathers. A reduction in the labor force required to perform the ongoing operations results in additional losses. Exemptions from army mobilization for small- and medium-sized farms can improve agricultural labor provision and help stabilize rural economies. Comprehensive policy measures, including incentives to attract workers back to rural areas from urban areas and abroad, as well as investments in mechanization and innovative technologies to partially offset the lack of manpower, should be considered. Transformation of Ukraine's agricultural education and extension system to be more resilient, adaptive, and supportive of the nation's recovery by providing up-to-date knowledge and trainings for young farmers, women, and veterans will contribute to the long-term development of the agriculture sector and ensure sustainable growth.

Background

In early 2022, Ukraine's rural labor force consisted of 5.5 million people, or 31.4 percent of the total labor force of the country. Total employment in rural areas was 4.8 million people—or 87.3 percent of its labor force. Almost 2.7 million people were **involved** in agriculture, forestry, and fishing (this includes individuals employed in agricultural enterprises, family members of private farms, and commercially oriented households, or those engaged in agricultural production for profit). As a result of Russia's hostilities, some agricultural workers and farmers were forced not only to cease economic activity in the agriculture sector, but also to leave their homes. More than 150,000 agricultural workers were directly **affected** by the war and/or were forced to migrate. Small- and medium-sized producers specializing in seasonal products—critical providers of employment and income in rural areas—have been particularly affected. Labor shortages induced by the war, especially for highly skilled and experienced workers, has not only negatively impacted farm operations but increased workloads for segments of the population not previously integrated in Ukraine's agricultural labor force, namely women and youth. The war has caused irreversible losses not only among the military, but also among the civilian population: At least 126,000 civilians were **killed** and 294,000 injured during the first three years of the war, and 5.2 million Ukrainian refugees from both urban and rural areas **remain** abroad.

Numerous surveys conducted with agricultural producers across Ukraine reflect the severe shortage of diverse labor needs. In a survey of the Association of Pig Farmers of Ukraine, 26 percent of members reported **suffering** from insufficient personnel (e.g., technologists, veterinarians, operators, and managers of production sites) and auxiliary workers (e.g., fitters and electricians). Approximately 48 percent of the members reported a **shortage** of personnel in areas of activity related to agricultural production, such as drivers, tractor operators, mechanics, and agronomists. Similarly, in a producer

survey carried out by Mercy Corps and Pro-Consulting, approximately 88 percent of fruit and vegetable producers, 71 percent of poultry producers, and 75 percent of dairy producers in partially occupied, deoccupied, or frequently shelled areas reported that labor shortages **limited** their production. This reduction of the agricultural labor force—which requires operations to adapt, restore, and modernize production assets—has led to compounding losses, limiting of activity, and even the discontinuation of agricultural activities.

Recent Initiatives

In early 2023, Ukraine introduced a **procedure for exempting military conscripts** for enterprises, institutions, and organizations that are critically important for ensuring a functioning economy and preserving people's livelihoods. This exempted some agricultural workers at farms with more than 1,000 ha that employ 50 or more people from military conscription. In April 2023, this law was **amended** to include farms with 500 to 1,000 ha and as few as 20 employees. Although the procedure was amended again later in 2024 to allow extension of the exemption for up to 12 months, it does not apply to basic laborers and fails to address the problems faced by small- and medium-sized operations. Farms that cultivate up to 500 ha make up the largest group of agricultural producers, supplying a significant amount of food to the market, and they are mainly family farms, meaning that their income entirely depends on the farm's operation. In a March 2025 meeting with the Ukrainian parliament, the Committee on Agrarian and Land Policy once again **raised** the issue of military conscription exemptions for small agricultural producers.

Another government initiative aimed at increasing the workforce was the establishment of the **Ministry of National Unity of Ukraine (MNUU)** in December 2024, which resulted from the reorganization of the Ministry of Reintegration. The MNUU is intended to stimulate the return of Ukrainian refugees from abroad. Its creation sparked significant criticism, as many of its functions **duplicate** functions already performed by other state bodies. Recently, the MNUU and the UN Refugee Agency launched a strategic partnership to **support** internally and externally displaced Ukrainians. However, the share of those planning to return to their homeland is nonetheless **declining**, dropping from 74 percent at the end of 2022 to 43 percent at the end of 2024. This trend will continue in proportion to the duration of the war.

Agricultural education and extension are important elements of strengthening the agriculture sector broadly, especially as Ukraine works to fill the skilled labor shortage. During its years of independence, Ukraine significantly improved its education system. However, the destruction of educational facilities and the mobilization and displacement of faculty and students caused by the war negatively impacted agricultural universities' ability to train a sufficient number of qualified employees and provide in-demand advisory services that meet today's challenges. Some agricultural colleges, such as the **Tavria State Agrotechnological University**, Luhansk National Agrarian University, **Kherson State Agrarian and Economic University**, and **Bakhmut Vocational Agrarian Lyceum**, were relocated from occupied areas to territory controlled by the Ukrainian government. Many educational institutions switched to distance and hybrid (online/offline) learning, which is complicated by a lack of stable internet connection, insufficient access to electricity, and insufficient access to bomb shelters, as well as limited opportunities to conduct practical and lab classes, experiments, and trials, which are crucial for agricultural education. One initiative aimed at addressing this issue is the **FABU** project, implemented by the German Ministry of Food and Agriculture, which focuses on improving agricultural vocational training in Ukraine during the war.

Current and Future Priorities

Labor scarcity in the economy is usually compensated for with the introduction of capital-intensive technologies. Ukrainian agricultural producers have faced significant capital losses during the war, especially in machinery and equipment, and their replacement and modernization based on the "build back better" principle will require significant capital investment. But human resources will still be essential to operating these technologies and performing other operational functions to ensure sustainable agricultural production.

- **Preserve human resources in agriculture.** To ensure sufficient agricultural production, farmers must be able to carry out agricultural work in accordance with the agricultural calendar regardless of the size of their farm. As proposed earlier by the Committee on Agrarian and Land Policy, it is recommended to extend military conscription exemptions for small agricultural producers: reserving the head of farms cultivating 20–100 ha, as well as the heads and 50 percent of military-eligible employees of farms cultivating grains on 100–500 ha of land and farms growing fruits and vegetables, but no more than one person per 100 ha. At a minimum, farmers who are fighting should be able to return to their farms in time to perform critical field work. This would save the workforce for the agriculture sector, stabilize agricultural production, and solve some socioeconomic issues in rural areas.
- **Incentivize employment and labor productivity growth in agriculture.** Higher-paying jobs in urban areas or make it increasingly difficult to attract personnel to work in rural areas, especially during wartime. Addressing the labor shortage will require comprehensive policy measures, including incentives to attract workers back to rural areas and investments in mechanization and innovative technologies to partially offset the lack of manpower. Workers will also require additional training to operate modern technologies.
- **Improve educational programs and institutions.** The agricultural workforce shortage is exacerbated by the weak capabilities of the agricultural education system both quantitative (e.g., lack of faculty, staff, and low enrollment) and qualitative (e.g., outdated equipment and curricula and damaged facilities). Event after obtaining certifications, personnel are **not ready** to perform production tasks without significant additional practical training. To ensure sustainable agricultural production during and after the war, transforming Ukraine's agricultural education system to be more resilient and adaptive will be crucial. Systematic study of trends in the development of the agriculture sector, as well as deeper **collaboration** between MAPFU and Ministry of Education, will contribute to this aim. Attracting additional funding and adopting expertise brought by international investors remains a potential direction through which investors can participate in the sector's future development.
- **Stimulate the influx of labor to agriculture from urban areas and from abroad.** After the war, Ukraine will be able to count on the return of part of the forcibly displaced population, in particular agricultural workers, which will create additional opportunities for the restoration of production. The main barriers to return remain security issues, as well as access to work in a relevant specialty, a decent salary, and housing. Therefore, the diversification of agricultural production and the corresponding creation of new jobs, along with the expansion of non-farm activities in rural areas, will stimulate the influx of labor from urban areas and abroad.

- **Improve the inclusiveness of agricultural education and extension.** Returning veterans will also be seeking employment. In one survey, 30 percent of interviewed farmers said they were **open to hiring** veterans and people with disabilities, but agricultural equipment typically lacks the necessary accessibility modifications, pointing to a key gap that needs to be addressed. An important task will be improving the skills of agricultural laborers and training new specialists who can work with modern technologies and ensure effective management of agricultural enterprises. Investments in education and training, as well as the development of agricultural extension services and support programs for young farmers, women, and veterans, can contribute to the long-term development of the agriculture sector and ensure its sustainable growth.

Medium-Term Measures (3–5 Years)

Medium-term measures should prioritize developing a sustainable and competitive agriculture sector. The two priority areas outlined below are (1) strengthening rural communities and supporting small farmers and (2) developing the livestock industry.

Strengthening Rural Communities and Supporting Small Farmers

Rural communities and small farmers will be essential for Ukraine's postwar recovery and economic resilience. Although decentralization has empowered local governments, war-related destruction, financial difficulties, and logistical challenges continue to hinder rural life and agricultural production. Small farmers (typically those operating on less than 500 ha), who previously accounted for over 40 percent of Ukraine's agricultural output, require targeted financial aid, infrastructure rehabilitation, and improved market access. Government programs and international initiatives are already facilitating some recovery through infrastructure investment, grant support, and credit expansion. Additional investments in rural infrastructure, digitalization, and cooperative farming models—both domestically and globally—will be essential for ensuring sustainable development, higher productivity, and long-term food security.

Background

The decentralization reform initiated in Ukraine in 2014 significantly **strengthened** the capacity of Ukrainian communities by transferring administrative and financial powers to local governments, enabling them to manage local resources effectively and with greater independence. This reform aimed to improve public service delivery, increase transparency, and bring decisionmaking closer to citizens by empowering newly formed amalgamated territorial communities, known as *hromada*. Local governments received greater control over land use, education, healthcare, and budgetary planning, allowing them to respond more directly to the needs of their populations. A key aspect of this reform was the transfer of agricultural land management rights from the state to local communities, granting them greater control over one of their most valuable resources. Supported by international partners and enshrined in national legislation, this reform has become a cornerstone of Ukraine's democratic governance and postwar recovery planning.

However, the war has placed additional pressure on local governance, forcing communities to address security issues, accommodate internally displaced persons, and restore damaged infrastructure. Rural areas have suffered significant losses due to the conflict, with the burden of maintaining agricultural production falling primarily on small farmers and household farms, which play a key role in ensuring local food security. Ukraine's agriculture sector as a whole has suffered significantly in the face of war-induced challenges. Small farmers and family farms, accounting for over 40 percent of Ukraine's pre-war agricultural production, have suffered the most due to financial resource shortages, reduced cultivated areas, and the destruction of logistical routes. Other challenges include decreased sowing areas and changes in production technologies, with indirect losses **projected** to reach $83 billion by the end of 2025. The continued threat of landmines and unexploded ordnance on farmland also poses a major obstacle to recovery, with contaminated territories **estimated** to reduce Ukraine's GDP by $11 billion annually, hindering the revival of rural regions and delaying the return of farmers to full-scale agricultural activities.

Damaged social infrastructure (e.g., housing, roads, bridges, schools, hospitals, stores, and utility lines) and production infrastructure (e.g., land, facilities, and equipment) makes life in rural areas extremely difficult. The recovery of rural communities and small farmers requires a comprehensive approach, including financial aid, state subsidies, international assistance, and the development of social and agricultural infrastructure.

Recent Initiatives

Decentralization continues to provide local governments in Ukraine with greater financial resources and administrative autonomy, allowing them to invest in community development, social services, and postwar recovery initiatives. To support war-affected communities, the Ukrainian government has **implemented** several financial assistance programs, including the Fund for Eliminating the Consequences of Armed Aggression, which allocates funds for restoring critical infrastructure and residential buildings. The government is expanding support mechanisms for local communities, particularly through grant financing for small agricultural businesses and the development of socially oriented enterprises. A major contributor to local communities until 2025 was the USAID Governance and Local Accountability project, which played a key role in strengthening local government capacity by **providing** technical assistance to communities for improving administrative services, economic planning, and investment attraction. The FAO, in cooperation with the European Union, has **launched** a new grant support program for agricultural producers, offering grants of up to $25,000 to support berry farming and vegetable production. This program covers up to 50 percent of investment costs and facilitates the integration of small farmers into supply chains, as well as improving logistics, storage, and processing facilities. The European Union and the World Bank have also provided crucial support, **allocating** over $500 million for the reconstruction of destroyed infrastructure, including schools, hospitals, and roads. In addition to financing infrastructure projects, international partners are also assisting in the development of effective credit and insurance mechanisms for small farms, ensuring their resilience in challenging economic conditions.

Current and Future Priorities

To ensure the sustainable development of rural areas and support small farmers, a comprehensive set of strategic measures must be implemented at the local, national, and international levels.

- **Secure access to finance and modern technologies.** A key government priority should be expanding access to financial resources, allowing farmers to develop their farms more effectively

and **implement** modern technologies. This includes tailored credit programs, loan guarantees, and subsidies that reduce financial barriers and incentivize investments in precision agriculture, energy-efficient equipment, and climate-smart practices.

- **Develop rural infrastructure and connectivity.** In addition to financial support, another crucial policy direction is the development of rural infrastructure, including modernizing transportation networks, water supply systems, energy infrastructure, and digital communications. Infrastructure improvement will enhance agricultural productivity and raise living standards in rural areas. Special attention should be given to ensuring access to high-speed internet and digital services, which will integrate farmers into modern markets and improve digital literacy among rural populations.
- **Strengthen cooperatives and rural entrepreneurship.** MAPFU should expand support programs for the development of agricultural cooperatives and agro-based clusters, enabling small farmers to share equipment, reduce input costs, and improve access to markets. The development of small farm businesses will contribute to increasing employment and, therefore, the well-being of the rural population, an important factor in preventing rural depopulation.
- **Develop skills and sustainable technologies.** Initiatives for professional education and skills development should be **expanded**, including training programs in financial management, digital technologies, and sustainable farming, which will ensure better adaptation of advanced technologies and increased productivity. The use of innovative agricultural technologies and soil fertility conservation methods will further enhance farm efficiency while minimizing negative environmental impacts on rural areas.

Development of the Livestock Industry

Even though Ukraine's livestock industry experienced difficulties before the war, positive trends in its productivity make it a promising direction for agriculture sector recovery. Government measures such as cofinancing farmers' purchases of animals for breeding, construction and/or reconstruction of livestock farms, subsides for increasing the number of animals, and reimbursement of incurred expenses due to animal injury and death can contribute to the sector's recovery. However, livestock development requires larger investments than the Ukrainian government is able to provide and demands international support.

Limited access to veterinary services and medicine increases the risk of disease spread and subsequent loss of livestock population. Therefore, efforts to increase the supply of veterinary drugs, including through domestic production, and expand veterinary services and trainings will be necessary to stabilize the epizootic situation in the country. The creation of progressive forms of entrepreneurship in the livestock industry, particularly for individual farmers, will facilitate these enterprises' integration into the agricultural market. Stabilizing and further increasing the animal population, improving animal keeping conditions, introducing advanced technologies, using better breeds, developing fodder production and processing as related industries, and stimulating livestock product export are critical prerequisites for the development of Ukraine's livestock industry.

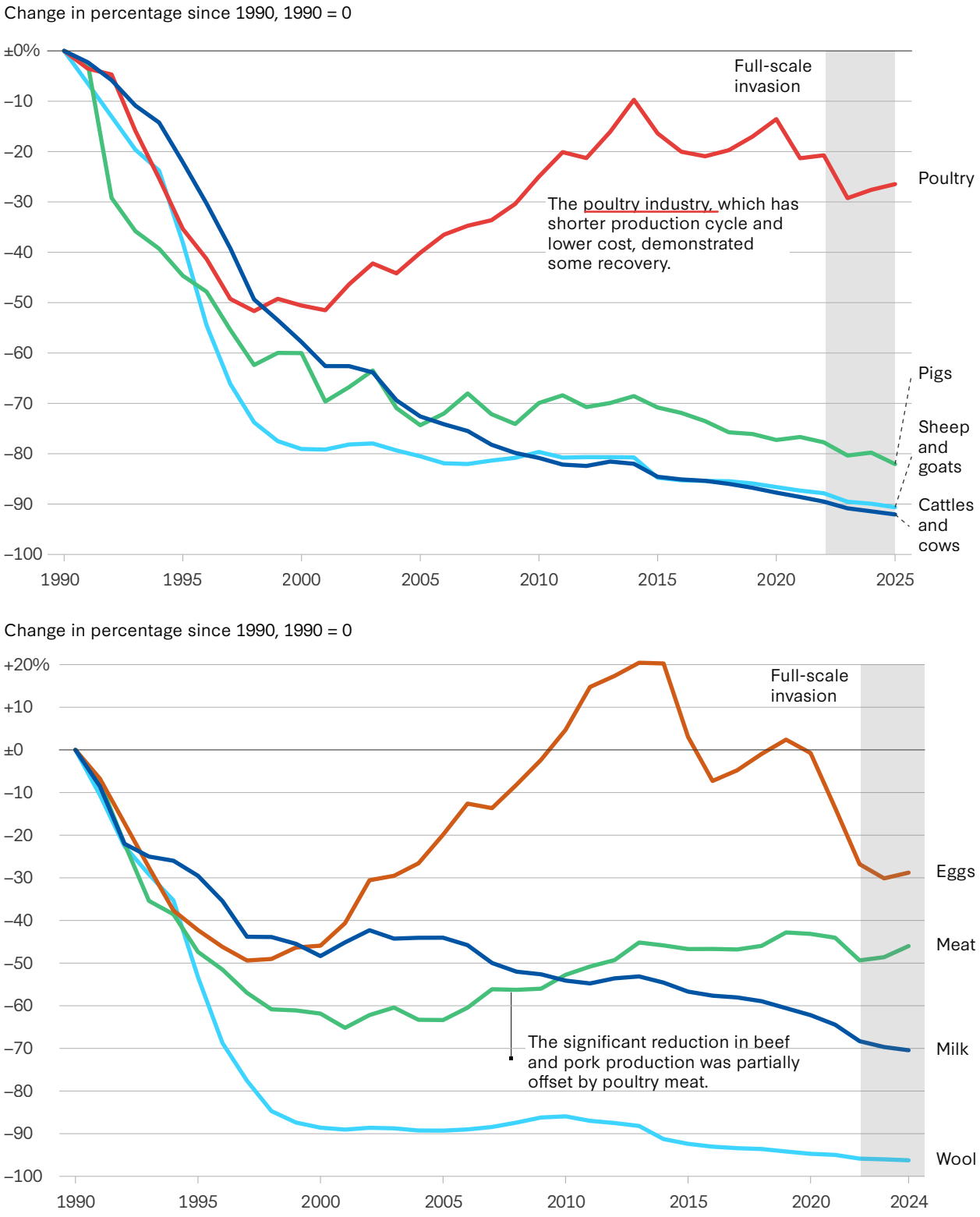
Background

Although Ukraine is primarily known for its significant production and export of grains and oilseeds, livestock products also account for a large share of Ukrainian agricultural exports. In 2023, Ukraine **ranked** as the sixth-largest exporter of live bovine animals, seventh-largest exporter of poultry meats, and eight-largest exporter of dairy products. However, Ukraine's livestock sector is still relatively small compared to those of major global producers like the European Union, Brazil, the United States, and China.

Even before the war, Ukraine's livestock sector experienced difficulties. Following the collapse of the Soviet Union, the destruction of agricultural infrastructure and inter-sectoral connections led to a loss of profitability in the livestock industry and forced farmers to slaughter a significant number of animals. Between 1990 and 2022, Ukraine's cattle population **decreased** by 10 times (including dairy cows by 5.7 times), pigs by 3.6 times, and sheep and goats by 8.1 times (See Figure 3). Only the poultry industry, which benefits from a shorter production cycle and lower costs, demonstrated some recovery after declining by half from 1990 to 1998 and then **increasing** by 79 percent by 2020.

Russia's invasion has accelerated losses in Ukraine's livestock industry. According to the Kyiv School of Economics, farms have **lost** 238,000 head of cattle, 544,000 head of pigs, 131,000 head of sheep and goats, and almost 13 million head of poultry as a result of the war, a loss worth $254 million. Reduction in the animal population has accelerated a decrease in livestock production. For example, Ukraine's total meat production decreased by 44 percent between 1990 and 2021; by 2024, this figure had dropped an additional 3.5 percent. At the same time, thanks to more advanced production technologies, better breeds, and improved farm management practices, the productivity of animals per head has increased: For example, milk yields per cow increased from an average of 2,900 metric tons in 1990 to 5,700 metric tons in 2024 (See Figure 3). Moreover, the significant reduction in beef and pork production was partially offset by poultry meat, production of which **increased** from 708,400 metric tons in 1990 to 1.4 million metric tons in 2024. Considering the positive trends in livestock productivity, the sector's development is a promising direction for Ukraine's agriculture sector recovery.

Figure 3: Livestock Population and Annual Production in Ukraine, 1990–2025



Source: Created by the authors based on data from the State Statistics Service of Ukraine.

Recent Initiatives

Even before Russia's full-scale invasion, the government of Ukraine had prioritized the development and profitability of animal husbandry in order to strengthen self-sufficiency in meat and dairy products. To support livestock producers and increase the number of animals, the government initiated a **program** providing partial reimbursement (80 percent) of the cost of breeding animals purchased for further reproduction, partial reimbursement (50 percent for agricultural enterprises and 70 percent for cooperatives) of the cost of construction and/or reconstruction of livestock farms and complexes, and a special budget **subsidy** for farmers to reproduce livestock on-site to disincentivize importing live cattle.

Following the full-scale invasion, and the resulting significant loss of livestock population as a main asset for agricultural production and source of income for many farmers, the Ministry of Agrarian Policy developed a **methodology** for reimbursing incurred expenses, including replacement of injured, dead, or lost animals, Later, additional subsidies of $170 per head were **provided** to livestock farmers with 3–100 cattle, along with $50-per-head subsidies for farmers with 5–500 goats or sheep of breeding stock. Though the subsidies were modest, they contributed to efforts aimed at reducing livestock production costs and encouraging the sector's development.

Since the start of the invasion, farmers, especially in rural areas near the front line, have struggled to access veterinary services and medicine, which significantly increases the risk of disease spread and subsequent loss of livestock population. According to a survey conducted by Mercy Corps, 23.9 percent of respondents **reported a deterioration** in the availability of veterinary drugs; many emphasized their high cost. To address this issue, the Swiss Federal Office for Food Safety and Veterinary Affairs and the consulting company SAFOSO AG, along with partner organizations, organized **humanitarian aid** in the form of veterinary drugs and feed additives to support Ukrainian livestock farming and protect animal health. Additionally, in order to ensure food security in Ukraine and improve access to high-quality and safe dairy products, Switzerland has been providing humanitarian assistance to milk producers in the most affected regions with a **project** launched in cooperation with MAPFU, the Association of Milk Producers, and other partners. Milk producers can obtain products for washing and disinfecting milking equipment, pre- and post-milking udder treatment, wipes for udder hygiene, gloves, reagents for detecting hidden forms of mastitis, and disinfectants for livestock premises. And as part of the activities of the international charitable fund **SaveUA**, teams from the Association of Milk Producers, the **Ukrainian Agrarian Council**, and the Association of Pig Farmers of Ukraine have been collecting and delivering humanitarian veterinary aid to livestock farms and offering remote consultations on animal reproduction, health, diet, and feed.

In 2022, Ukraine's Ministry of Economy launched a **program** for farmers to relocate their businesses from dangerous zones. Although there have been some successful examples of livestock farms **relocating** from the front line to other regions, such possibilities are limited due to regular Russian missile strikes on frontline settlements. In addition, farmers would be able to transfer only part of their livestock, since most farms in Ukraine were built during the Soviet era and do not meet modern requirements for keeping animals, and there is a shortage of open agricultural plots. Indeed, the country's lack of suitable premises for keeping cows **creates** the conditions for a further reduction in the livestock.

Current and Future Priorities

To ensure national food security and satisfy domestic demand for meat and dairy products, MAPFU recently **introduced** a concept known as the State Targeted Economic Program for the Development of Livestock Breeding. The concept, still in development, provides a framework for inclusive government policy aimed at restoring livestock production after the war and until 2033. Currently, large agricultural enterprises experience higher cattle and cow productivity than households and small farms, while this trend is reversed for pork productivity. Livestock production has also become more concentrated in large enterprises compared to small- and medium-sized farms. To address these disparities, the program should provide for organizational and economic measures to create progressive forms of entrepreneurship in the livestock industry, particularly for individual farmers, which will facilitate their integration into the agricultural market.

- **Modernize the livestock industry.** Along with the stabilization and increase of the animal population (especially cattle/cows and pigs), improvement of animal keeping conditions and the introduction of advanced technologies are key to the industry's development. Concurrently, farmers need to take actions to improve animal diet, use feed additives, enhance manure management, and safeguard animal health in order to reduce the negative impact of greenhouse gas emissions.
- **Improve livestock breeding and genetics.** Implementing measures to preserve local breeds of farm animals, provide the livestock industry with genetic resources of Ukrainian origin, and improve the genetics of highly productive transborder breeds through selection will contribute to the formation of more adaptive and resilient livestock for domestic conditions.
- **Ensure sanitary conditions and stable veterinary care.** Protecting livestock facilities from biological, infectious, and invasive threats as well as preventing negative environmental consequences from livestock production will not only stabilize Ukraine's animal population but also increase food safety and facilitate compliance with EU standards. Increasing domestic production of veterinary medicine and expanding veterinary service will be critical to **stabilizing** the epizootic situation in the country, particularly the ongoing African swine fever outbreak.
- **Strengthen the crop production–livestock–food processing value chain.** Livestock creates demand for crop products as feed and supply of raw materials for the food processing industry. Development of fodder production will provide animals with adequate nutrition in sufficient quantity in response to the reduction of pastures due to contamination by mines and shells, which will in turn contribute to the increase of animal productivity. Development of the processing industry will stimulate increase of livestock production through stable demand and prices.
- **Increase self-sufficiency in animal products.** Even before the war, Ukraine's self-sufficiency (i.e., domestic production to consumption ratio) in meat, excluding poultry, was no more than 88 percent. Compared to the rational consumption norm (i.e., domestic production to dietary recommendation for consumption ratio), **self-sufficiency** was even lower: 77 percent for pork, 40 percent for beef, and 55 percent for milk. Expansion of livestock production will not only decrease import dependency for livestock products but also open new opportunities for export, especially after the Ukrainian government **abolished the licensing** of certain agricultural

products for export (e.g., live cattle, frozen cattle meat, poultry meat, meat and edible meat offal, edible meat meal or meat offal, cattle meat, and poultry eggs). Stimulating livestock product exports through the use of fiscal, tariff, and nontariff methods will encourage an increase in Ukraine's domestic livestock production by harmonizing the interests of raw material producers, processors, intermediaries, and importers.

Long-Term Measures (5+ Years)

Long-term measures should focus on supporting Ukraine's integration into the global agricultural economy and attracting international partners. The three priority areas outlined below are (1) integration of the agriculture sector with Europe, (2) adaptation of agricultural production to climate change and environmental sustainability, and (3) development of the food processing industry and high value-added production.

Integration of the Agriculture Sector with the European Union

Integrating Ukraine's agriculture sector into the European market is a strategic priority that requires harmonizing legislation, modernizing infrastructure, and expanding export opportunities. Due to the challenges of war, Ukraine was forced to redirect a significant share of its agricultural exports to the European Union, which accelerated the sector's partial adaptation to European standards. In response to new market conditions, producers focused on goods that meet the European Union's phytosanitary and quality requirements. Trade expansion was further supported by temporary liberalization measures under the Solidarity Lanes initiative and the European Union's autonomous trade preferences. Government initiatives, in partnership with EU-backed programs, have focused on improving sanitary and phytosanitary control, strengthening certification procedures, and enhancing logistical infrastructure. Further efforts should simplify customs procedures, improve quality control, and enhance cooperation with European certification bodies. Expanding financial and technical support from international partners will accelerate agricultural modernization, boost export potential, and enhance Europe's food security.

Background

Ukraine is actively working on integrating its agriculture sector with the European Union, focusing on harmonizing legislation, implementing EU standards, and expanding access for Ukrainian agricultural products to the European market. The country holds official EU candidate status, granted in June 2022, and formal accession negotiations **commenced** with an intergovernmental conference in June 2024. Ukraine has since initiated bilateral screening meetings, assessing its alignment with EU legislation across various sectors. The country aims to open multiple negotiation clusters throughout 2025, demonstrating its commitment to advancing toward EU membership.

According to the European Commission, in 2024, the share of Ukrainian agricultural exports to EU countries increased, demonstrating producers' gradual adaptation to European requirements.

Despite significant challenges caused by the war, the need for rapid adaptation has accelerated the implementation of European agricultural practices. In its annual enlargement report published on October 30, 2024, the European Commission **assessed** Ukraine's readiness in the sphere of agriculture and rural development as being in the early stages of preparation. At the same time, in the sphere of food safety, veterinary, and phytosanitary policies, Ukraine was **recognized** as moderately prepared, highlighting the need to accelerate legislative adaptation, modernize quality control infrastructure, and improve certification mechanisms in line with EU requirements. Ukraine is actively working on harmonizing its regulatory framework in the agriculture sector with EU legislation, particularly in the areas of subsidies, land relations, and environmental production standards. At the same time, there is a pressing need to strengthen the institutional capacity of state bodies responsible for implementing agricultural and food safety policies. Despite positive export dynamics, a significant share of Ukrainian producers still face challenges related to certification, access to EU markets, and compliance with traceability requirements.

Recent Initiatives

In 2024, agricultural products **accounted** for 59 percent of Ukraine's total exports, reaching $24.5 billion, marking the second-highest level after the record in 2021. Agricultural exports to the European Union **amounted** to $12.8 billion, or 51.7 percent of Ukraine's total EU exports. This reflects Ukraine's gradual integration into the European market and the adaptation of agricultural producers to EU standards. A significant step forward was the adoption of several laws **prepared** by the Verkhovna Rada Committee on Agrarian and Land Policy, which aim to improve the regulatory framework and align it with EU requirements. In addition, Ukraine and the European Union are jointly implementing projects to reform sanitary and phytosanitary control, establish effective quality control mechanisms, and introduce European certification procedures.

Several recent European initiatives have aimed at increasing coordination with Ukrainian farmers. The EU4Business program supports Ukrainian farmers and small- and medium-sized agricultural enterprises through consultative assistance, grant programs, and loans. The European Bank for Reconstruction and Development (EBRD) supports projects that improve logistical infrastructure for agricultural exports and expands certification opportunities for Ukrainian producers to meet EU standards. This support is particularly crucial in the context of postwar recovery, as it contributes not only to stabilizing agricultural production but also to building a more resilient and competitive logistics system. Investments by the EBRD in infrastructure modernization help reduce dependence on traditional export routes, which have become vulnerable due to the war, and promote the development of alternative supply corridors, especially through Ukraine's western borders. At the same time, certification support opens new market opportunities within the European Union, encourages the adoption of European quality standards, and enhances the position of Ukrainian products in global supply chains. Combined with grants and concessional loans provided through the EU4Business program, these efforts create favorable conditions for the effective integration of Ukraine's agriculture sector into the European economic area and for strengthening its export potential.

The European Commission has **introduced** additional trade liberalization measures, extending duty-free and quota-free access for Ukrainian agricultural products to the EU market through 2025,

fostering integration and increasing Ukraine's export potential. Strengthening cooperation between Ukraine and the European Union remains a priority, ensuring the modernization of agricultural production, improvement of quality standards, and expanded opportunities for Ukrainian farmers in the European market.

Current and Future Priorities

Ukraine must accelerate the adaptation of national legislation to EU standards, particularly in food safety, veterinary care, and phytosanitary control, which requires comprehensive infrastructure modernization and the implementation of effective certification mechanisms.

- **Strengthen quality control and regulatory alignment.** To support further integration with Europe, Ukraine will need to focus on improving the state quality control system for agricultural products, enhancing coordination between government agencies and the private sector, ensuring compliance with EU norms, and expanding market access for Ukrainian producers. In 2025, Ukraine is set to undergo an active phase of legislative screening to **assess** the alignment of its legal framework in the agricultural sector—including land use, farming, and food safety—with EU regulations. A crucial area of focus for policymakers should be the development of laboratory infrastructure to enable high-quality product inspections according to international standards. This will require support from international financial institutions and expert assistance.
- **Facilitate export logistics and border infrastructure.** To facilitate the uninterrupted export of Ukrainian agricultural products, Ukrainian and European leaders should simplify customs procedures, expand logistical routes, and establish new export hubs in border regions with the European Union. Poland has announced plans to **establish** a dry port on the border for agricultural products, which will increase Ukrainian export volumes.
- **Advance certification and market access:** Ukrainian authorities should advance cooperation with European certification bodies to streamline the inspection and approval processes for Ukrainian agricultural products, ensuring alignment with EU standards and facilitating smoother access to European markets. This will help producers meet EU standards more efficiently, enabling quicker access to high-value markets and strengthening Ukraine's position in the European supply chain.
- **Mobilize international support and joint investment.** International partners can enhance their support by financing technical assistance programs, providing grants for adapting production to European environmental standards, and promoting joint investment platforms for Ukrainian agribusinesses. Deepening economic integration with the European Union and implementing joint strategic agricultural initiatives will not only drive the development of Ukraine's agriculture sector but also strengthen Europe's food security.

Adaption of Agricultural Production to Climate Change and Environmental Sustainability

The adaptation of Ukraine's agriculture sector to climate change is crucial for sustainable growth, food security, and economic stability in the long term. Rising temperatures, soil degradation, and extreme weather events pose serious risks, necessitating modern climate adaptation strategies. Ukrainian farmers are increasingly adopting precision farming, biogas energy solutions, and advanced irrigation systems to improve efficiency and mitigate risks. Ukraine's Environmental Security and Climate Adaptation Strategy Until 2030 provides a national framework for integrating eco-friendly technologies and sustainable farming practices. Expanding international cooperation, financial assistance, and farmer education programs will accelerate the adoption of climate-resilient agricultural methods, reduce environmental risks, and enhance Ukraine's agricultural competitiveness in global markets.

Background

Ukrainian farmers are increasingly facing the negative consequences of climate change, including droughts, declining soil fertility, erosion, rising average annual temperatures, and the spread of new pest species. Over the past 30 years, the average annual temperature in Ukraine has **increased by 1.2°C**. These changes pose a serious threat to the sustainable development of agriculture; as the frequency of extreme weather events increases, natural ecosystems, human health, and economic stability are negatively impacted. This problem is not unique to Ukraine—one assessment estimates that without adaptation measures, global agricultural production could **decrease by 30 percent** by 2050—but Ukraine is particularly **vulnerable** due to its reliance on crop production, export-oriented agriculture, and the significant environmental damage caused by the war.

Adaptation can also provide new opportunities. In the face of growing challenges, Ukrainian farmers are exploring new crops and practices to ensure resilience and productivity. For example, climate change has significantly contributed to the expansion of grain cultivation, particularly corn, which has become one of the most promising agricultural crops in Ukraine. Rising temperatures, an extended growing season, and the northward shift of sufficient moisture zones have created favorable conditions for increasing corn acreage. Additionally, increasing precipitation variability and frequent droughts have encouraged farmers to adopt drought-resistant hybrids and innovative cultivation methods, leading to a substantial rise in corn yields. These changes have not only boosted grain production but have also **transformed** the structure of Ukraine's agriculture sector, making it more adaptable to emerging climate challenges. Developing climate adaptation strategies, enhancing resilience, and reducing risks are crucial elements of Ukraine's commitments under the UN Framework Convention on Climate Change and the EU-Ukraine Association Agreement.

Recent Initiatives

Ukrainian farmers are actively implementing modern methods to enhance the resilience of agriculture to climate change. The use of precision farming technologies such as soil analysis, field mapping, and crop monitoring has been shown to increase yields by up to 15 percent and reduce agrochemical use by 20–25 percent. Additionally, the introduction of biogas plants for processing organic waste

helps **reduce energy costs** by an average of 30 percent, ensuring farms' energy independence. The Ukrainian government has **approved** the Environmental Security and Climate Adaptation Strategy Until 2030, which focuses on modernization of irrigation systems and incentives for implementing eco-friendly technologies. International partners, including the World Bank, are actively **supporting** these efforts by financing projects aimed at increasing the resilience of agriculture to climate change and reducing greenhouse gas emissions. The initiatives mentioned above are not only a response to climate challenges but also an important prerequisite for the long-term enhancement of the efficiency of Ukraine's agriculture sector. The implementation of precision farming technologies, energy-saving solutions, and environmentally friendly production practices enables agricultural enterprises not only to optimize resource use and reduce costs but also to adapt to environmental changes, decreasing the vulnerability of agriculture to droughts, floods, and temperature anomalies. These approaches contribute to the formation of a new model of agricultural production—one that is more flexible, adaptive, and focused on sustainable development. Combined with government support and international financing, these measures lay the groundwork for increasing the global competitiveness of Ukrainian farmers and strengthening national food security amid wartime conditions, postwar recovery, and global climate change.

Current and Future Priorities

Effective **adaptation** of the agriculture sector to climate change will require a comprehensive national strategy including climate risk assessment, modern agricultural technologies such as precision farming and drought-resistant crop varieties, and farmer training on climate adaptation measures.

- **Reconstruct irrigation systems and improve water use efficiency.** Sustainable irrigation and efficient water use are key priorities for farmers, especially in the context of climate resilience and postwar recovery. A major focus is the modernization of infrastructure through the reconstruction of irrigation systems—particularly the introduction of water-saving technologies like drip irrigation—which can significantly reduce water consumption in arid areas and lower crop losses by 20–30 percent.
- **Provide policy and financial support for climate adaptation.** To promote the adoption of climate-resilient practices, government support in the form of subsidies and preferential loans will be necessary. International assistance can also play a vital role in strengthening agricultural resilience to climate change. Cooperation with international partners will facilitate the attraction of investments, expert support, and advanced technologies, enabling the implementation of climate adaptation projects.
- **Improve farmer education and advisory services.** Educational initiatives and advisory programs will help farmers **integrate** innovative farming methods that address modern environmental challenges. The implementation of these measures will contribute to enhancing the climate resilience of Ukraine's agriculture sector and ensure its sustainable development in the future.

Development of the Food Processing Industry and High Value-Added Production

The food processing industry plays an important role in the economy of Ukraine. It is responsible for processing agricultural products to produce finished food products and semifinished products with higher added value for consumption in domestic and foreign markets. Despite suffering damage during the war, the industry has demonstrated relative resilience—in 2024, the productivity of the food processing industry increased by 15.9 percent. The development of the food processing industry will require a transformation from Ukraine's current agricultural model to a new, large-scale, intensive model, which will ensure sufficient supply of quality raw materials through the introduction of modern practices and technologies, including advanced biotechnologies. However, such intensification must comply with environmental protection requirements and European standards. Diversification and growth of food production and exports will increase budget revenue, GDP, and food self-sufficiency, as well as reposition Ukraine in the global food system.

Background

The food processing industry constitutes over 8 percent of Ukrainian GDP and comprises more than 40 subsectors; the dominant sectors (in terms of volume) are vegetable oil and animal fats, sugar, beverages, and animal feed production. In 2021, the food processing industry **accounted for** 30.9 percent of Ukraine's overall processing industry revenue. Vegetable oil and animal fats made up the largest share of revenue (8.9 percent), followed by meat products (4.6 percent), beverages (3.1 percent), dairy products (2.9 percent), and bakery products (2.1 percent). From 2015 to 2021, an average of 283,600 people were **employed** by the food processing industry. Food products ready for consumption are Ukraine's third-largest export after metals and grains, and most of them are **sold** to EU countries, providing Ukraine with $11 billion in **export revenue**. Despite the war, Ukraine has maintained its position as the leading producer and exporter of sunflower oil and meal. In 2021, exports of these products reached 5.1 and 4.1 million metric tons, respectively. Following a brief decline in 2022, the industry recovered and in 2024 **exported** almost 6 million metric tons of sunflower oil and 4.5 million metric tons of sunflower meal and cake. Ukraine is also the world's leading **producer** of tomato paste and one of the five largest European suppliers of apple concentrate. However, Ukraine still exports more raw agricultural commodities than processed products ($12.9 billion vs. $9.1 billion in **export revenue**, respectively, in 2023), which leads to the transfer of added value to importing countries.

The war has caused a significant crisis in Ukraine's food processing industry. Logistics disruptions, blocking of transport routes, and damage to bridges, roads, and railways make it difficult to transport raw materials and finished products both internally and externally. Destruction of production facilities, interruptions in electricity supply due to constant missile attacks, and shortages of labor and raw materials further complicate the stable functioning of processing enterprises, and in some cases cause cessation. Economic instability and inflation have led to increased costs for food and food inputs, as well as a decrease in the solvency of both agro-industrial enterprises and citizens. Decline in domestic consumption due to lower purchasing power along with population decline, the loss of some sales

markets, and a decrease in export earnings have had a negative impact on the financial stability of food processing enterprises. Food companies typically **purchase** used, often outdated, equipment from Europe, but due to inflation and logistical challenges, even this practice is becoming increasingly expensive. Increased costs for inputs, security, and infrastructure restoration are diverting resources from investment in food production development.

Recent Initiatives

To ensure stability in the processing industry during the war, the Ukrainian government has launched several **initiatives** in collaboration with international organizations, in particular the EBRD. These include relocating production facilities to safer regions, supporting the creation and development of processing enterprises, and implementing further steps toward European integration. Relocating food industry enterprises requires not only finding or building suitable premises and moving equipment, but also attracting employees with appropriate knowledge and skills, developing new logistics for inputs and outputs, and opening new sales markets. The New Level grant program for processing enterprises, which falls within the framework of the government's e-Work program, gives entrepreneurs the opportunity to receive financial support for business creation and/or development. The main **conditions** of the program are that business owners must create up to 25 new jobs and cofinance 50 percent the project.

With another grant program, the Ukrainian government is supporting the creation and development of processing facilities, including in the food industry, by cofinancing the acquisition of technological equipment for businesses that create at least five new jobs. Since 2022, the state has **approved** 1,156 applications for the program, representing approximately $145 million in production facilities. USAID also introduced two projects to support Ukraine's processing facilities: USAID AGRO **announced** subgrant funding for the implementation of agricultural processing projects in rural areas. It was expected to provide an opportunity to attract investments in infrastructure development (e.g., cold storage and storage equipment) and create additional jobs. Out of the projects proposed for cofinancing, particular attention was paid to initiatives that aimed to restore and strengthen processing capacities for the production of value-added products from vegetables and root crops, fruits, berries, legumes, corn for food products, herbs, meat (except chicken), milk, and honey. USAID's Competitive Economy of Ukraine Program also announced grants that would **support** the development of medium and large processing enterprises in Ukraine, including in the food industry. However, the continuation of the USAID programs is currently questionable.

The Ukrainian government also recently **implemented** a new "Made in Ukraine" initiative, which is designed to stimulate an increase in domestic consumption of internally produced products, including food, and consequently support domestic producers by helping them accumulate funds for further investments.

Although food producers have also suffered significant losses from the war, the food processing industry has demonstrated relative resilience compared to the rest of Ukraine's processing industry, as it is aimed at providing for the basic needs of the population and meeting the daily demand for food both within and outside the country. As of September 2022, a total of 62 percent of food industry enterprises were **operating** at almost full (75–99 percent) or full and above capacity compared to the prewar period, the best result among Ukraine's processing industries. Increase of agricultural production, stabilization of domestic demand, and recovery of export logistics contributed to a 15.9 percent increase in the productivity of the food processing industry in 2024. The highest growth rates were seen in the production of sugar (39.4

percent), vegetable oils and animal fats (34.7 percent), and fruit and vegetable preservation (30.1 percent). Also, in marketing year 2023–24, a record 1.1 million metric tons of rapeseeds were processed, and export of rapeseed oil reached record 424,000 metric tons; production of soybean oil and meal **increased** by 22 and 29 percent, respectively. These positive trends should encourage an increase in the production of agricultural raw materials and further investments in the development of the processing industry.

Current and Future Priorities

The development of the processing industry will require the transformation of Ukraine's agricultural model to a new large-scale intensive model that will ensure a sufficient, quality supply of raw materials. Diversifying types of food processing and increasing the share of finished and semi-finished food products in the structure of domestic consumption and exports will contribute to increasing GDP and export revenues, improving Ukraine's trade balance, reducing food imports and, consequently, reducing import dependency and import logistics risks.

- **Attract new investment.** Intensive development of the processing industry will require significant investment (both domestic and foreign), but these costs are **justified** by the profitability of processing enterprises (which averaged 3.3 percent profits in 2021 and 8.6 percent profits in 2023). Improving economic efficiency of food processing enterprises and implementing modern technologies, including advanced **biotechnologies**, will contribute to the food processing industry's growth and, consequently, Ukraine's economic recovery. It will also increase return on investments as Ukraine shifts from exporting raw agricultural products to processed, high-value, consumer-ready products.
- **Support new product growth.** Businesses trying to produce and export food products that Ukraine has not previously supplied, but for which there is domestic and/or international demand, will need financial, legislative, and consultative support. (This applies to companies focusing on both nontraditional types of commodities for Ukraine and ready-to-consume niche and organic products.) The export of agricultural and food products from Ukraine is carried out mainly by large enterprises. The Ukrainian government should provide support for the entry of small- and medium-sized agricultural producers into export markets, their involvement in international projects, and the creation of joint ventures. Contract farming will ensure uninterrupted supply of quality raw commodities.
- **Diversify and expand food exports.** Increasing the share of agricultural products processed in Ukraine and exported as finished food products will reduce the potential for conflict with partner countries that primarily regulate the import of agricultural raw materials. Ukraine's transition from an exporter of raw materials to a supplier of high-quality and safe products with higher added value will repositioning it in the global food system.
- **Align the Ukrainian food sector with EU standards.** Increasing alignment with the European Union's food processing and environmental standards will be a key strategic approach for Ukraine to rebuild and revitalize its food industry following the war. To address this issue, MAPFU, in partnership with UNIDO and with financial support from the German government, developed the **Action Plans for the Green Recovery and Transformation of Ukrainian Food Industries**, and which will address recovery for key industries, including dairy, fruits and berries, honey, grain processing, poultry and egg products, vegetable oil, and sugar, as well as

cross-cutting areas such as food quality and safety and packaging. Future implementation of this plan will create jobs, enhance resilience, promote sustainable economic growth, and strengthen the productivity, competitiveness, and investment attractiveness of the food processing industry.

Conclusion

Agriculture is a cornerstone of Ukraine's economy, and the recovery of Ukraine's agriculture sector is of strategic importance for ensuring national food security, reducing dependence on imports of critical goods, restoring export capacity, and promoting the country's long-term sustainable economic development. Additionally, the stabilization and modernization of this sector are essential for the resilience of the global food system, as Ukraine remains one of the world's key agricultural suppliers.

This recovery will be a complex and long-term process that requires a multidisciplinary and coordinated approach across sectors. It calls for a comprehensive reconstruction model, including infrastructure rehabilitation, technology modernization, financial support for farmers, human capital development, export activation, and effective foreign investment mobilization. The "build back better" principle should guide this process—ensuring recovery not only repairs war damage but also lays the foundation for innovation, reform, and integration into the European Union.

Across all four stages—urgent, short-term, medium-term, and long-term measures—one priority remains central: the attraction of foreign investment. Despite wartime risks, Ukraine continues to demonstrate resilience and attractiveness to foreign investors—particularly in agriculture, infrastructure, and logistics—reflecting strong investor confidence in the agriculture sector's long-term potential. Foreign capital is already playing a pivotal role in Ukraine's recovery. Government initiatives, including war-risk insurance, preferential financing, and the development of industrial parks, have contributed to creating a more predictable and stable investment climate. In 2024, Ukraine attracted significant net foreign direct investment, with a substantial portion coming from reinvested earnings. Since the beginning of the full-scale invasion, 2,652 new foreign companies have **registered** in Ukraine, with agriculture and food remaining the most attractive sectors. Forty-three international companies have **invested** in Ukraine during the war, including Bayer ($65 million), Carlsberg ($40 million), and CEMARK ($30 million), which continue to expand their production capacity.

The agriculture sector requires **targeted** investment to implement specific priorities. Demining and infrastructure restoration remain critical, as approximately 4 million ha of farmland are still contaminated with landmines. The restoration of grain storage facilities, warehouses, and logistics infrastructure will require significant investment, with projected returns expected to substantially exceed the initial costs over the medium term. Processing modernization is equally essential, as upgrading value chains improves product quality and competitiveness in both domestic and international markets. Land market liberalization and the adoption of advanced agricultural technology have the potential to attract substantial investment and improve efficiency in agricultural production. Innovative technologies can help reduce production costs and boost annual revenues. Investment in biofuels and biomaterials opens new opportunities to strengthen energy security and support sustainability. Likewise, the development of organic agriculture is expected to significantly expand export capacity and enhance Ukraine's positioning in high-value global markets.

Foreign investment, therefore, serves not only as a key enabler but also as a cross-cutting driver of agricultural recovery. Its mobilization should follow a two-stage strategy, first addressing the consequences of war, then enabling long-term investment and sustainable growth. The total potential return from these initiatives is estimated to be in the tens of billions of dollars, making Ukraine's agribusiness sector one of the most attractive destinations for international investors—even under wartime conditions. ■

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