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FAO's response to the multiple crises in Europe and Central Asia

Executive Summary

This background document provides in-depth information and analysis on how a confluence of multiple shocks led to crises in the food, energy and finance sectors in the Europe and Central Asia region in 2021 and 2022. The paper outlines the challenges stemming from the multiple crises and FAO's responses in the region to address them.

In recent years, the Europe and Central Asia region has experienced multiple shocks, both natural and man-made, that have collectively contributed to the multiple crises affecting food, energy and finance systems and generating increased cost-of-living, particularly for the most vulnerable.

A wide range of responses were implemented by multiple stakeholders both globally and within the region to address the negative consequences of the crises, including, *inter alia*, on food inflation, trade, agricultural production, food security and access to affordable healthy diets in vulnerable populations. Recognizing the gravity of this situation, the Food and Agriculture Organization of the United Nations (FAO) has taken substantial strides in comprehending the channels through which these shocks affect the agrifood system and how they evolve in real time. FAO has played its role in monitoring the situation and in implementing interventions aimed at mitigating adverse consequences and bolstering agrifood system resilience in the face of ongoing and future shocks.

This document outlines the multifaceted challenges faced, highlights the responses taken by FAO and provides several recommendations for members to enhance the resilience of agrifood systems and support food security in the region. Members are encouraged to discuss the relevance of the information and the policy recommendations aimed at responding to the multiple crises and building resilient agrifood systems in the region.

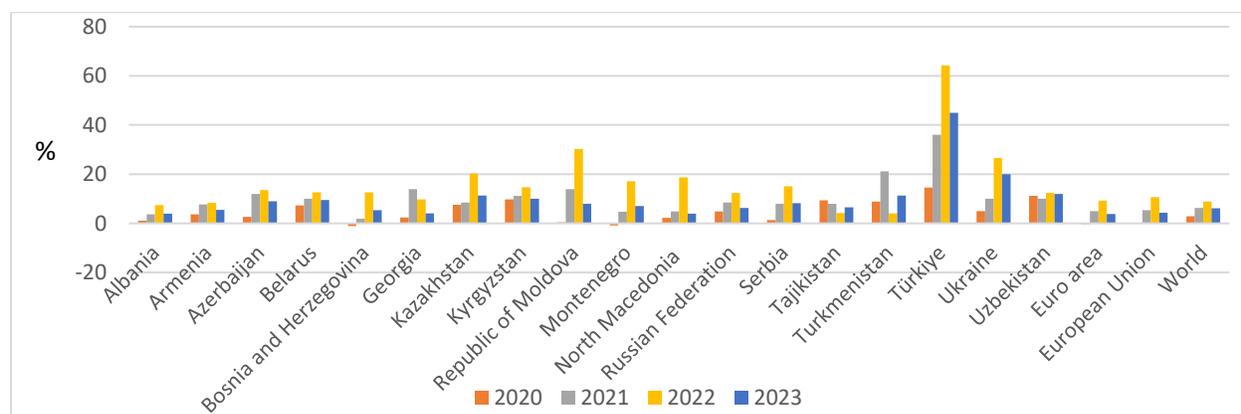
I. The context

1. Multiple, often overlapping shocks experienced by various countries in the Europe and Central Asia region in recent years – including the COVID-19 pandemic, the impacts of the war in Ukraine, adverse weather events and earthquakes – have affected the food, energy and finance sectors. The year 2021 and the first half of 2022 were characterized by steep increases in food and energy prices as markets adjusted to new supply conditions pushing up inflation and a tightening of financial conditions that at country level were compounded by depreciating local currencies, food supply chain disruptions and increased costs of food imports. Increased costs of food import bills were mainly reflected in higher unit costs rather than higher volumes (in particular grains, oilseeds and sugar), which in many countries of Eastern Europe, the Caucasus and Central Asia remained unchanged compared to previous years (FAO, 2023a).

2. The high energy prices have affected consumer households as well as agrifood systems and food industries. These factors impacted, to various degrees, many countries around the world, including in the Europe and Central Asia region. Since 2022, the Europe and Central Asia region also has experienced large displacements of people escaping the war. Many, mostly neighbouring, countries have welcomed millions of refugees fleeing the violence in Ukraine.¹

3. A sharp rise in consumer prices for food, housing and energy contributed to the escalation of the annual inflation in the region. In 2023, the highest inflation rates in non-European Union countries were in Türkiye (45 percent) and Ukraine (20 percent). Double-digit inflation persisted in three additional countries of the region: Kazakhstan, Turkmenistan and Uzbekistan (Figure 1). Food price inflation (December 2022 data) was also the highest in Türkiye (77.9 percent), followed by Ukraine (34.4 percent) and Republic of Moldova (31.8 percent) (FAO, 2023b). In the same month, all countries of the region for which data were available, apart from Tajikistan (5.1 percent), displayed double-digit food price inflation.

Figure 1. Inflation rate, end of period consumer prices (annual percent change, 2020–2023)



Source: **International Monetary Fund**. 2023. Inflation rate, end of period consumer prices. In: *IMF Datamapper*. <https://www.imf.org/external/datamapper/PCPIEPCH@WEO/OEMDC/ADVEC/WEOWORLD>

4. Men and women of different socioeconomic, ethnic and age groups were affected in different ways by overlapping shocks. Both the COVID-19 pandemic and the war in Ukraine have exacerbated existing inequalities, with older women and single mothers representing the majority of the poor in Ukraine. Gender intersects with other social dimensions affecting the vulnerabilities of distinct groups, including: the Roma population; unaccompanied children; persons living with disabilities; women in rural communities; people in displacement and conflict zones; and lesbian, gay, bisexual, transgender, intersex and queer communities. A higher portion of women are underemployed than men, leading to negative coping mechanisms and

¹ Currently, there are more than 8 million refugees from Ukraine in Europe alone, and more than 5 million are under various protection schemes in Europe (UNHCR, 2023).

increased vulnerabilities and exposing them to various forms of harm and abuse, such as trafficking, labour exploitation and gender-based violence, including sexual exploitation.

5. Based on the latest information (2019–2021), the Europe and Central Asia region has low prevalence of both undernourishment (below 2.5 percent) and moderate or severe food insecurity (12.4 percent), with some variations within the region (FAO *et al.*, 2023) (See Table 1). In 2020, the prevalence of stunting (7.3 percent) and wasting (1.9 percent) in children under 5 years of age was also low in the region. However, the prevalence of overweight in children under 5 was higher than the world average (7.1 percent versus 5.7 percent in 2020). The prevalence of anaemia among women aged 15 to 49 years (17.4 percent in 2019) is below the world average of 29.9 percent, but the regional estimates have remained unchanged for nearly two decades. On the other hand, adult obesity has been on the rise in all subregions and all countries in the region for the past two decades and is well above the global average (23.3 percent versus 13.1 percent in 2016, the latest year for which data are available).

Table 1. Prevalence of food insecurity

	Moderate or severe food insecurity (%)			
	2014	2019	2020	2021
Europe and Central Asia	10.6	9.8	11.3	12.4
Caucasus	14.0	16.0	16.7	16.9
Central Asia	8.5	13.2	17.9	20.2
Commonwealth of Independent States Europe and Ukraine	8.5	8.9	10.3	10.2
EU-27 and the United Kingdom of Great Britain and Northern Ireland	8.7	6.0	6.2	6.6
Western Balkans	16.2	14.7	17.6	19.8

Source: *FAO, IFAD, WMO, WHO, UNICEF, WFP, & UNECE. 2023. Europe and Central Asia – Regional Overview of Food Security and Nutrition 2022. FAO; IFAD; WMO; WHO; UNICEF; WFP; UNECE. <https://doi.org/10.4060/cc2571en>*

6. The multiple crises have led to a widespread slowdown in global economic growth, which declined to 3.5 percent in 2022 (from 6 percent in 2021) and is forecasted to fall to 3 percent in 2023 and 2024 (IMF, 2023). In the Europe and Central Asia region, growth decelerated sharply from 7.1 percent in 2021 to 1.2 percent in 2022, reflecting contraction in the Russian Federation (2.1 percent), a deep recession in Ukraine and a substantial slowdown in Türkiye (Izvorski *et al.*, 2023). In 2023, the output in the Europe and Central Asia region is projected to increase moderately, to 2.4 percent.

II. Impact of the multiple crises in Europe and Central Asia

7. In the Europe and Central Asia region, following the onset of the pandemic in 2020 and the war in Ukraine in early 2022, the prices of certain essential food items and agricultural inputs experienced a sharp escalation, particularly for grains, vegetable oils, feed, energy and fertilizers, although many have since

eased. Consequently, a surge in inflation coupled with a credit crunch posed significant challenges to vulnerable groups accessing nutritious foods that contribute to healthy diets. The Russian Federation and Ukraine are prominent players in the global trade of grains and oilseeds. In the first few months after the start of war in Ukraine, trade and logistics in the Black Sea region were also significantly disrupted by the blockade of Ukrainian seaports, which has also contributed to food price increases in 2022. Some volatility spikes in prices were also seen in mid-July 2023 after the withdrawal of the Russian Federation from the Black Sea Grain Initiative.

Impacts on food market prices and trade

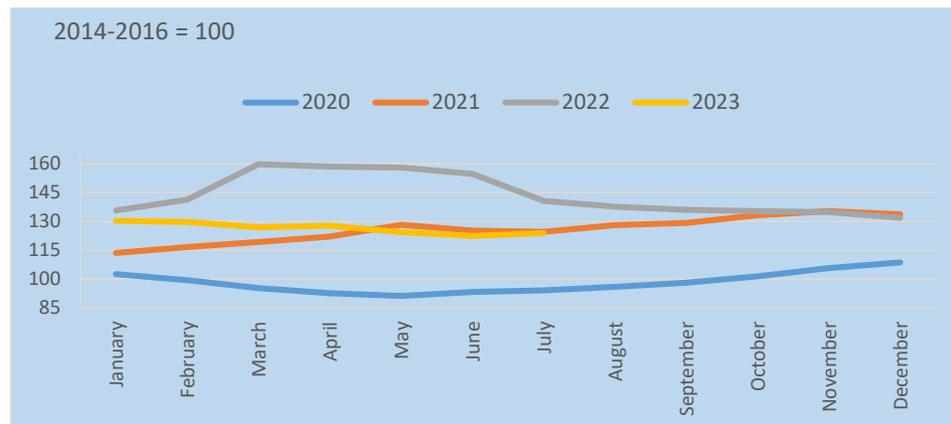
8. The Russian Federation, Türkiye, Ukraine and the United Nations² launched the Initiative on the Safe Transportation of Grain and Foodstuffs from Ukrainian Ports, known as the Black Sea Grain Initiative, in Istanbul on 22 July 2022. The Black Sea Grain Initiative has enabled the resumption of exports from three Ukrainian Black Sea ports (Pivdennyi, Chornomorsk and Odesa) and the export of fertilizer, including ammonia, from the Russian Federation (FAO, 2023i). As part of the European Union's response to the war in Ukraine, the European Union–Ukraine Solidarity Lanes were established on 12 May 2022, providing essential corridors for agricultural exports from Ukraine through European Union territories as well as the importation of other goods. The autonomous trade measures for Ukraine, in force since 4 June 2022, have suspended all import duties for a limited number of Ukrainian exports (wheat, maize, rapeseed and sunflower seed) to the European Union (European Commission, 2023). The Solidarity Lanes and the autonomous trade measures helped Ukraine preserve some trade flows from the country to the European Union and maintain its trade position with the rest of the world in 2022. These agricultural products are released for free circulation in all Member States of the European Union other than Bulgaria, Hungary, Poland, Romania and Slovakia to protect the domestic markets of these countries from excess supplies and depressed farm-gate prices. In these five countries, the products can circulate or transit by means of a common customs transit procedure or go to a country or territory outside the European Union.

9. International initiatives such as the Black Sea Grain Initiative and the European Union Solidarity Lanes have helped ease global food prices. The prices of grains started declining on global markets in August 2022, thanks to improved production prospects in Canada, the Russian Federation and United States of America. Nevertheless, world prices remain elevated compared to historical standards. On 17 July 2023, the Russian Federation did not agree to extend the Black Sea Grain Initiative agreement.

10. The FAO Food Price Index in July 2023 was 11.8 percent lower than in the same month in 2022, although it gained 1.3 percent from the previous month (**Error! Reference source not found.**). The monthly increase was underpinned by a solid rise in the vegetable oil price index, which was partly counterbalanced by declines in the price indices for sugar, cereals, dairy and meat.

² Based on the 1974 International Convention for the Safety of Life at Sea.

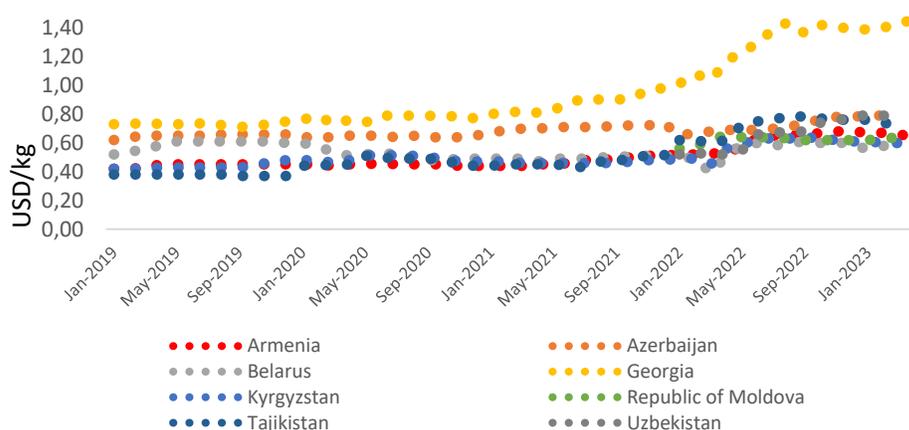
Figure 2. FAO food price index, 2020–2023



Source: **FAO**. 2023. *FAO Food Price Index*. In: *World Food Situation*.
<https://www.fao.org/worldfoodsituation/foodpricesindex/en/>

In most of the monitored import-dependent countries in the Europe and Central Asia region, domestic food prices also have declined from mid-2022. However, national average wheat flour prices were still significantly higher in March 2023 than their values before war broke out in Ukraine. The highest price elevations since January 2022_were recorded in Uzbekistan (50 percent) and Georgia (43 percent), while the lowest was in Republic of Moldova, at 14 percent (Figure 3). Food prices were already on the rise in Central Asia prior to the war (World Bank, 2022). In March–June 2022 in this subregion, the trends in domestic prices were similar to those on international markets, particularly on selected food products sourced from the Russian Federation (wheat flour, sugar and sunflower oil), reflecting the price spikes and the effects of export restrictions by Kazakhstan and the Russian Federation on price growth.

Figure 3. Trends in wheat flour prices in Europe and Central Asia, 2019–2023



Source: **FAO**. 2023. *FPMA Tool V4*. In: *Food Price Monitoring and Analysis (FPMA) Tool*.
<https://fpma.fao.org/gIEWS/fpmat4/#/dashboard/tool/domestic>

Note: The graph portrays the national average prices of wheat flour in United States dollars.

11. The countries in the Europe and Central Asia region, particularly those in Central Asia and the Caucasus, are highly dependent on the import of food products and key agricultural inputs, mostly fertilizers,

from the Russian Federation and, to a lesser extent, Ukraine, mostly due to their geographic proximity (Figure 4). *Inter alia*, wheat and wheat products are important components of people's traditional diets in the region, which are mainly sourced from the Russian Federation. In 2022, in Kyrgyzstan, the share of wheat imports originating from the Russian Federation increased significantly, while it decreased in Albania and Azerbaijan. The market share of partner countries had not changed significantly in most other countries.

Figure 4. Share of wheat flour imports from the Russian Federation and Ukraine among the net importers in Europe and Central Asia, 2021 and 2022



Source: FAO calculations based on information acquired from *Trade Data Monitor*. 2023. *Trade Data Monitor*. <https://www.tradedatamonitor.com/>

Note: The data are for wheat and meslin/wheat or meslin flour. In Türkiye, some grain imports take place under a special processing regime for re-exports.

12. In their attempts to protect domestic food markets, some governments implemented ad hoc trade restrictions that disrupted trade routes and further compounded the situation. In 2022, 32 countries imposed 77 export restrictions in the form of export licensing requirements, export taxes or duties, outright bans or a combination of measures (Glauber and Laborde, 2022). The export restrictions were largely on the commodities most affected by the ongoing war in Ukraine, such as wheat, feed grains and vegetable oils. In 2022, 19 countries worldwide, including 11 from Europe and Central Asia, implemented food export bans. In addition, six countries or territories, including three (Belarus, the Russian Federation and Ukraine) from the Europe and Central Asia region, introduced export restrictions in the form of export licensing requirements or export taxes. These policy measures are now inactive (IFPRI, 2023). Currently, 19 countries, including six from Europe and Central Asia,³ have a total of 54 active food export bans, while seven countries imposed 40 food export-limiting measures up to the end of 2023. With the same validity period, China, the Russian Federation and Ukraine implemented bans and/or restrictions on the export of fertilizers.

Impacts on agriculture and livestock production

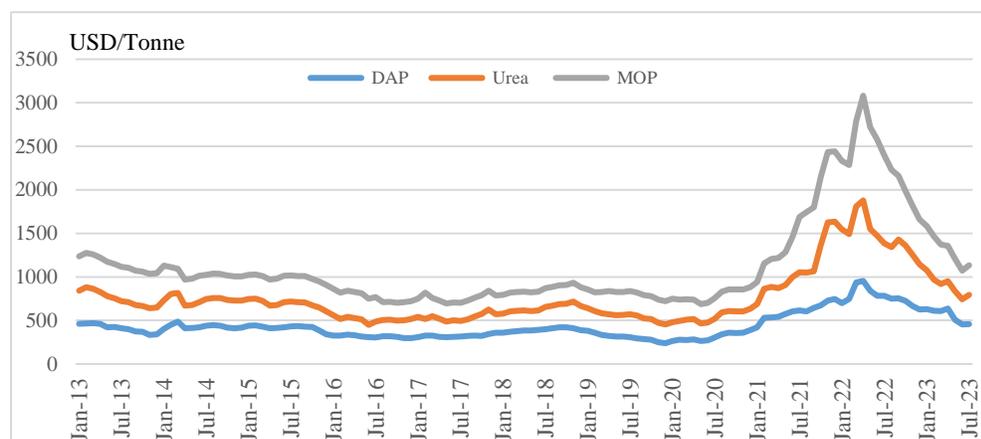
13. Fuel and fertilizers are essential inputs for crop farming activities. Prices of fertilizers have been on the rise since 2021 due to a combination of factors (FAO, 2022c), including soaring wholesale gas prices (particularly important for nitrogen fertilizers), supply chain disruptions and increased demand. The prices of fertilizers reached all-time highs in 2021 and in the first half of 2022.⁴ Soaring prices of fertilizers and other energy-intensive products have increased production costs in 2022, compromising the ability of farmers to cultivate and sustain or increase profits. In the first half of 2023, fertilizer prices remained well above pre-

³ The countries or territories are Azerbaijan, Belarus, the Russian Federation, Serbia, Türkiye and Kosovo. All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).

⁴ In 2021, the Russian Federation, a key exporter of fertilizers (nitrogen fertilizers, potassium and phosphorous), introduced restrictive measures on exports of fertilizers (through export taxes, licensing requirements and actual bans). Sanctions on Belarus, one of the major global suppliers of potash, also have contributed to increases in fertilizer prices. Increased demand in 2021 (due to higher crop prices), increases in bulk and container freight rates caused by the COVID-19 pandemic, and weather-induced disruptions to renewable energy are among the other factors contributing to increased fertilizer prices (FAO, 2022c).

pandemic levels (Figure 5). Input market dynamics and trade restrictions will continue to affect fertilizer markets, which could limit supply and demand recovery in 2023.

Figure 5. Monthly fertilizer prices, 2013–2023



Source: **World Bank**. 2023. *Monthly prices*. In: *Commodity Markets*. [Cited 2 August 2023]. <https://www.worldbank.org/en/research/commodity-markets>

Note: Monthly series are in nominal United States dollars.

14. Drought in 2022 severely impacted the cereal harvest in the Republic of Moldova. This has exacerbated the situation of farmers who had incurred high expenses during the planting season due to high farm input prices. In Ukraine, the war has damaged both agricultural and general infrastructure and constrained agricultural activities in several ways. Agricultural areas along the active conflict line that were mined (designated military areas) were no longer suitable for agricultural production, whereas the areas lost to Russian forces reduced access to farmers for cultivation. The estimates of the damage and losses in the agriculture sector in Ukraine over one year, starting from the beginning of war, is equivalent to USD 8.7 billion, while losses are USD 31.5 billion (World Bank *et al.*, 2023).⁵ These estimates are likely higher now, as the war has brought more damage since June 2023. Powerful earthquakes in Türkiye in early 2023 resulted in the significant loss of human life and damaged infrastructure, including agriculture assets. The cost of damages is estimated at USD 1.3 billion, while losses are estimated at USD 5.1 billion (Republic of Türkiye, 2023).⁶

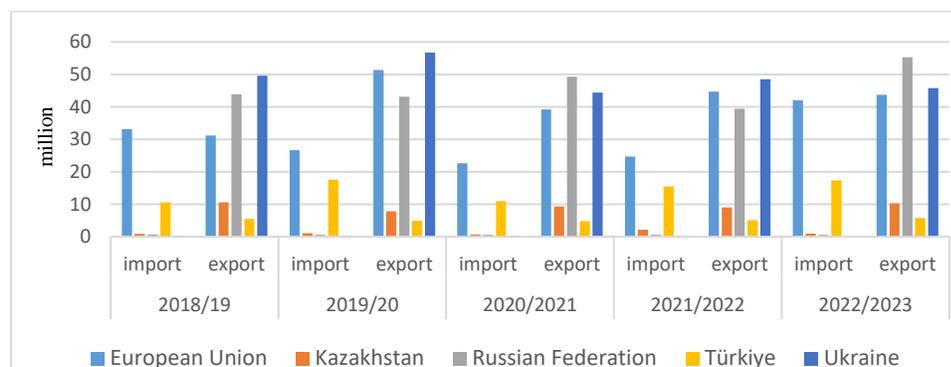
15. FAO continuously monitors developments on the commodity markets. In June 2023, FAO estimated that world cereal output will increase by 1.1 percent from 2022 to reach a record-high 2 819 million tonnes in 2023. This reflects a better wheat production outlook, albeit one that is below the record registered in 2022 (FAO, 2023g). In parts of Europe, weather conditions have been favourable for crop development, although heatwaves in the south will constrain the harvest of spring planted crops. In Central Asia, dry weather conditions persist, particularly in areas already impacted by drought. Although the countries of this subregion, apart from Kazakhstan, have limited relevance for global trade, they may generate challenges in domestic food availability. Meanwhile, both the Russian Federation and Ukraine reduced plantings of wheat and maize. Despite this, the 2022 bumper crop in the Russian Federation and large carryover stocks are likely to have a minimal net impact on cross-border trade. The 2023 forecast for

⁵ The damage includes partial or full destruction of machinery and equipment, storage facilities, livestock, fisheries and aquaculture, and perennial crops, as well as stolen inputs and outputs. The war losses include the foregone farm income due to lower/foregone production volume (e.g. unharvested crops), lower farm gate prices (due to export logistic disruptions), higher additional farm production costs (e.g. fertilizers and fuel), the cost of affected land recultivation after survey, clearance and land release, and the halt of fishing operations (World Bank *et al.*, 2023).

⁶ The cost of damages includes the cost of the replacement or repair of totally or partially destroyed physical assets and stocks, including agricultural infrastructure, livestock and crops. Losses to the sector include the economic and productive impact of the damage, such as reduced availability of food and higher food prices due to the loss of stored crops (Republic of Türkiye, 2023).

total cereal production in Ukraine, estimated at 47.8 million tonnes, is more than 30 percent below the five-year average level (FAO, 2023h).

Figure 6. Total cereal import and export: major exporters in Europe and Central Asia



Source: FAO. 2023. Market Database. In: AMIS Agricultural Market Information System. <https://app.amis-outlook.org/#/market-database/custom-query>

Note: Total cereals include coarse grains, maize, soybeans, rice and wheat.

16. While consumers welcome declining food prices, the prospect of a decline in food prices due to the anticipated abundant crop could be worrisome for farmers who faced expensive input prices in 2022.

17. The region is currently facing a significant risk of the spread and introduction of transboundary animal diseases, such as African swine fever, avian influenza, lumpy skin disease, *peste des petits ruminants* and foot and mouth disease, primarily due to unregulated movement of animals within and across borders. Additionally, zoonotic diseases such as brucellosis, echinococcosis, anthrax and rabies continue to pose a burden to both livestock producers and public health, despite their presence in the region for many decades.

18. Apart from the aforementioned diseases, livestock production in the region is also threatened by the escalating cost of feed, especially in Central Asian countries. This situation results in lower profit margins for farmers and might affect the availability of and the access to animal-source foods. The issue of expensive feed is further compounded by the impacts of climate change and overgrazing in rangelands, which are crucial for the rearing of cattle and small ruminants. In addition to expensive feed prices, feeding practices, like other husbandry practices, are inefficient and obsolete. This also includes infrastructure, pasture management, genetics and access to updated knowledge.

Impacts on vulnerable households

19. A surge in inflation in 2022, coupled with a credit crunch, posed significant challenges to the ability of vulnerable people to access nutritious foods that contribute to healthy diets. The average cost of a healthy diet in the Europe and Central Asia region increased by 3.3 percent from 2019 to 2020 to USD 3.14 due to the sharp increase in consumer food prices related to the broad economic impacts of the COVID-19 pandemic. Vulnerable populations and individuals, often including pensioners, were hit the hardest by the increased cost due to their weak purchasing power.

20. The concurrent crises have constrained household budgets, particularly among the poorest people, who spend the largest portions of their incomes on food, energy and other essentials. Many of the households living close to the poverty line also are among the most vulnerable. The multiple crises threaten to widen inequalities further, including gender inequalities. Thus, the crisis will have significant implications on food diversity and access to healthy diets among the most vulnerable, with eventual impacts on poverty levels, food security and nutrition.

21. Interestingly, not all consequences unfolded as expected. For example, initial concerns surrounding remittance flows from the Russian Federation to Armenia, Central Asia, Georgia and the Republic of

Moldova were alleviated. As a result of an influx of freelancers and businesspeople affected by the international sanctions against the Russian Federation into neighbouring Armenia, Georgia, Kazakhstan and Uzbekistan, these countries have experienced increased capital flows from the Russian Federation (Usov, 2022). The Russian influx also has surged real estate rents, often beyond the reach of the local population, and contributed to a rise in the cost of living in the abovementioned countries.

Government responses

22. Governments across the region responded to the increased cost-of-living crisis with various measures. The responses primarily were related to broadening social assistance and subsidies, including for energy, electricity and natural gas prices and price regulations, among others. These subsidies targeted households as well as businesses.

23. In January 2023, at a virtual initial consultation with government representatives organized by the FAO Regional Office for Europe and Central Asia, many countries confirmed⁷ that they are facing challenges related to food security because of an increased cost of living. Most countries in the region mitigated potential risks to food availability by supporting primary production through various farm and market support measures. In addition to the abovementioned measures, participants reported implementing such responses as tax reductions, trade restrictions (imports), export limitations, pension revisions and valorization schemes, cash compensations, direct support to farmers with cash and agricultural inputs, and expanding trade partners. Despite these perceptions, countries called on the FAO to support them in the collection of data and information, which they have identified as one of the major bottlenecks for timely and efficient evidence-based responses.

III. FAO's response to the multiple crises in Europe and Central Asia

24. The FAO work programme for Europe and Central Asia for the biennium 2022–2023 implements the FAO Strategic Framework 2022–2031 as well as the Medium-Term Plan 2022–2025 and the Programme of Work and Budget 2022–2023, utilizing expertise from FAO headquarters in Rome and the Regional, Subregional and Country Offices, acting as “One FAO.” The FAO Regional Office for Europe and Central Asia addresses four regional priorities focusing on the medium-term goals (outcomes) for 2022–2025 and the clear contribution to the Sustainable Development Goal (SDG) targets, in line with the corporate aspirations of the FAO Strategic Framework and the regional priorities. The regional priorities are as follows:

- Regional Priority 1: Formulating effective policies, promoting digital innovation and facilitating rural transformation, with emphasis on smallholders and youth.
- Regional Priority 2: Food system transformation and support in exploring new markets through the alignment of trade, food safety and sanitary and phytosanitary policies to meet World Trade Organization commitments and promote value chain development and the One Health approach.
- Regional Priority 3: Promoting sustainable natural resource management and facilitating resilience in agriculture, forestry and other land use sectors, including mitigating and adapting to climate change.
- Regional Priority 4: Addressing food insecurity and reducing all forms of malnutrition.

25. The FAO Regional Office for Europe and Central Asia is utilizing three Regional Initiatives as programmatic umbrellas facilitating multidisciplinary interventions to address food insecurity and reduce all forms of malnutrition, tailored to regional, subregional and country contexts. Gender, youth and inclusion are cross-cutting themes of the work in the region.

26. To effectively respond to the multiple crises, the FAO Regional Office for Europe and Central Asia has made necessary adjustments to its regional work programme for 2022–2023. These changes primarily focus on regional-level outputs, introducing additional measures such as developing immediate, medium-term and longer-term plans to address the consequences for food security and nutrition, including emergency

⁷ The countries are Albania, Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Montenegro, North Macedonia, Republic of Moldova, Serbia, Türkiye, Tajikistan and Uzbekistan.

responses, recovery assistance and resilience-building in food systems for the most affected countries in the region. Additionally, the Regional Office is actively monitoring the evolving food security and malnutrition situation in the Europe and Central Asia region during the crisis, utilizing in-house information and analyses as well as those from prominent news outlets and international organizations.

27. In 2022, the FAO Regional Office for Europe and Central Asia achieved an exceptional level of resource mobilization, with voluntary contributions amounting to USD 149 million. This far surpassed the previous year's levels (USD 49 million in 2021). The total resources for Europe and Central Asia up to July 2023 were equivalent to USD 230 million. Fifty percent of the total funds mobilized are directly related to the implications of the war in Ukraine. This substantial funding has enabled the Regional Office to strengthen its efforts in addressing the crises and implementing impactful initiatives in the region.

28. Recognizing the need for continuous monitoring and information exchange regarding the implications of the war in Ukraine on agrifood systems and food security for internal purposes and thus also facilitating better and targeted programming, the FAO Regional Office for Europe and Central Asia established a working group composed of a multidisciplinary team of technical staff in the Regional Office in March 2022. The working group has produced 22 news briefs targeted to the FAO offices in the region, covering a range of topics related to the impact of the war (e.g. food inflation, market prices, food imports, fertilizer prices, cost of living, crop prospects, gender and economic consequences). In 2023, the group has expanded its scope to include discussions on the environment, market price trends and updates from Country Offices in relation to the impact of the crises and information needs.

29. FAO, through the FAO Investment Centre, has also worked closely with its investment partners from the World Bank and the European Bank for Reconstruction and Development to support initial damage and loss assessments and to provide analytical and technical assistance in support of liquidity and access to finance for farmers and agribusiness companies and reduce the impact of supply chain disruptions.

30. The FAO Regional Office for Europe and Central Asia has developed a technical cooperation programme "Responding to the crisis in food, energy and financial systems in Europe and Central Asia" following a request from governments at the Thirty-third FAO Regional Conference for Europe. Through the project, FAO aims to identify problems and develop immediate, medium-term and longer-term plans to address the food security implications of the war in Ukraine, including emergency response, recovery assistance and resilience-building.

31. In response to the multiple crises, FAO has developed a new Regional Gender Action Plan 2023–2026 to ensure that the principles of leaving no one behind and gender equality are embedded in all work programmes for greater effectiveness and impact.

32. FAO has initiated and implemented various projects to address the crises. Some of these projects contribute to the United Nations Joint Fund for Sustainable Development Goals, a multipartner trust fund and pooled mechanism for integrated policy support and strategic financing under the leadership of United Nations Resident Coordinators.⁸ FAO's specific role in the joint projects focused on evaluating the reliability of the available data, assessing information needs, ensuring correct messaging, strengthening the food security and nutrition monitoring system to measure the impact of shocks, enabling governments to formulate relevant responses, and attending to the needs of vulnerable groups.

33. In addition, FAO is implementing emergency projects in Armenia (input support for the most vulnerable smallholders affected by supply chain disruptions) and the Republic of Moldova (two emergency projects in response to the drought as well as the impacts of the war in Ukraine) to help economically vulnerable smallholder farmers alleviate the impacts of crisis. In Bosnia and Herzegovina, support has been given to vulnerable groups through the direct provision of food. After the destructive earthquakes in Türkiye, FAO provided immediate interventions to safeguard livelihoods and ensure that the most-affected rural

⁸ Projects under the UN SDG Fund with FAO involvement cover Albania, Armenia, Bosnia and Herzegovina, Georgia, Kyrgyzstan, North Macedonia, Republic of Moldova, Tajikistan, Türkiye, Ukraine and Uzbekistan.

communities in Türkiye could sustain and recover basic food production.⁹ In collaboration with the Ministry of Agriculture and Forestry of Türkiye, FAO has initiated a three-year earthquake response and recovery plan, valued at USD 112 million, to support 700 000 rural individuals in the 11 provinces affected by the earthquakes (FAO, 2023f).

34. Urban environments, with their high concentrations of consumers and retail markets, are an important part of the agrifood system. Urbanization affects three major components of agrifood systems: i) consumer behaviour and diets; ii) food supply chains (logistics, processing and wholesale, markets, retail and trade); and iii) food production (FAO *et al.*, 2023). As urbanization increases across the region, the potential of urban food systems to deliver more sustainable and resilient local solutions should be investigated in response to the multiple crises. The FAO Regional Office for Europe and Central Asia will conduct urban food system assessments in selected cities in the region to identify priority areas of work and document successful initiatives that address urban food system issues. Among the actions that FAO is implementing in the region to build resilience in urban environments are efforts to strengthen rural–urban linkages by improving local production and providing market access to local producers, boost consumer education and healthy food environments, reduce food loss and waste and encourage innovation and the adoption of green technologies for agrifood systems and green infrastructure.

FAO's response in Ukraine

36. After the start of the war in Ukraine in early 2022, FAO established a project office and formulated a rapid response programme and emergency operations in the country to support small and medium-scale farmers (FAO, 2022a). These programmes and operations are being implemented drawing on FAO expertise in the Regional Office and in close cooperation with the Office of Emergencies and Resilience in FAO headquarters. Agriculture plays a significant role in Ukraine's economy, and the sector is key to protecting food security and livelihoods across the country – particularly for the smallholder farming sector, which contributed 41 percent to the gross agricultural production in Ukraine (FAO, 2022a). Urgent agricultural interventions in emergencies and crises have enormous impacts on food availability, nutrition and displacement, significantly cutting other humanitarian costs.

37. In March to December 2022, FAO's rapid responses were designed to meet critical and time-sensitive agricultural deadlines for production, harvest and storage and that address market functionality and access for vulnerable populations (FAO, 2022a). Safe access to fields and adequate support of farming activities are essential for ensuring successful harvest and national food security in Ukraine and for adequate contribution to the global food balance. FAO has mobilized USD 118 million in resources to support projects in Ukraine in 2022–2023 related to the ongoing war.

38. The programme has sought to assist nearly 1 million rural people through maintaining critical food production systems; supporting agrifood supply chains, value chains and markets; and developing evidence-based analysis of the evolving food security status and impacts of the war on rural populations. In parallel, the FAO Grain Storage Support Strategy aimed to address 25 percent of the national grain storage deficit with temporary and fixed storage solutions.

39. Through December 2023, FAO's response programme in Ukraine aims to restore food systems and protect food security in Ukraine (FAO, 2023d). The overall funding need for the implementation of the response programme is USD 205 million.

40. The programme focuses on three pillars, with different priority groups for each:¹⁰

- Pillar 1: responding to the urgent needs of rural communities and protecting upcoming agricultural campaigns.
- Pillar 2: restoring critical agricultural production and value chains.

⁹ FAO's interventions included the provision of cash, the rehabilitation of damaged infrastructure at the household level, the distribution of livestock feed and the provision of quality inputs.

¹⁰ Priority groups by pillars are mainly households in conflict-affected rural areas (Pillar 1); small and medium-sized producers, particularly in newly accessible areas (Pillar 2); and national authorities, local farmers' associations and providers of critical technical services (Pillar 3).

- Pillar 3: supporting the continued functioning of productive food systems and contributing to local, national and global food security.

41. In addition to the rapid response programme, FAO is implementing investment programmes in Ukraine. In mid-January 2023, FAO launched an investment support programme in Ukraine targeting commercially oriented, small-scale farmers and agricultural small and medium enterprises. This programme includes two interlinked interventions: an investment grant facility providing cash-based investment grants to eligible beneficiaries on a cost-sharing basis, and pre- and post-investment technical assistance. Investment support grants help farmers stabilize, diversify and expand their production, thus increasing food security and economic health at the national level. Investments with other agriculture actors can unblock supply chains, streamline logistics and strengthen markets.

42. The FAO Investment Centre continued supporting its financial institutions partners, namely the World Bank and the European Bank for Reconstruction and Development, in their activities in Ukraine aimed at the country's reconstruction and recovery. Support was provided to the new World Bank project on agriculture recovery and emergency operation in Ukraine (with tentative funding of USD 700 million) as well as to analytical and technical assistance to European Bank for Reconstruction and Development operations in the livestock, grain, oilseeds and other agribusiness sectors in Ukraine (with a total value of about USD 160 million), focusing on farm biosecurity, the use of antimicrobials and market analysis for informed policy decision-making.

FAO assessments and studies

42. FAO has carried out several assessments, conducted studies and produced information products in relation to the impact of the multiple crises on agriculture, food systems, food security and nutrition in the Europe and Central Asia region.

43. In 2022, FAO Armenia conducted a brief analysis on the effect of the war in Ukraine and economic sanctions on the Armenian food system, evaluating key trade-related components of the Armenian food system (wheat, fertilizers and poultry). The document included a number of recommendations that might be considered in areas necessitating potential emergency intervention, as well as potential development cooperation projects.

44. FAO Tajikistan conducted an evaluation of FAO's COVID-19 response and recovery programme in the country to assess its effectiveness in order to determine FAO's contribution to mitigating the impacts of the pandemic and evaluating the initial progress made towards recovery. The scope of the assessment in terms of substantive coverage includes response actions by FAO in Tajikistan (starting in March 2020) that shaped the design of the programme and those directly stemming from it through December 2021.

45. In April 2022, FAO Georgia conducted an assessment of the economic and social impacts of the war in Ukraine on Georgia and provided recommendations for addressing the potential risks related to food security. In July 2022, FAO Georgia, alongside other United Nations agencies, launched a United Nations Joint Programme to strengthen food and energy resilience in Georgia, aimed at enhancing the country's ability to cope with food and energy crises and protect the most vulnerable livelihoods. As part of this initiative, a rapid assessment was conducted of existing data collection and analysis tools for crop monitoring.

46. In October 2022, FAO conducted a crop and food security assessment mission in the country to assess the impacts of the drought on the 2022 crop harvest and to forecast the country's import requirements until the next harvest in 2023 (FAO, 2022b). The study also identified the support requirements for the sector and the medium-term needs to strengthen agricultural resilience. In 2023, FAO in the Republic of Moldova developed a study on the import of cereals and its impact on the competitiveness of local agriculture producers. The study analysed options for mitigating the negative effects and the levels of required compensation for vulnerable farmers.

47. In December 2022, FAO published a study on the impact of the war on agriculture and rural livelihoods in Ukraine based on its nationwide rural household survey in Ukraine (FAO, 2022d). The study

results indicated reduced agricultural and food production due to the war, along with limited availability and high prices of critical agricultural inputs (seeds, fertilizers, pesticides, equipment, fuel, feed and veterinary medicines) and challenges due to non-functioning supply chains (wholesale, distribution and retail) and input supply networks.

48. In March 2023, FAO contributed to the government-led preliminary assessment of the impact of earthquakes in Türkiye. As a follow up, FAO has developed four emergency response projects that included micro-level assessments. FAO has conducted a supply chain analysis of the wheat sector in Türkiye as a joint initiative with the World Food Programme and the International Fund for Agricultural Development, and in close collaboration with the Ministry of Agriculture and Forestry of Türkiye. The study was funded by the Joint United Nations SDG Fund. A rapid rural appraisal and a value chain assessment focused on the impact of the earthquakes also have been planned. The goal of the value chain assessment will be to develop a roadmap for intervention areas to recover milk production, greenhouse-based tomato production and fisheries in Kahramanmaraş and Hatay provinces, where the earthquake caused the most significant damage.

49. FAO also has supported analytical work in Albania for a policy brief titled “Monitoring the impact of the Ukraine war on Albanian food and agricultural sector: results from field observations and secondary statistics,” which provides recommendations that respond to problems faced by farmers and other businesses in the sector.

50. In 2023, FAO Armenia published a report titled “Impact assessment of the COVID-19 pandemic in relation to food value chains in the Lori and Tavush regions” to aid in understanding the situation of agricultural and rural development challenges after a few waves of the COVID-19 pandemic (FAO, 2023c).

51. Over the course of 2023, FAO is planning to conduct seven assessments in Ukraine that can be divided into two broad categories: i) assessments of the impacts of the war on agricultural production and the livelihoods of households and producers;¹¹ and ii) sectoral (aquaculture, fishery and forestry) assessments of agricultural damages and losses (FAO, 2023d). FAO recently has published the findings of a nationwide assessment (January–February 2023) in Ukraine of the impact of the war on agricultural enterprises (FAO, 2023e).

52. To strengthen national capacities in price and market information system and policy analysis, in 2020 the FAO Regional Office for Europe and Central Asia began implementing a project in several countries (Kyrgyzstan, North Macedonia, Tajikistan and Uzbekistan) of the region titled “Strengthen capacity in price and market information systems and policy monitoring in response to the COVID-19 pandemic and other shocks.” This regional project aimed at strengthening institutional capacities in addressing countries’ needs in developing and maintaining market information systems for commodity and value chain development and in developing robust and flexible policy strategies to deal with short-term shocks and risks (such as the pandemic) and long-term market uncertainties.

53. To identify the impacts of the war on refugees, FAO, as part of the Regional Gender Taskforce for the Ukraine Refugee Situation, contributed to a regional rapid gender analysis titled “Making the invisible visible: an evidence-based analysis of gender in the regional response to the war in Ukraine.” Currently, FAO – together with UN Women, the International Labour Organization and Care International – developed a policy gender brief on refugees’ access to livelihoods in countries neighbouring Ukraine as part of the abovementioned Regional Gender Taskforce. Recently released knowledge products, such as a report on gender, agriculture and rural development in Europe and Central Asia¹² and country gender assessments, review the available data and suggest recommendations for addressing the impacts. Two information notes were also prepared by the FAO Regional Office for the Near East and North Africa, with the FAO Inclusive Rural Transformation and Gender Equality Division and the FAO Office of Emergencies and Resilience, to raise awareness on the gender-related impacts of the war in Ukraine and neighbouring countries and provide recommended actions for addressing gender and intersecting factors.

¹¹ The focus of these assessments are: a) the impact of the war on rural populations and rural livelihoods (second round of the assessment conducted in 2022); b) the impact of the war on agricultural producers; c) the impact of the war on commercial crop producers and storage capacities; d) an assessment of livelihoods in settlements in frontline areas; and e) an analysis of food security and livelihoods.

¹² This report is available online at <https://www.fao.org/3/cc2763en/cc2763en.pdf>.

54. As part of the FAO–World Bank Cooperative Programme, FAO headquarters prepared two technical reports on the implication of the war in Ukraine on agrifood trade and food security in Central Asia¹³ and the South Caucasus. Both reports were used to guide the World Bank’s further investments in the region. FAO headquarters has a webpage dedicated to global food security challenges on which analysis, updates and information are posted in relation to the multiple crises, including the war in Ukraine.¹⁴ The page regularly provides the latest updates on FAO’s responses, including data, analyses, policy recommendations and actions on the ground.

IV. Policy recommendations

55. Formulating policy recommendations to address crises resulting from various shocks – including social conflicts, inflation, natural disasters, climate change and the COVID-19 pandemic – remains a complex task due to the interconnected nature of these issues. Identifying causality, predicting the impacts of interventions and considering unintended consequences can be challenging. Conflicting stakeholder interests further complicate the development of shared and effective solutions. Moreover, crises are constantly evolving, necessitating quick adaptations with limited information, adding an additional layer of complexity for decision-makers and planners. Timely and accurate data, along with analytical tools that elucidate the transmission channels of overlapping crises in food, energy and finance, are crucial for understanding the dynamics of the crisis and formulating appropriate responses. This will be provided by the Regional Technical Cooperation Programme. Nevertheless, the Secretariat of the European Commission on Agriculture would like to put forward several recommendations for the consideration of its members:

56. It is recommended that members:

1) Refrain from isolating domestic food markets from world food markets:

While recent ad hoc trade policies adopted by a number of countries and the overall trade landscape changes offered good reasons for countries to be reluctant to fully rely on world food markets to safeguard their national food security, these alone cannot justify the pursuit of food self-sufficiency. On the contrary, countries should engage collectively in the formulation of trade agreements (especially because not all countries in the region are members of the World Trade Organization) that ensure, when shocks occur, that nobody is left behind and that equal opportunities are provided to women and vulnerable groups. Domestic measures could also be applied, provided that these are aligned with the pursuit of collective resilience building. These may include diversifying food import sources, building strategic reserves, supporting domestic agricultural production, and implementing efficient storage and distribution systems that reduce food loss.

2) Provide humanitarian and social protection responses to vulnerable groups of the population:

This is particularly important for internally displaced people and refugees from Ukraine and Türkiye, although other future needs cannot be excluded. Social protection programmes should be expanded to all disadvantaged people in urban and rural settings, including food insecure and nutritionally vulnerable populations, smallholder farmers, contributing family workers and vulnerable women and youth. More flexible social protection interventions and stronger coordination and policy links among authorities responsible for social protection, food security and nutrition, rural development and agriculture will be important to enable the transition to more sustainable and resilient practices. This would also open opportunities for Ukrainian refugees to engage in the agricultural (and other) sector in host countries as agricultural labourers and contribute to enhancing production and productivity.

¹³ The report “Agrifood trade and food security in Central Asia: Possible implications of the war in Ukraine” is available at <https://documents1.worldbank.org/curated/en/099614301182328659/pdf/IDU099aa8f43031360476b0ba0e0c5517feb727f.pdf>.

¹⁴ This webpage is available at <https://www.fao.org/in-focus/en>.

3) Promote the affordability of healthy diets with sustainability considerations through a rapid and efficient agrifood systems transformation:

A comprehensive set of policy measures must be put in place and existing public support to food and agriculture repurposed to enhance the affordability of a healthy diet. Shifting subsidies from producers to consumers to support healthy diets could have great potential if adequate measures are taken to achieve environmental benefits and income equity. Multisectoral collaboration and coordination of policies in food systems will be necessary to make a healthy diet less costly and more affordable and mitigate any unintended consequences from repurposing support.

4) Refrain from imposing ad-hoc export restrictions and diversify sources of imported foods:

Ad hoc export restrictions disrupt the functioning of markets and damage the health of economies more widely. Export restrictions can increase commodity prices and exacerbate food insecurity, primarily affecting vulnerable people in food-importing countries. Faced with export restrictions by traditional suppliers, affected countries should respond by diversifying the origins of their imported foods, particularly in import-dependent countries of the Europe and Central Asia region. Diversification will reduce the risks that may arise from excessive dependence on a single import source (FAO, 2021). This will contribute to improving the stability of the food supply, which is associated with other dimensions of food security, such as equitable access to food and food utilization. Having sufficient food stocks and enhancing the diversity of domestic production also can contribute to the stability of food supplies, provided that these respect international commitments. Diverse sourcing of food through international trade also will help enhance the resilience of agrifood systems, because it buffers the food supply against shocks and stresses.

5) Invest in trade infrastructure and logistics:

The blockade of Black Sea ports highlighted the need to simplify, modernize and harmonize export and import processes across the region. World Trade Organization member countries should speed up the adoption of the Trade Facilitation Agreement, which includes provisions aimed at expediting the movement, release and clearance of goods. In addition, countries should leverage the power of digital technologies. Through digital inspection and certification technologies, such as electronic documentation, online verification and real-time data sharing, inspections can be conducted more efficiently and expeditiously. This would require investments in information technology infrastructure coupled with significant efforts in the digitalization of processes, which would reduce administrative burdens, minimize physical inspections and enhances transparency in trade operations.

6) Increase responsible investments in agriculture:

Responsible investment enhances the resilience and productivity of the agriculture and food sectors. Increased investment can raise production and productivity and improve the food security of rural people, who represent the majority of those experiencing acute food insecurity. Measures aimed at fostering productivity and resilience to any future shocks need to be complementary and inclusive of the vulnerable people in society and address the specific needs of women and men belonging to different socioeconomic and ethnic groups. Targeted economic, agricultural and social protection policies should enable and promote the involvement of rural women and youth in diverse and viable opportunities for income generation and diversification and reduce inequalities that are holding back progress towards sustainable agriculture, food security and poverty reduction. For countries with high concentrations of Ukrainian refugees, skill and language training can enable the utilization of labour in national agrifood systems. Given that most refugees escaping Ukraine are women with small children, the provision of a day care for children is equally important to enable parents to find jobs.

7) Invest in and promote the use of digital technologies in the agriculture sector:

Digital technologies can play a critical role in mitigating the adverse effects of war on the agriculture sector and food security. By providing real-time and location-specific data, precision agriculture

technologies can empower farmers to optimize their farming practices and reduce input costs. Moreover, digital platforms can help farmers access information on the prices of essential agricultural inputs and identify new market opportunities and distribution channels. These technologies also can aid in the delivery of social protection programmes to vulnerable agricultural stakeholders. By leveraging decision support services, the monitoring of farmland use efficiency and natural resource conditions, including climate variables, will play a pivotal role in the transformation of agrifood systems towards greater sustainability and resilience. Additionally, governments can leverage digital tools to monitor and analyse the impacts of war on agriculture and make informed decisions to enhance food security and agricultural production.

8) Establish and strengthen veterinary services and livestock disease surveillance systems:

Veterinary services lack the necessary capacity to respond to animal health threats, whether new or existing. The region may also be experiencing a rise in antimicrobial resistance, although the true extent of the problem remains unknown due to the lack of surveillance and management. Surveillance systems would support early detection, rapid response and the effective management of animal diseases. This would require investing in training, infrastructure and resources to build the capacity of veterinary professionals and improve disease monitoring and reporting mechanisms. Additionally, promoting and implementing sustainable agricultural practices, such as better feed management and rangeland conservation, can help mitigate the challenges faced by livestock producers and ensure the long-term viability of the sector.

9) Strengthen food security and nutrition information, assessment and analysis systems:

Ensure that up-to-date information is available to trigger timely and context-appropriate response actions and inform policy decisions. In times of increased market uncertainty, it is essential to provide objective, timely and up-to-date market assessments and outlooks. Thus, it is critical to provide support to market information systems as a platform for policy dialogue and coordination among stakeholders to safeguard food security. With the threat of inequalities and discrimination against certain people widening, the evidence base – including gender statistics – must be strengthened. Expanding Food Insecurity Experience Scale data collection into more countries is important to make available reliable information regarding household and individual experience-based food insecurity. The frequent monitoring of key indicators and coordination among policymakers in different sectors through consultations and the sharing of information will improve the efficiency and effectiveness of policy decisions.

Quantified data on what people eat and drink (individual quantitative food consumption data) are needed to bridge the knowledge gap and better inform nutrition and food-safety policies and programmes at global, national and subnational levels. Food-based dietary guidelines could be used to align policies in various sectors (nutrition, health, agriculture, education, fiscal, trade policies, etc.) with national health and sustainability objectives – for example, to help shape food production strategies towards more sustainable practices.

10) Develop new or improve existing national food security strategies:

Taking into consideration the above recommendations, countries should develop national food security strategies that address not only the short-term consequences of shocks but also build back better from crises, addressing both the practical and strategic needs of the most affected people. The recent shocks and their diverse nature (health, economic, social and environmental) – including the COVID-19 pandemic, food price volatility, the war in Ukraine, drought, earthquakes, and the ad hoc imposition of trade restrictive measures – call for special efforts to adopt holistic approaches to improve the long-term resilience in agrifood systems and enable the consumption of affordable healthy diets. This calls for collaboration and dialogue among all relevant stakeholders, including farmers, policymakers, civil society organizations and private sector agro-industry associations. Stakeholders should strive to find optimal solutions that leave no one behind, with an emphasis on vulnerable groups.

11) Promote regional cooperation in science and innovation:

Analysts find it difficult to assess the overall impacts of the crisis in the region because of the granular way research is being carried out by a broad range of research institutions. This calls for the promotion of regional cooperation in science and innovation to enhance the resilience of agrifood systems. Collaboration among research institutions, universities and the private sector should be fostered to share knowledge and expertise and develop innovative solutions to common challenges.

References

- European Commission.** 2023. EU extends trade benefits for Ukraine. In: *Press corner*.
https://ec.europa.eu/commission/presscorner/detail/en/ip_23_3059
- FAO.** 2021. *The State of Food and Agriculture 2021: Making agrifood systems more resilient to shocks and stresses*. The State of the World. Rome. <https://doi.org/10.4060/cb4476en>
- FAO.** 2022a. *Ukraine: Rapid Response Plan, March–December 2022*. FAO.
<https://doi.org/10.4060/cb9457en>
- FAO.** 2022b. *Special report – FAO Crop and Food Supply Assessment Mission (CSAM) to the Republic of Moldova*. Rome, FAO. <https://doi.org/10.4060/cc3043en>
- FAO.** 2022c. *Information note: The importance of Ukraine and the Russian Federation for global agricultural markets and the risks associated with the war in Ukraine*.
<https://www.fao.org/3/cc3317en/cc3317en.pdf>
- FAO.** 2022d. *Ukraine: Impact of the war on agriculture and rural livelihoods in Ukraine*. FAO.
<https://doi.org/10.4060/cc3311en>
- FAO.** 2023a. *Trade Policy Review in The Countries of Eastern Europe, Caucasus and Central Asia*.
<https://www.fao.org/3/cc6091en/cc6091en.pdf>
- FAO.** 2023b. Data. In: *FAOSTAT*. <https://www.fao.org/faostat/en/#data>
- FAO.** 2023c. *Impact assessment of the COVID-19 pandemic in relation to food value chains in the Lori and Tavush regions*. FAO. <https://doi.org/10.4060/cc0477en>
- FAO.** 2023d. *Ukraine: Response programme, January–December 2023*. FAO.
<https://doi.org/10.4060/cc4655en>
- FAO.** 2023e. *Ukraine: Impact of the war on agricultural enterprises*. FAO.
<https://doi.org/10.4060/cc5755en>
- FAO.** 2023f. FAO initiates Türkiye earthquake response and recovery plan in partnership with MoAF. In: *FAO in Türkiye*. Cited 29 August 2023. <https://www.fao.org/turkiye/news/detail-news/en/c/1642312/>
- FAO.** 2023g. *Crop Prospects and Food Situation #2, July 2023*. FAO. <https://doi.org/10.4060/cc6806en>
- FAO.** 2023h. FAO GIEWS Country Brief on Ukraine. In: *GIEWS - Global Information and Early Warning System*. <https://www.fao.org/giews/countrybrief/country.jsp?code=UKR&lang=en>
- FAO.** 2023i. *FAO Brief on the interruption of the Black Sea Grain Initiative and its potential implications on global food markets and food security*.
<https://www.fao.org/3/cc7271en/cc7271en.pdf>
- FAO, IFAD, WMO, WHO, UNICEF, WFP, & UNECE.** 2023. *Europe and Central Asia – Regional Overview of Food Security and Nutrition 2022*. FAO; IFAD; WMO; WHO; UNICEF; WFP; UNECE. <https://doi.org/10.4060/cc2571en>
- Glauber, J. & Laborde, D.** 2022. How sanctions on Russia and Belarus are impacting exports of agricultural products and fertilizer. In: *IFPRI Blog : Issue Post*. <https://www.ifpri.org/blog/how-sanctions-russia-and-belarus-are-impacting-exports-agricultural-products-and-fertilizer>
- IFPRI.** 2023. Food Export Restrictions during the Ukraine-Russia crisis. In: *Food & Fertilizer Export Restrictions Tracker*.
<https://public.tableau.com/app/profile/ifpri.food.security.portal/viz/shared/2CPYTB4G8>
- IMF.** 2023. Near-Term Resilience, Persistent Challenges. In: *World Economic Outlook Update*.
<https://www.imf.org/en/Publications/WEO/Issues/2023/07/10/world-economic-outlook-update-july-2023>
- Izvorski, I., Lokshin, M., Norfleet, J.R.R., Singer, D. & Torre, I.** 2023. *Europe and Central Asia Economic Update, Spring 2023: Weak Growth, High Inflation, and a Cost-of-Living Crisis*. The World Bank. <https://doi.org/10.1596/978-1-4648-1982-7>
- Republic of Türkiye.** 2023. *Türkiye earthquakes recovery and reconstruction assessment*.
<https://www.sbb.gov.tr/wp-content/uploads/2023/03/Turkiye-Recovery-and-Reconstruction-Assessment.pdf>

- UNHCR.** 2023. Ukraine Refugee Situation. In: *Operational Data Portal*.
<https://data.unhcr.org/en/situations/ukraine>
- Usov, A.** 2022. Central Asia shows strong resilience to geopolitical turmoil. In: *European Bank for Reconstruction and Development*. Cited 1 May 2023. <https://www.ebrd.com/news/2022/central-asia-shows-great-resilience-to-geopolitical-turmoil-.html>
- World Bank.** 2022. *Agrifood trade and food security in Central Asia: Possible implications of the war in Ukraine*.
<https://documents1.worldbank.org/curated/en/099614301182328659/pdf/IDU099aa8f43031360476b0ba0e0c5517feb727f.pdf>
- World Bank, Ukraine, European Union, & United Nations.** 2023. *Ukraine Rapid Damage and Needs Assessment*. Washington, DC. <https://ukraine.un.org/sites/default/files/2023-03/P1801740d1177f03c0ab180057556615497.pdf>