Economic Cooperation Organization
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ECO-RCCFS

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Overview of food security

in Economic Cooperation Organization countries 2022

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Foreword

The pressure on global food systems is intensifying, compounded by the impacts of climate change, the COVID-19 pandemic, conflicts, migration, and economic crises. These situations are exacerbating the deterioration of our food systems.

According to the Food and Agriculture Organization of the United Nations (FAO), the number of undernourished people has risen sharply over the past two years, with up to 828 million people in the world facing hunger in 2021. Projections indicate that nearly 670 million people will still be facing hunger in 2030 – 8 percent of the world's population, the same as what it was in 2015, when the 2030 Agenda was launched (FAO *et al.*, 2022). Addressing these problems is an urgent international issue that is relevant for the Economic Cooperation Organization (ECO) region. In ECO countries alone, an estimated 59 million people still suffer from undernourishment, which means that 13 percent of the regional population is facing the risk of hunger.

The Overview of food security in ECO countries, the third edition of which we are proud to present, offers a comprehensive analysis of food security in the ECO region. The report provides an in-depth analysis of the key issues of food security in the region, such as agrifood trade and the impact of socioeconomic shocks, which are critical to enhance food security in the region.

The report begins by presenting the latest statistics on food-security indicators selected for the ECO region, followed by an examination of agrifood trade, including the effects of the war in Ukraine.

We hope that the analyses, findings and recommendations published here will contribute to addressing the issues concerning food security in the ECO region and foster enhanced cooperation among ECO countries. Overcoming these challenges requires a collective effort from all of us.

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1. Introduction

This report provides an overview of the latest trends in food security and nutrition across ECO countries, namely Afghanistan, Azerbaijan, the Islamic Republic of Iran, Kazakhstan, Kyrgyzstan, Pakistan, Tajikistan, Turkmenistan, Türkiye, and Uzbekistan, using data up to 2022. It also examines changes in agrifood trade among these countries from 2018 to 2021. Additionally, the report assesses the effects of the COVID-19 pandemic on food security and evaluates how the ongoing conflict in Ukraine might influence agrifood trade within the ECO region.

The report is structured into five sections. Following the Introduction, Section 2 describes the methodology employed for reviewing and assessing the food security and nutrition landscape, including the conceptual framework of food security, and its indicators. Section 3 reviews the latest status of food security in ECO countries, based on the indicators of the Sustainable Development Goals (SDGs). The data used in this section do not reflect the impact of the war in Ukraine, which is examined separately in Section 4, with a focus on trade of the main food products. Section 5 concludes the report, making policy recommendations for the development of a resilient agrifood trade system across ECO countries.

2. Definition, conceptual framework and indicators of food security

Definition of food security

The 1996 Rome Declaration on World Food Security, and the 2030 Sustainable Development Agenda of the United Nations, together determine the scope of the food security overview. The Rome Declaration defines food security as a state in which "all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food, which meets their dietary needs and food preferences for an active and healthy life." It highlights that achieving food security necessitates the simultaneous fulfillment of four key conditions.

First, there must be adequate food supplies of appropriate quality, whether through domestic production, imports, stockpiles, or food aid. Second, individuals should have sufficient income or assets to access enough food for a healthy diet, as well as non-economic means to physically reach food in markets. Third, food should be consumed in a safe and healthy environment to ensure that the nutrients are effectively utilized. This requires improved sanitation, healthcare, and access to clean water. Finally, the stability of these processes must be guaranteed by implementing prevention and preparedness measures against economic, social, or natural shocks. It is essential to maintain the continuity and sustainability of all pathways leading to food security for everyone, ensuring access to food is not compromised by unforeseen events or recurring challenges.

Conceptual framework of food security

Due to the complexity of the food security concept, various frameworks have been developed to clarify the connections between different dimensions of food security, while also illustrating relationships with underlying causes, outcomes, and associated terms and concepts. A food security conceptual framework serves as a valuable tool for conducting food security analysis. These frameworks also:

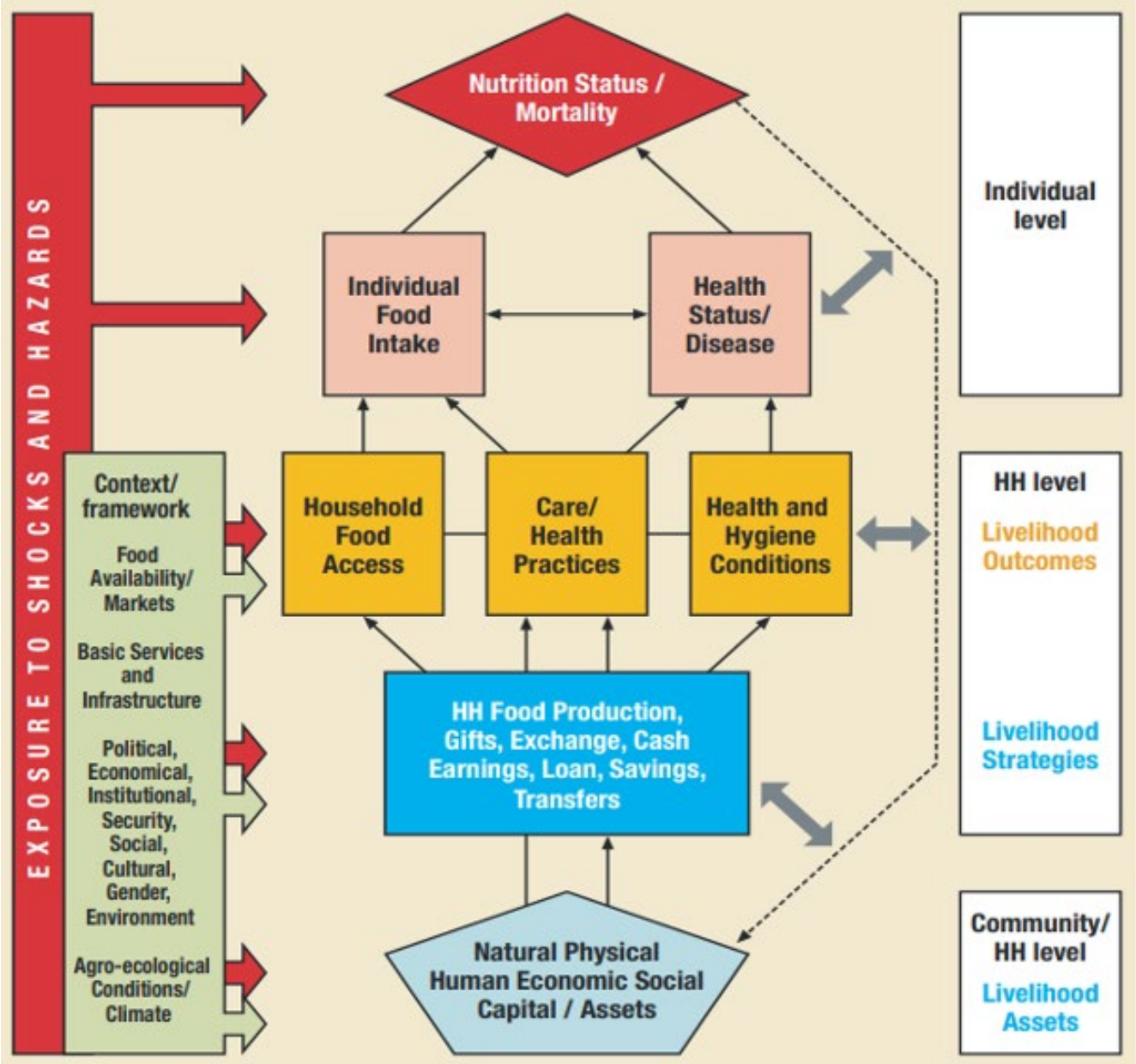
- Enable stakeholders from diverse backgrounds to engage in organized, coherent discussions about the numerous factors influencing livelihoods, household food security, and nutrition, their relative significance, and how they interact.

- Assist in identifying suitable entry points for interventions aimed at strengthening livelihoods, household food security, and nutrition.

Figure 1 highlights food availability, access, and utilization as the key determinants of food security and connects them to household asset endowments, livelihood strategies, and the broader political, social, institutional, and economic environment . The food security status of a household or individual is usually influenced by a wide range of agri-environmental, socioeconomic, and biological factors. Similar to health or social welfare, there is no single, direct measure of food security. However, this complex issue can be simplified by examining three interrelated dimensions: overall food availability, household food access, and individual food utilization. The framework illustrates that risk exposure is shaped by the frequency and severity of both natural and human-induced hazards, as well as their socioeconomic

and geographical impacts. Coping capacity is determined by factors such as a household's natural, physical, economic, human, social, and political assets, along with its production levels, income, consumption, and ability to diversify income sources and consumption patterns to manage risks effectively (WFP, 2009).

Figure 1. Conceptual framework of food security



Source: **WFP (World Food Programme).** 2009**.** Comprehensive Food Security & Vulnerability Analysis Guidelines, Food Security Analysis Service. https://documents.wfp.org/stellent/groups/public/documents/manual_guide_proced/wfp203208.pdf

2.1. Sustainable Development Goal targets related to food security and nutrition

The 2030 Agenda establishes an implementation framework centered around 17 Sustainable Development Goals (SDGs), with food security and nutrition playing a pivotal role. SDG 2, specifically dedicated to achieving zero hunger, serves as a key objective to track and evaluate progress toward the food security and nutrition goals outlined in the agenda. This

goal seeks to end hunger, achieve food security, improve nutrition, and promote sustainable agriculture by 2030. It includes eight closely interconnected targets. For example, in areas where many food-insecure individuals rely on agriculture for their livelihoods, enhancing agricultural productivity and raising the incomes of small-scale food producers (Target 2.3) can help improve food access (Target 2.1). Additionally, making agriculture more resilient and sustainable (Target 2.4) will significantly impact the future availability and stability of food supplies (targets 2.3 and 2.4). Collectively, advancements in targets 2.1, 2.3, and 2.4 will support progress toward Target 2.2, which focuses on "end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under five years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons." Monitoring progress toward SDG 2 targets should extend beyond merely tracking SDG 2 indicators. It requires a deeper understanding of how these targets interact with and influence the broader network of all 17 SDGs.

2.2. Indicators to monitor food security

The set of indicators according to the four pillars of food security (listed in Table 1) for the ECO region, were selected from statistics provided by FAO (FAO, 2015) for the 2022 overview of food security. The indicators are organized according to the four pillars of food security, reflecting their interrelated functional relationships. Based on this framework, food security and nutrition policy options should aim to achieve positive changes in these pillars to reduce food insecurity and undernutrition.

Table 1. List of indicators

Dimension	Indicator
Availability	Dietary energy supply Population Average dietary energy supply adequacy Agriculture orientation index Food losses and waste Share of dietary energy supply derived from cereals, roots and tubers Average protein supply Average fat supply Transboundary animal diseases
Access	Gross domestic product (GDP) per capita (in purchasing power equivalent) Annual world price indices Immigration Social protection Prevalence of undernourishment, three-year averages
Utilization	Daily per capita supply of vegetable oil Daily per capita supply of sugar People using safely managed drinking water services People using safely managed sanitation services Percentage of children under 5 years of age affected by wasting Percentage of children under 5 years of age who are stunted Percentage of children under 5 years of age who are overweight Prevalence of obesity in the adult population (18 years and older) Prevalence of anaemia among women of reproductive age (15–49 years) Prevalence of exclusive breastfeeding among infants of 0–5 months
Stability	Cereals imports dependency ratio Percentage of arable land equipped for irrigation Value of food imports over total merchandise exports Conflicts and natural disasters Changes in dietary energy supply

3. Overview of food security

This section follows the conceptual framework outlined in Figure 1, where food security outcomes are defined as a result of both static and dynamic factors that influence food security either directly or indirectly.

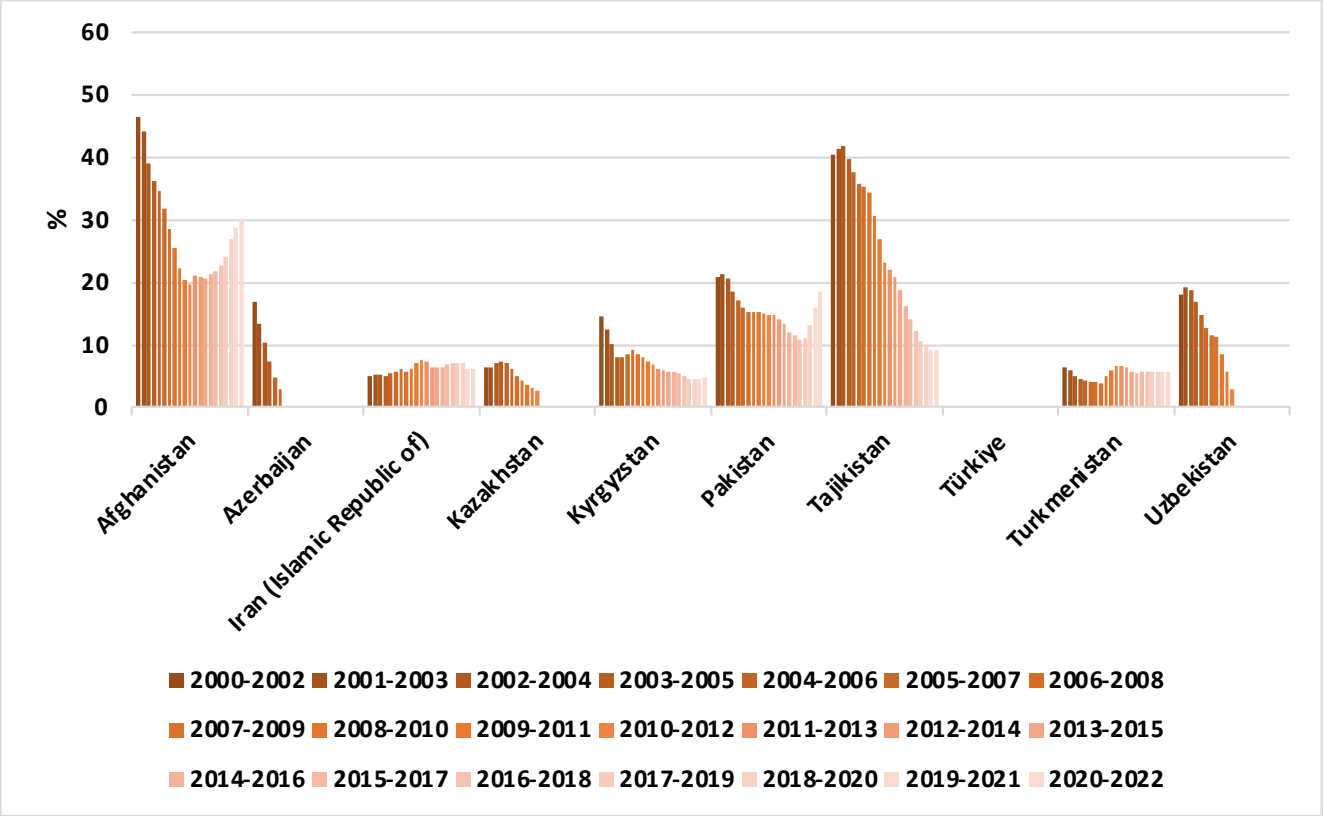
3.1. Food security outcomes

3.1.1. Prevalence of undernourishment

Progress toward zero hunger is tracked using SDG indicator 2.1.1. Indicator 2.1.1 measures the prevalence of undernourishment (PoU), which is the percentage of the population that is undernourished. This indicator estimates the extent to which a person's energy intake falls short of their required energy needs.

Figure 2 illustrates that all ECO countries successfully reduced the PoU between 2000 and 2022. However, Afghanistan has experienced a recent increase (rising from 21.3 percent in 2014–16 to 30.1 percent in 2020–22), and Pakistan has seen a slight uptick. In contrast, the PoU has improved in the Islamic Republic of Iran (dropping from 6.3 percent in 2014–16 to 6.1 percent in 2020–22), Kyrgyzstan (falling from 5.8 percent to 4.8 percent), and Tajikistan (declining from 16.3 percent to 9.3 percent), while remaining below 2.5 percent in Azerbaijan, Kazakhstan, Türkiye, and Uzbekistan. For Turkmenistan, the data indicates stability. Notably, Türkiye has maintained a PoU level of under 2.5 percent throughout the entire 2000–2022 period. However, the growing influx of refugees has strained the government's fiscal capacity, posing risks to the livelihoods of many vulnerable people. Pakistan faces a similar challenge, given its large refugee population. Despite progress, an estimated 59 million people remain undernourished in ECO countries, accounting for around 13 percent of the region's population of 475 million.

Figure 2. Prevalence of undernourishment, 2000–2022 (percent)



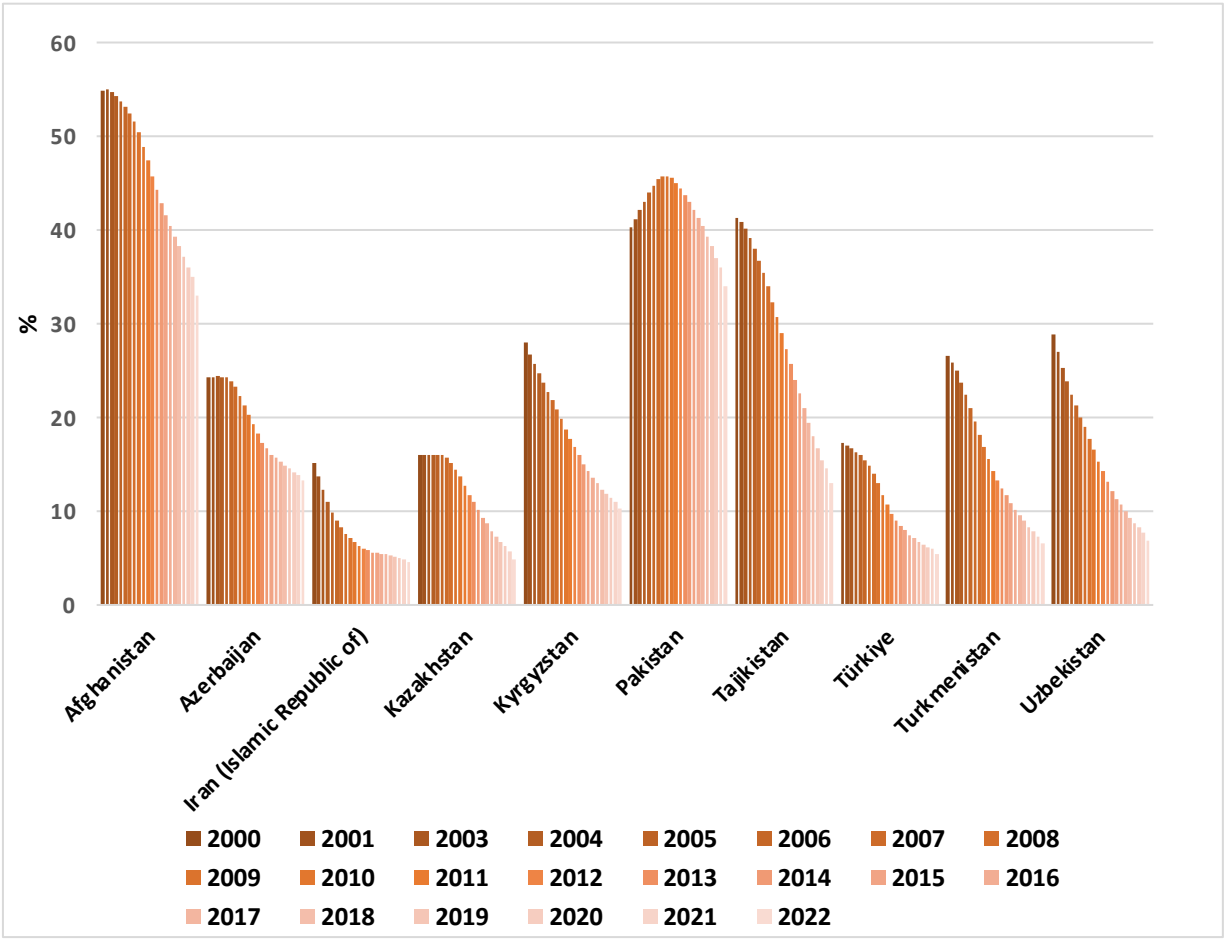
Source: **FAOSTAT.** 2024. Suite of Food Security Indicators. In: FAO. Rome. [Cited 24 February 2024]. https://www.fao.org/faostat/en/

3.1.2. Prevalence of malnutrition

Sustainable Development Goal 2 (Target 2.2) aims to eradicate all forms of malnutrition by 2030, including meeting the internationally agreed targets on stunting and wasting among children under five by 2025, and addressing the nutritional needs of adolescent girls, pregnant and lactating women, and the elderly. This section highlights progress made in the field of nutrition.

Target 2.2 seeks to achieve a 40 percent reduction in stunting by 2025. Between 2000 and 2022, all ECO countries saw notable decreases in stunting rates (Figure 3). The latest data shows that stunting levels in these countries range from 6 percent to 54 percent. With a decline from 41.3 percent in 2000 to 13.1 percent in 2022, Tajikistan has seen the largest reduction in stunting. In 2022, the Islamic Republic of Iran had the lowest stunting rate in the region at 4.7 percent, followed by Kazakhstan, while Afghanistan and Pakistan reported the highest rates. Although stunting has generally decreased across the region, this trend may not fully capture the reality, as some of the decline could be attributed to population growth rather than genuine improvements in nutrition.

Figure 3. Children under five years of age who are stunted, 2020–2022 (percent)

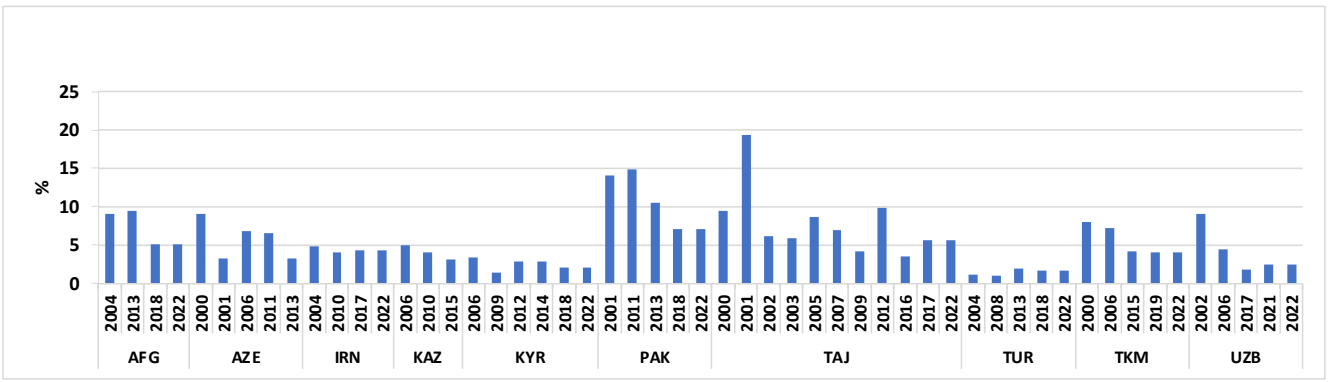


Source: **FAOSTAT.** 2024. Suite of Food Security Indicators. In: FAO. Rome. [Cited 24 February 2024]. https://www.fao.org/faostat/en/

Wasting, characterized by being underweight for one's height, is a critical concern for children under five due to the increased risk of illness and mortality. The global nutrition goal aims to reduce childhood wasting to below 5 percent by 2025.

In 2018, Pakistan had a wasting rate of 7.1 percent, making it one of two ECO countries yet to meet the target. However, if recent progress continues, Pakistan is on track to achieve the goal by 2025. Afghanistan and Tajikistan, with rates of 5.1 percent and 5.6 percent respectively, are also nearing the target. Eight out of ten ECO countries have already met the 5 percent goal (Figure 4).

Figure 4. Children under five years of age affected by wasting, 2020–2022 (percent)



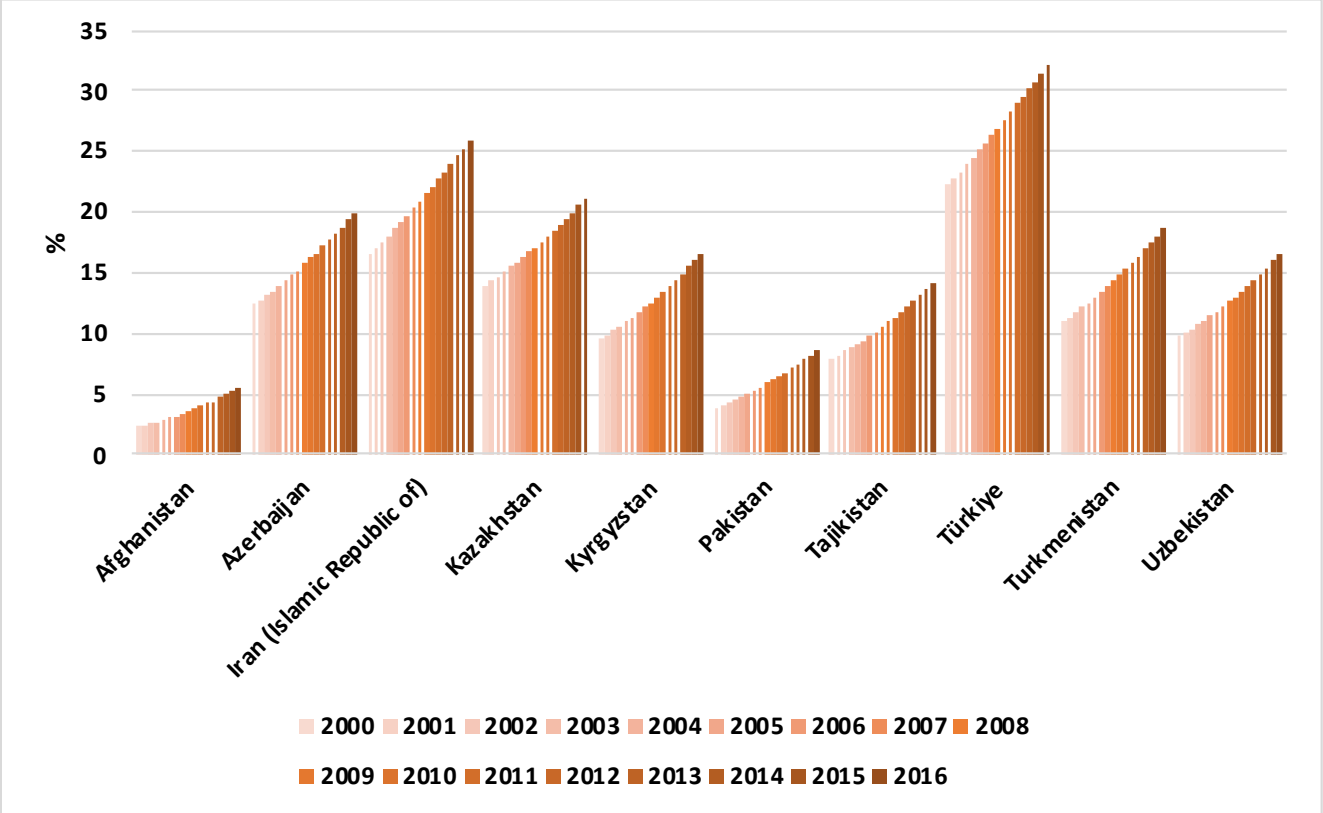
Source: **FAOSTAT.** 2024. Suite of Food Security Indicators. In: FAO. Rome. [Cited 24 February 2024]. https://www.fao.org/faostat/en/

Obesity, a multifactorial disease and a form of malnutrition, remains a serious problem in the ECO region.

The prevalence of obesity in adults is determined by the percentage of individuals aged 18 and older with a body mass index (BMI) exceeding 30 kg/m^2. The prevalence of obesity among adults in the ECO region over the 2000–2016 period showed an increasing trend (Figure 5).

With respect to the 2025 global target of halting the rise in prevalence of adult obesity (Development Initiatives, 2020), the whole region is far from the target. Türkiye has the highest obesity rate at 32 percent, followed by the Islamic Republic of Iran with 26 percent, and Kazakhstan and Azerbaijan with around 21 percent.

Figure 5. Prevalence of obesity in the adult population, 2000–2016 (18 years and older, percent)



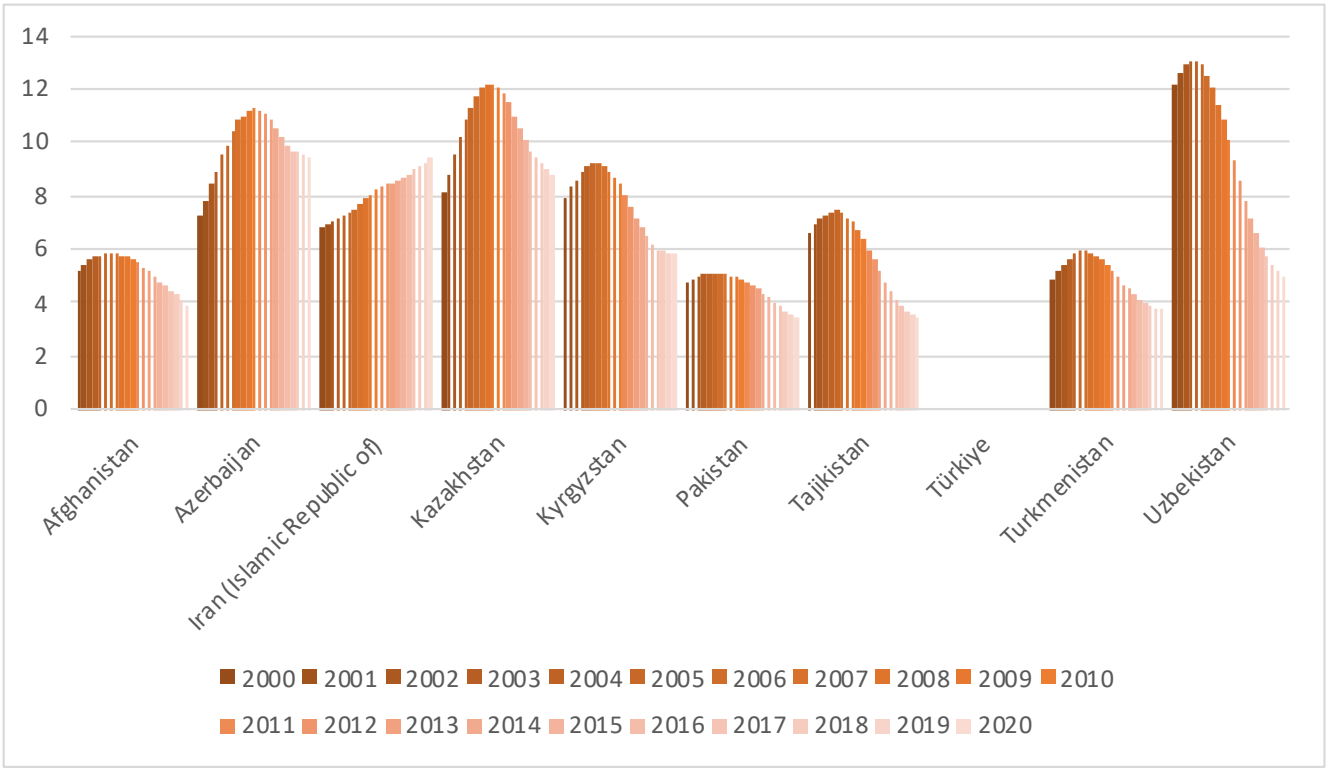
Source: **FAOSTAT.** 2024. Suite of Food Security Indicators. In: *FAO*. Rome. [Cited 24 February 2024. https://www.fao.org/faostat/en/

Addressing obesity is crucial for meeting SDG targets, including promoting well-being and ensuring healthy lives for everyone (SDG 3, Target 3.4). In order to prevent the increasing trend of obesity in the ECO region, an intersectoral and holistic approach including the agricultural, environment, nutrition and health sectors should be adopted.

During the period from 2000 to 2022, the prevalence of overweight increased in three countries and decreased in six. Overweight in children under five years old indicates a long-term trend of excessive weight gain, which heightens the risk of serious health issues, including obesity, diet-related non-communicable diseases, premature death, and disability in adulthood. One country (the Islamic Republic of Iran) shows an increasing trend, six (Afghanistan, Kyrgyzstan, Pakistan, Tajikistan, Turkmenistan and Uzbekistan) a decreasing one, while two others

(Azerbaijan and Türkiye) remain high compared with 2000. The prevalence is especially high in Azerbaijan and Kazakhstan, unlike the continuous reduction accomplished in Afghanistan, Kyrgyzstan, Pakistan, Tajikistan, Turkmenistan and Uzbekistan. Despite the growing child population, the ECO region has not achieved the level of success anticipated. This trend highlights the need for comprehensive interventions across agriculture, nutrition, healthcare, and education, and emphasizes the importance of raising awareness about the connections between food consumption, diet quality, and health issues to meet the 2025 target

Figure 6. Percentage of overweight children under five years of age, 2000–2022 (percent)



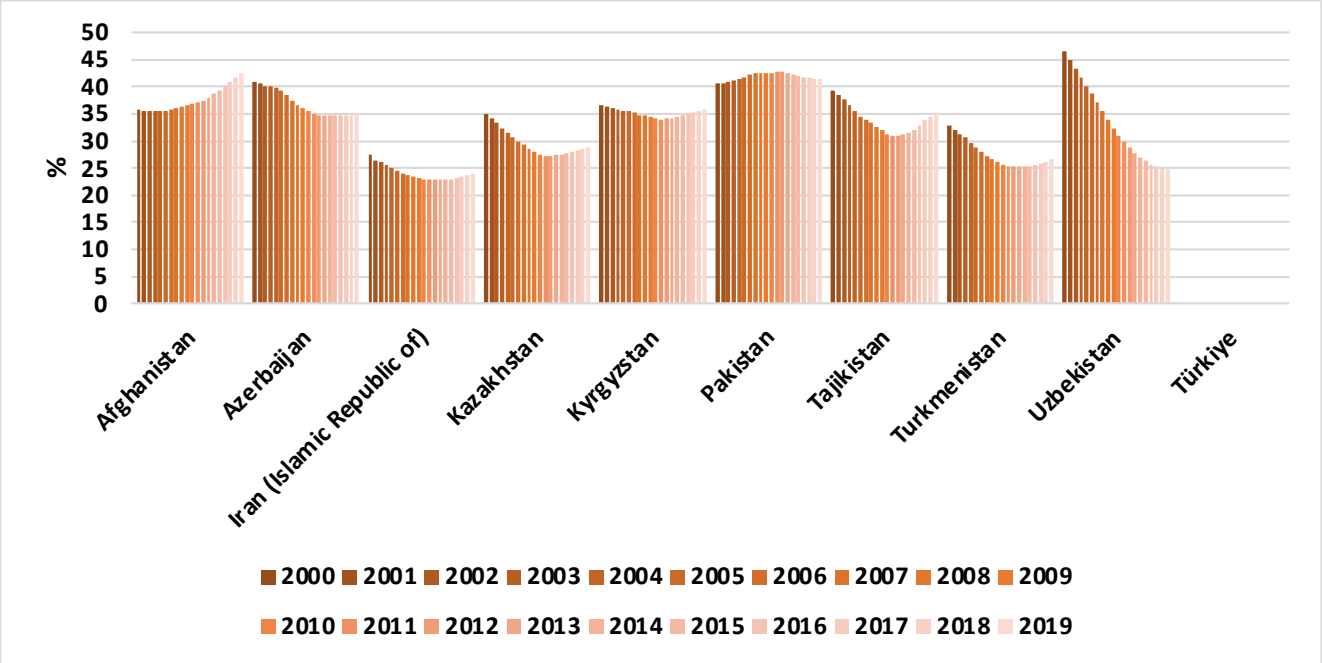
Source: **FAOSTAT.** 2024. Suite of Food Security Indicators. In: FAO. Rome. [Cited 24 February 2024]. https://www.fao.org/faostat/en/

Anaemia in women of reproductive age reflects both inadequate nutrition and poor health. Children and women are especially susceptible to anaemia.

Sustainable Development Goal 2, Target 2.2, specifically emphasizes addressing the nutritional needs of adolescent girls, pregnant women, and lactating mothers, as anaemia in women of reproductive age poses a significant public health issue with substantial social costs. Additionally, anaemia is closely connected to other SDG targets; reducing its prevalence will contribute to lowering maternal mortality (SDG 3, Target 3.1) and enhancing economic productivity (SDG 8, Target 8.2).

Trends from 2000 to 2019 show that anaemia decreased in all ECO countries except for Afghanistan and Pakistan (Figure 7). With a decline from 46.5 percent in 2000 to 24.8 percent in 2019, Uzbekistan has seen the highest reduction in anaemia. There are no data available for Türkiye.

Figure 7. Prevalence of anaemia among women of reproductive age, 2000–2019 (15–49 years, percent)

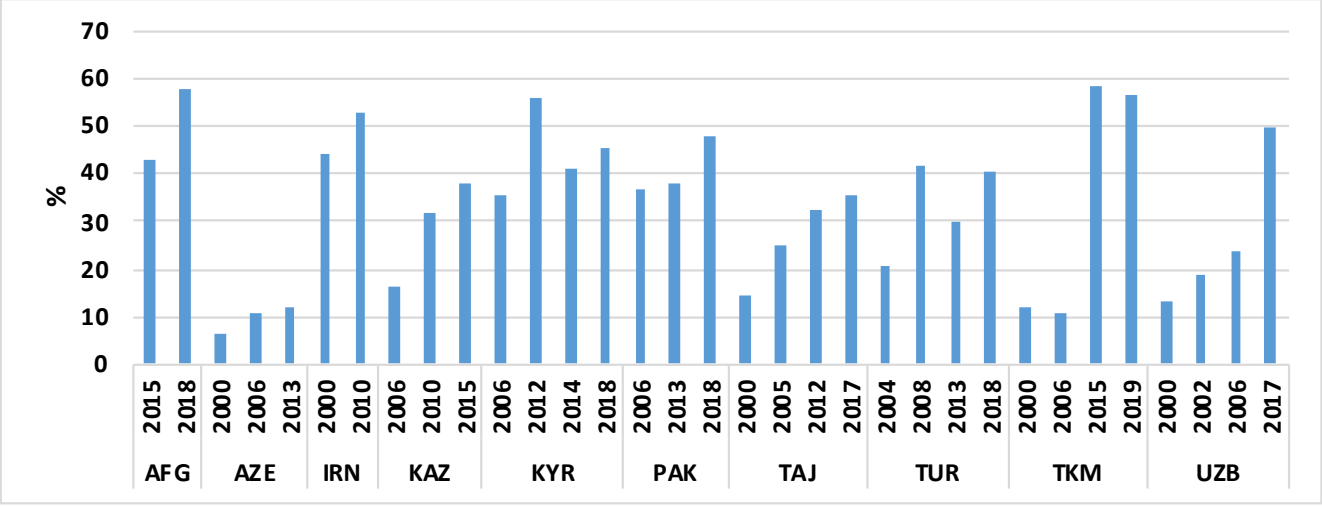


Source: **FAOSTAT.** 2024. Suite of Food Security Indicators. In: FAO. Rome. [Cited 24 February 2024]. https://www.fao.org/faostat/en/

Anaemia remains a significant health threat for mothers, indirectly impacting children's well-being due to reduced time available for child care. Furthermore, if children's health issues linked to anaemia are not promptly addressed, the long-term economic growth can be adversely affected.

Breastfeeding plays a crucial role in combating hunger and child malnutrition, with one of the global nutrition targets being to increase the rate of exclusive breastfeeding to up to 50 percent in the first six months of life. Afghanistan (2018 data), the Islamic Republic of Iran (2010 data), Turkmenistan (2015), and Uzbekistan (2017) have met this 50 percent target. Pakistan (2018), Kyrgyzstan (2019), Türkiye (2018), and Tajikistan (2017) are progressing well, with rates ranging from 36 to 48 percent. However, the situation in Azerbaijan is critical, with only a 12 percent prevalence based on the most recent data from 2013 (Figure 8).

Figure 8. Prevalence of exclusive breastfeeding among infants, 2000–2018 (0–5 months, percent)



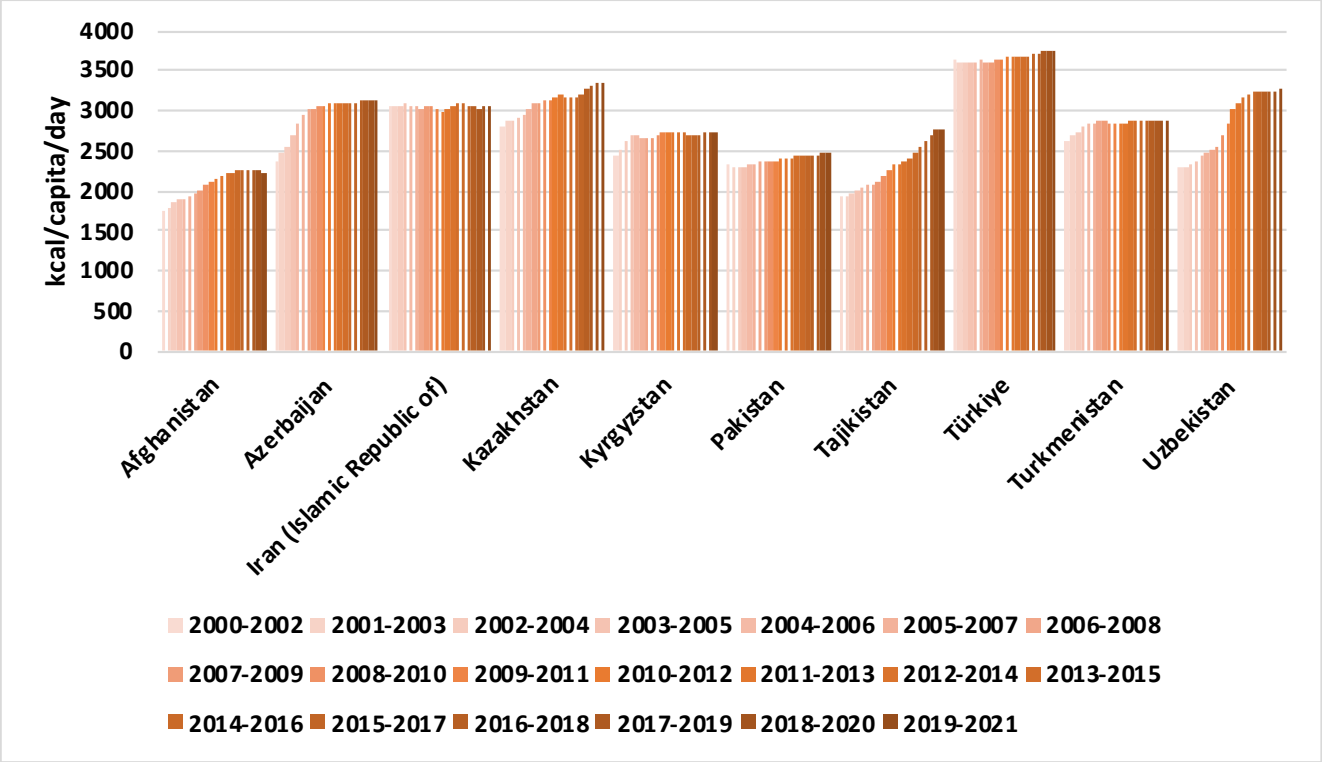
Source: **FAOSTAT.** 2024. Suite of Food Security Indicators. In: FAO. Rome. [Cited 24 February 2024]. https://www.fao.org/faostat/en/

3.2. Determinants of food-security outcomes

3.2.1. Food availability

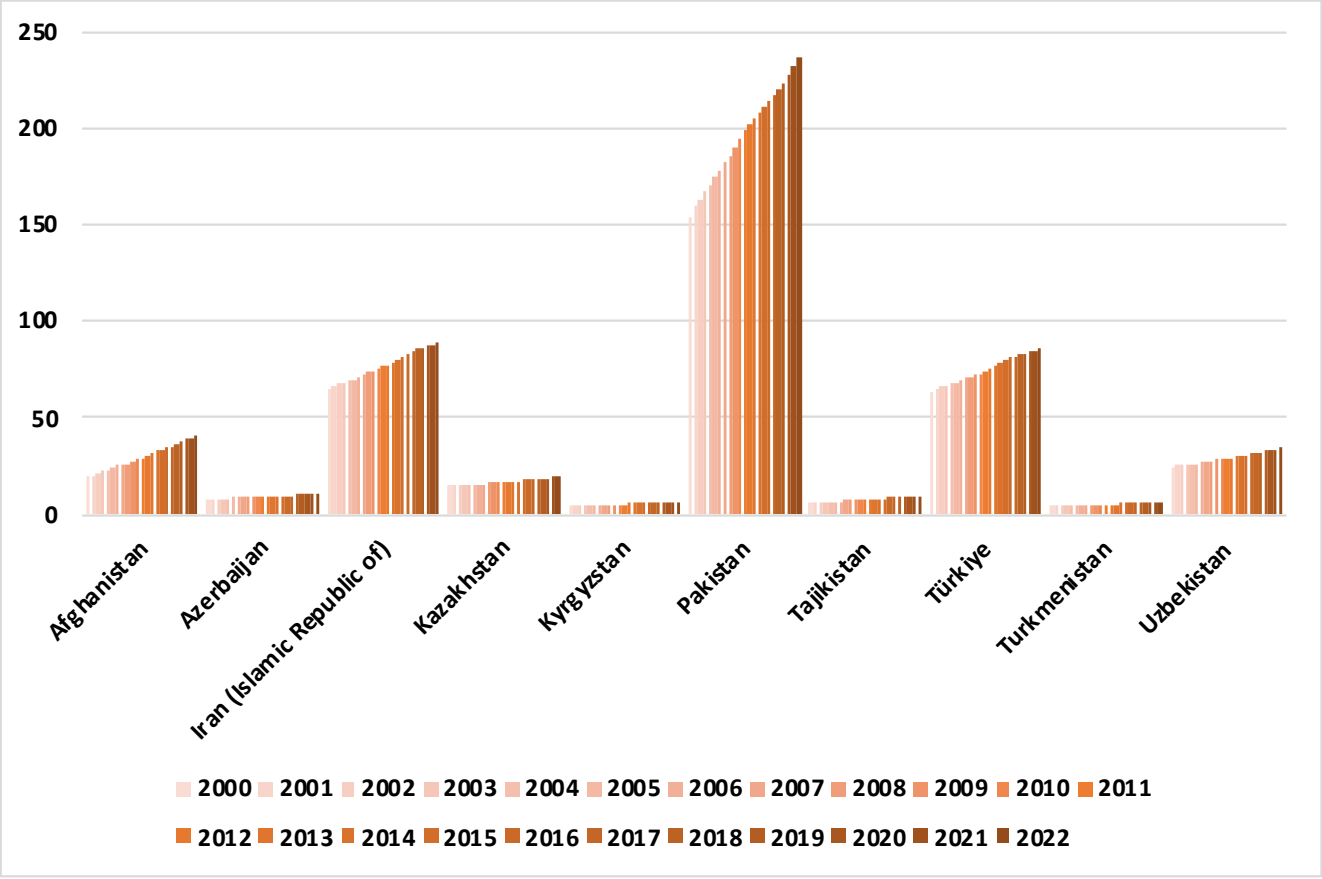
Food availability at the national level in the ECO region has improved – the amount of available food measured in terms of calories per day per person has significantly increased. Improvement in the dietary energy supply (DES) has been achieved in spite of population growth over the past two decades (Figures 9 and Figure 10). During the last three-year period, DES levels in the region have remained almost unchanged. Azerbaijan, the Islamic Republic of Iran, Kazakhstan, Türkiye and Uzbekistan all achieved a level above 3 000 calories.

Figure 9. Dietary energy supply (DES), 2000–2021, 3-year average (kcal/capita per day)



Source: **FAOSTAT.** 2024. Food Balance Sheets. In: FAO. Rome. [Cited 24 February 2024]. https://www.fao.org/faostat/en/#data/FBS

Figure 10. Population of ECO countries, 2000–2022 (millions)



Source: **FAOSTAT.** 2024. Population and Employment. In: FAO. Rome. [Cited 24 February 2024]. https://www.fao.org/faostat/en/#data/OA

Food availability refers to having an adequate amount of high-quality food ready for consumption. However, this does not necessarily mean that people have actual access to this food. The average Dietary Energy Supply adequacy (ADESA) indicator measures the Dietary Energy Supply (DES) as a percentage of the average Dietary Energy Requirement (ADER). When analysed alongside the prevalence of undernourishment, the ADESA helps determine whether undernourishment is primarily due to insufficient food supply or to issues with food distribution.

Over the past three years, the ADESA has remained relatively stable. Most countries, particularly Türkiye, Kazakhstan, and Uzbekistan, have more food available than is needed for their populations. This increase in food supply corresponds with a decrease in the prevalence of undernourishment during the same period, suggesting that the higher food availability has contributed to the reduction in undernourishment. This suggests that the current issues of undernourishment and malnutrition in ECO countries are not primarily due to insufficient food availability.

Figure 11. Average dietary energy supply adequacy, 2000–2022, 3-year average (percent)

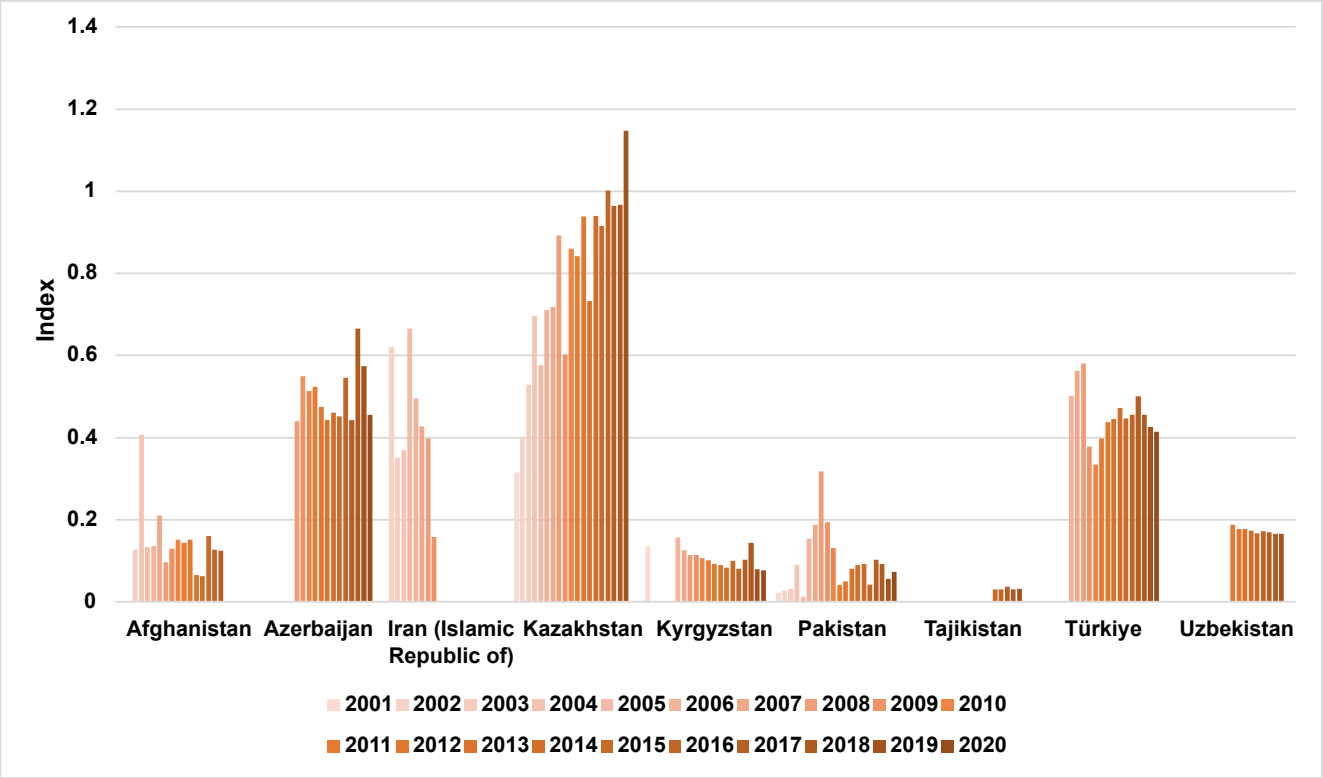
Source: FAOSTAT. 2024. Suite of Food Security Indicators. In: FAO. Rome. [Cited 24 February 2024]. https://www.fao.org/faostat/en/#data/FS

The ADESA indicator is calculated as the ratio of the total per capita calories available from food, derived from commodity balances, to the average Dietary Energy Requirement (ADER). This indicator assesses the adequacy of the national food supply in terms of caloric intake and helps determine whether undernourishment results primarily from insufficient food supply or from poor distribution. An ADESA value of 100 indicates that the dietary energy supply meets the population's needs, while a value below 100 signifies that the food supply is insufficient to fulfill the population's caloric requirements.

3.3. Investment in agriculture for increased food security and better food systems in the ECO region

To meet the growing food demand driven by global population growth, increased income levels, and changing lifestyles over the next 40 years, agricultural production must increase by at least 60 percent. With limited farmland available, achieving this growth will largely depend on responsible investment in agriculture. . Responsible agricultural investment can help improve food security and thus create better food systems. The agriculture orientation index, defined as the ratio of government expenditure on agriculture to the agriculture share of GDP, is a key SDG 2 indicator for monitoring agricultural investment (Figure 12). According to SDG 2 Target 2.A, increasing investment in agriculture should boost the sector's productivity by supporting agricultural research, extension services, technology development, and gene banks for plants and livestock. Data from 2001 to 2020 indicate that agricultural orientation has risen in Kazakhstan and remained steady in Azerbaijan, Tajikistan, and Uzbekistan (data for Turkmenistan were unavailable). The trends in Figure 12 also reveal that support for agriculture varies across ECO countries, showing fluctuations from year to year and indicating that agriculture has not consistently received attention from policymakers.

Figure 12. Agriculture Orientation Index for government expenditure*, 2001–2021



Source: **FAOSTAT.** 2024. SDG Indicators. In: FAO. Rome. [Cited 24 February 2024]. https://www.fao.org/faostat/en/#data/SDGB

* The Agriculture Orientation Index (AOI) for government expenditure is defined as the ratio of the agriculture share of government expenditure to the agriculture value-added share of GDP. This index, which encompasses the agriculture, forestry, fishing, and hunting sectors, is a currency-free measure calculated by comparing these two shares.

3.3.1. Food loss and waste

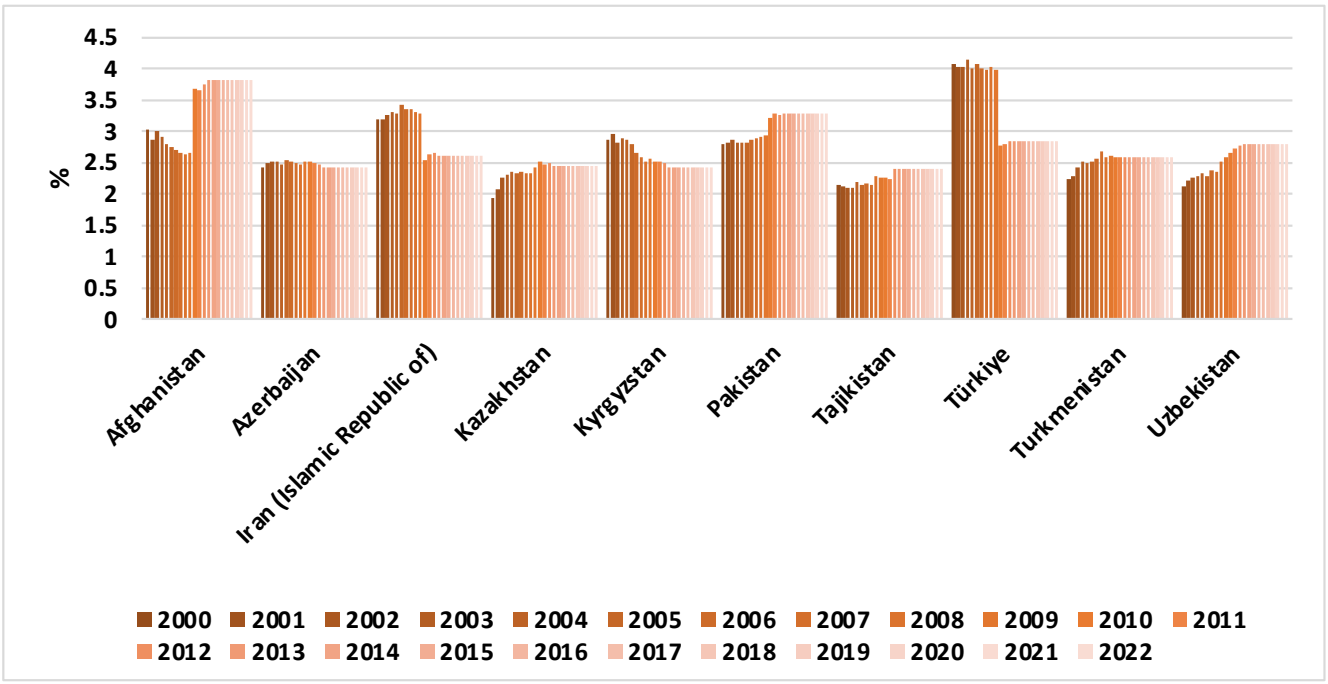
Food loss and waste compromise food availability and diminish farmers' incomes, thereby threatening food security. The causes of food loss and waste are influenced by a range of country-specific technological, economic, and social factors. These include the availability of post-harvest equipment and technologies, the quality of transportation, storage, and communication infrastructure, consumer eating habits, and access to food storage technologies. In middle and low-income countries within the region, the majority of food losses occur at the stages of agricultural production, post-harvest handling, and storage in the food supply chain.

Sustainable Development Goal Target 12.3 aims to "halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses". Advancing this target would also enhance food security. The ECO region shows a varied pattern in food production losses and waste, reflecting differences in the development of food supply chains (Figure 13). Türkiye has the highest rate of caloric losses at the retail distribution level, at 4 percent, followed by the Islamic Republic of Iran, Pakistan, Uzbekistan, Afghanistan, and Turkmenistan, which fall within the 2.5–3 percent range. In contrast, Azerbaijan, Kazakhstan, and Tajikistan perform better, with losses of less than 2.5 percent. This regional trend highlights country-specific variations in food loss and waste. Notably, food loss and waste levels have remained stable across the region from 2013 to 2021, suggesting persistent structural issues within individual countries.

It should also be taken into account that the COVID-19 pandemic has contributed to food loss and waste. Especially, it has highlighted that supply chains often generate substantial amounts of food loss and waste. In 2020, monitoring in several ECO countries revealed an increase in unharvested food left in fields. Livestock farmers experienced reduced access to animal feed and decreased abattoir capacity due to containment measures.

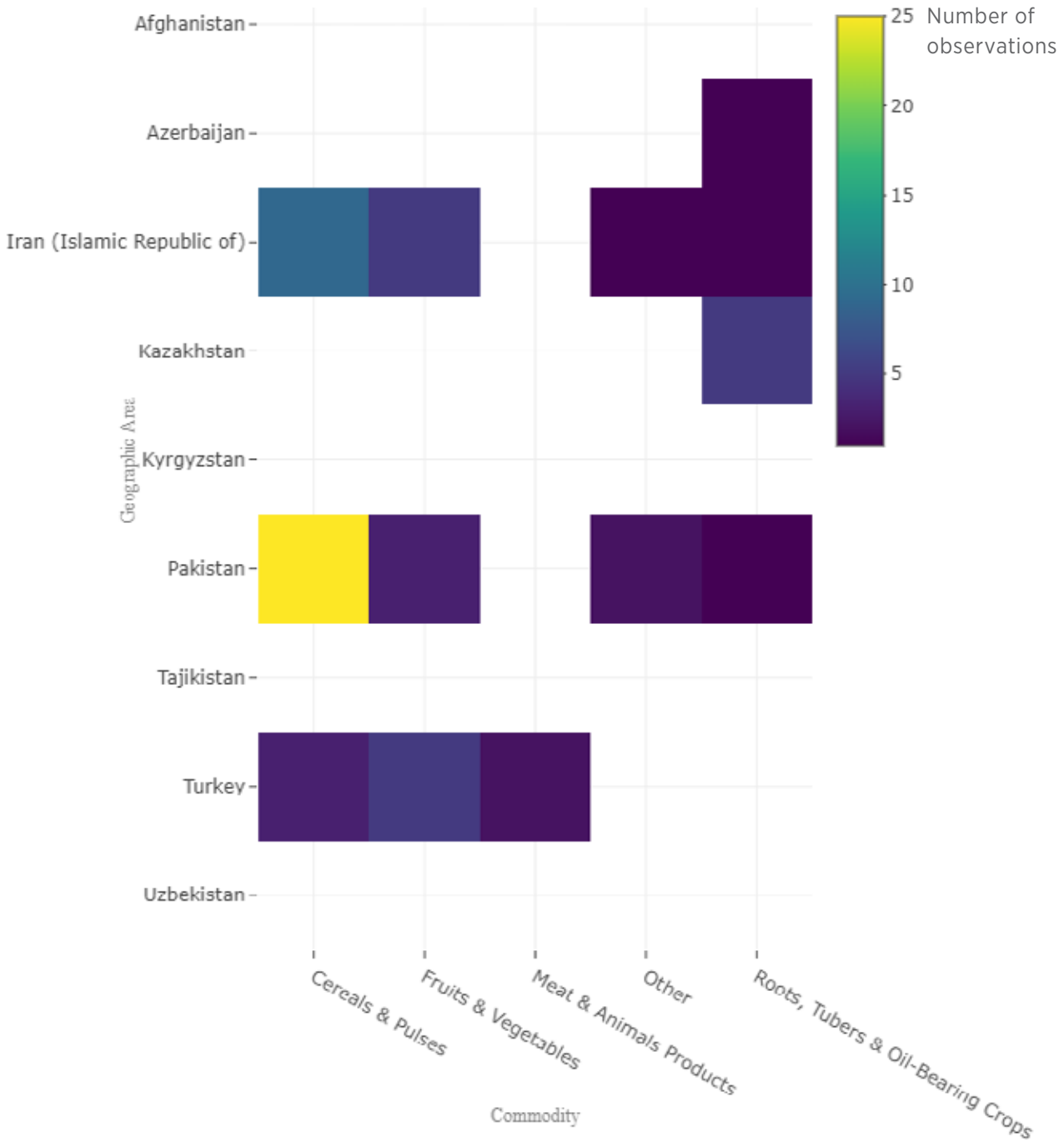
One of the biggest problems in the ECO region regarding food loss and waste is the scarcity or abundance of data. Figure 14 provides an overview of the available data on food loss and waste by country and food item, with colour coding indicating the volume of data available. In Türkiye and the Islamic Republic of Iran, data are available for four out of five food commodity groups. In contrast, other ECO countries have data for only one or two commodity groups, typically cereals or potatoes. Access to comprehensive and current data on food loss and waste is crucial for effectively addressing the issue.

Figure 13. Incidence of caloric losses in the ECO region



Source: FAOSTAT. 2024. Suite of Food Security Indicators. In: FAO. Rome. [Cited 24 February 2024]. https://www.fao.org/faostat/en/

Figure 14. Food loss and waste by country and commodity, 2000–2022

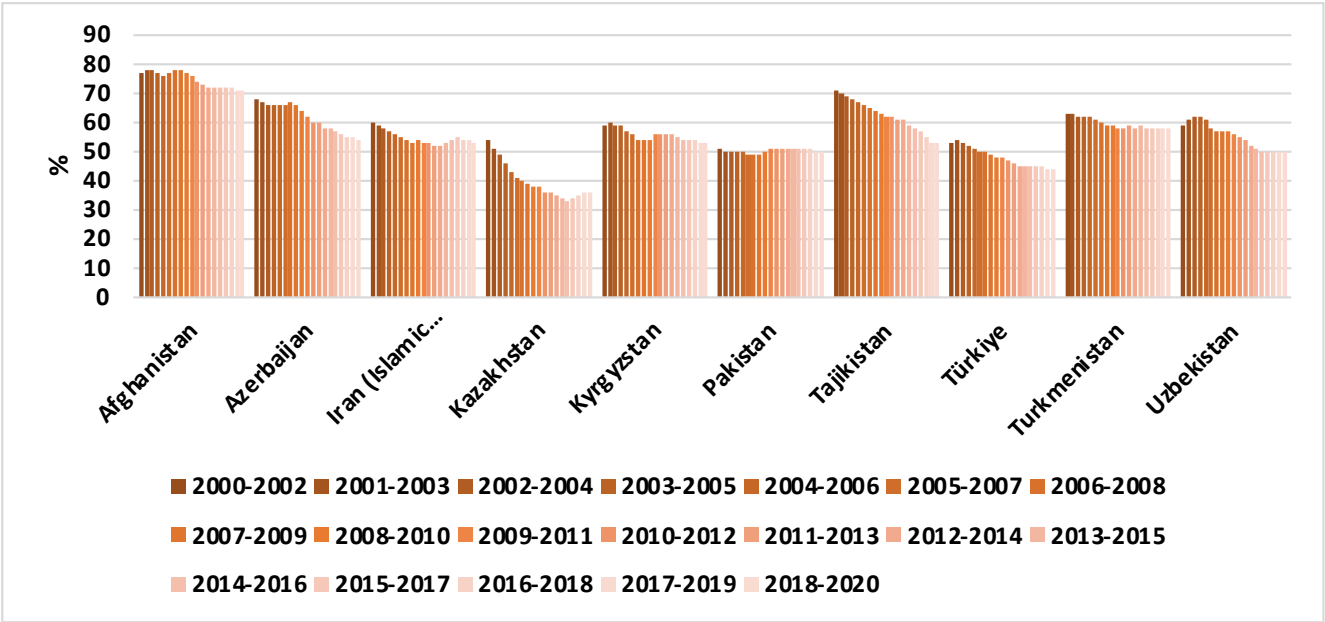


Source: **FAO.** 2022a. Food Loss and Waste Database. In: FAO. Rome. [Cited 24 May 2022]. https://www.fao.org/platform-food-loss-waste/flw-data/en/

3.3.2. Changes in dietary energy supply

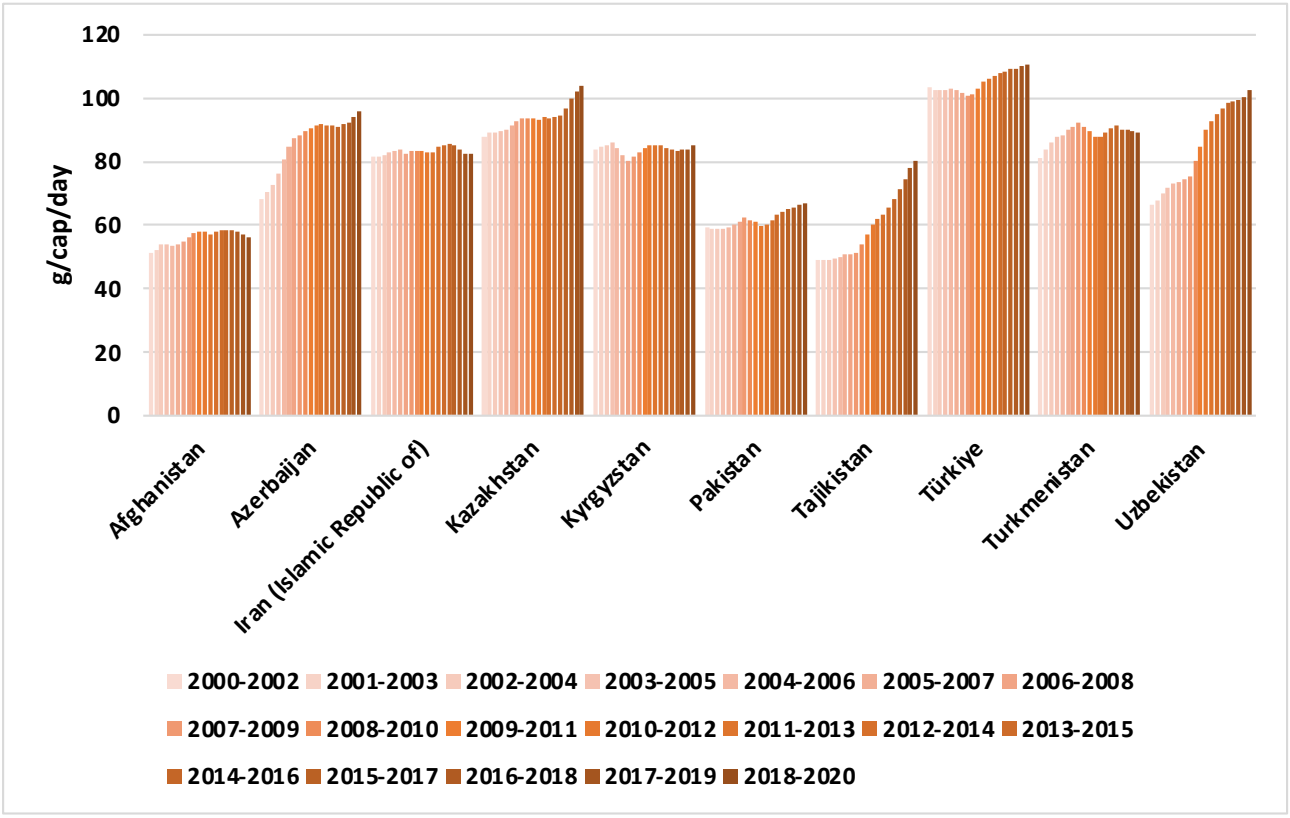
Energy supply sources are undergoing a notable transformation, with a significant shift from calories derived from cereals to those from protein, and a moderate rise in calories from fat. Over the period from 2000 to 2020, there has been a considerable change in the composition of available Dietary Energy Supply (DES) calories. The regional trend indicates a sharp reduction in calories from cereals, roots, and tubers, while calories from protein have increased substantially, with a moderate rise in calories from fat (refer to Figures 15, 16, and 17). This shift has significant implications for food security and nutrition, potentially impacting the burden of malnutrition in the region. Therefore, agriculture, food, health, and nutrition policies should consider the socioeconomic effects of these regional changes in calorie distribution on the burden of malnutrition.

Figure 15. Dietary energy supply from cereals, roots and tubers (percent), 2000–2020 (kcal/cap/day), (3-year average)



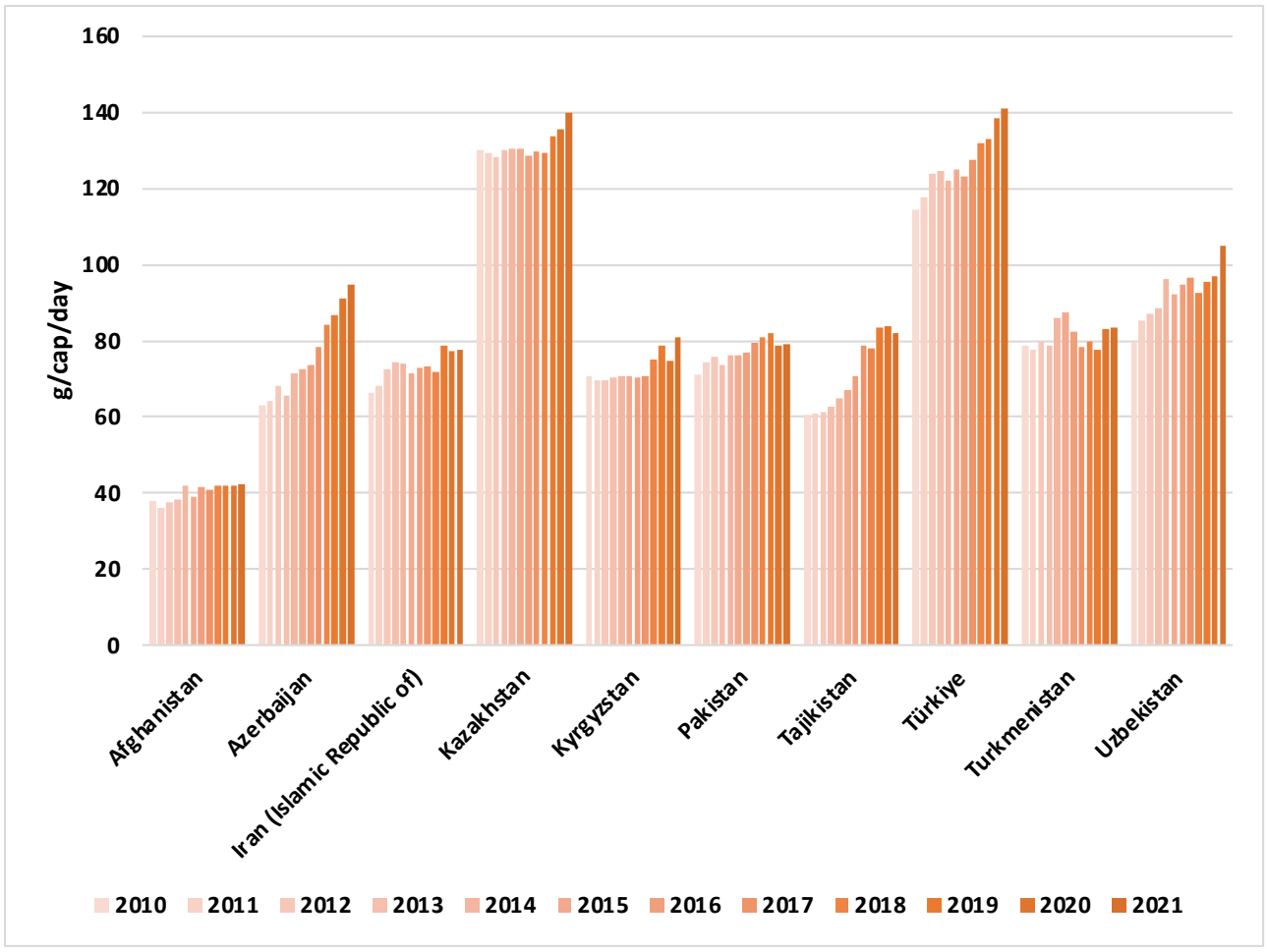
Source: **FAOSTAT.** 2024. Suite of Food Security Indicators. In: FAO. Rome. [Cited 24 February 2024]. https://www.fao.org/faostat/en/

Figure 16. Average protein supply (g/capita daily), 2000–2020 (3-year average)



Source: **FAOSTAT.** 2024. Suite of Food Security Indicators. In: FAO. Rome. [Cited 24 February 2024]. https://www.fao.org/faostat/en/

Figure 17. Fat supply (g/capita daily), 2010–2021



Source: **FAOSTAT.** 2024. Food Balance Sheets. [Cited 24 March 2024]. https://www.fao.org/faostat/en

3.3.3. Transboundary animal diseases

Transboundary animal diseases are highly contagious epidemics that spread rapidly across borders, posing significant socioeconomic and public health risks. These diseases can emerge or re-emerge, affecting both domestic and wild animals as well as humans, thereby endangering animal and human health and contributing to food insecurity. No country, regardless of its wealth, is exempt from the threat of these diseases. While the conditions that trigger outbreaks may vary, the challenges associated with managing the spread of these diseases are largely consistent across different contexts.

New and re-emerging diseases in humans, animals, and ecosystems are increasingly frequent. This includes highly contagious transboundary animal diseases that have the potential to escalate into pandemics, as well as various food hazards of animal origin. Additionally, neglected or endemic diseases, such as bovine tuberculosis and numerous parasitic infections, are also a growing concern.

Many factors contribute to the emergence of diseases. In short, for the environment these factors include habitat destruction and fragmentation, climate change and pollution. For livestock, key factors include illegal animal trade, intensified livestock farming, unauthorized use of drugs and vaccines, and the clustering of livestock farms. The unregulated use of drugs and vaccines can lead to the emergence of drug-resistant strains. Additionally, the spatial concentration of livestock farms often results in varying production practices and levels of biosecurity. In the human realm, contributing factors include rising population density and mobility, growing inequality, and the increasing number of vulnerable groups.

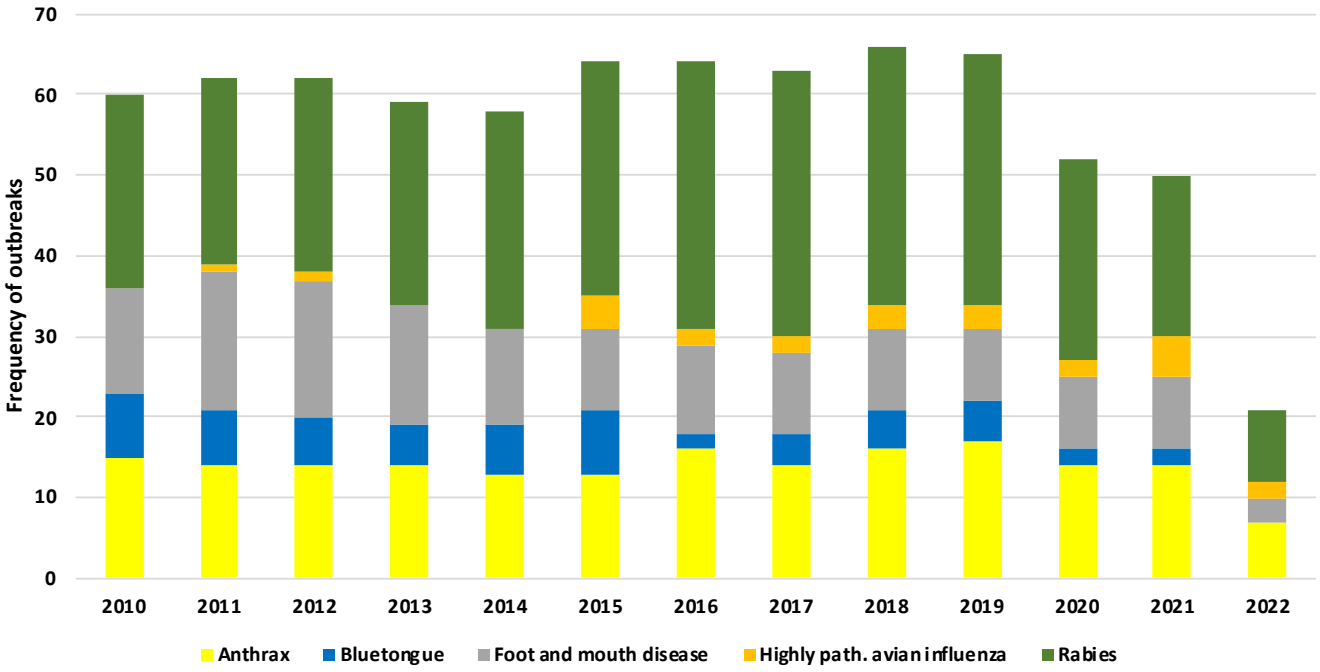
Zoonotic transboundary diseases have economic impacts when they cause mortality in humans or when the disease is medically treated or prevented from doing what people would normally do.

Due to this reason, from turtles to ticks, from Salmonella to the Zika virus, pathogens can spread between humans and animals at an alarming rate. Infectious diseases can be found all over the world, and our world is more interconnected than ever before, so the importance of trying to prevent, track, detect and respond to outbreaks is undeniable.

High-impact viral animal diseases, such as foot-and-mouth disease, pest of small ruminants, classical swine fever, and African swine fever, do not directly impact human health but have significant effects on food and nutrition security, livelihoods, livestock production, and trade. Transboundary animal diseases represent a global and regional threat to food security and nutrition, as well as to international trade.

Figure 18 shows the distribution of diseases identified as number of observed cases in ECO countries over the 2010–2022 period. Over the years, five types of diseases have been recorded with varying levels of frequency. The highest number of reported outbreaks occurred between 2015 and 2019, with rabies being the most frequently reported disease in the region, followed by anthrax and foot-and-mouth disease. In contrast, reports of highly pathogenic avian influenza were less common. Notably, reports of foot-and-mouth disease have declined over the years. Additionally, rabies and anthrax have shown significant and stable frequency throughout the 2010–2021 period.

Figure 18. Frequency of animal disease outbreaks in ECO countries



Source: WOAH WAHIS (World Organisation for Animal Health World Animal Health Information System).
In: WOAH. Paris. [Cited 20 May 2022]. https://wahis.woah.org/#/dashboards/qd-dashboard

The recent COVID-19 pandemic has shown us how dangerous transboundary animal diseases can be, how they affect food security, and also how they can affect the whole world. The pandemic caused a global economic shock of unprecedented scale, leading to severe recessions in many countries with sharp declines in employment, consumer demand, and trade. The global economy shrank by an estimated 3.3 percent in 2020, followed by

a recovery of approximately 6 percent in 2021 (IMF, 2021). In 2020, 8.8 percent of global working hours were lost, equivalent to 255 million full-time jobs (ILO, 2021). Young people (aged 15 to 24) faced higher unemployment rates and poorer job quality compared to adults (aged 25 and above), with young women generally experiencing worse unemployment rates than their male counterparts. In the ECO region, macroeconomic conditions during the COVID-19 pandemic led to a challenging outlook for food security. Public resources were directed toward protecting food chains, businesses, and unemployed individuals, but rural areas, where most poverty-stricken and vulnerable populations reside, received relatively less attention. The pandemic also negatively impacted supply chains for fish, dairy, livestock, perishable products, grains, and pulses, which rely on timely and secure transportation and storage (FAO and ECORCCFS, 2022). Additionally, weak market connectivity between input – output markets and rural – urban markets led to reduced product sales, as health and economic measures disrupted the links between producers and urban consumers.

Prevention and control mechanisms for transboundary animal diseases should be the priority, with a global public interest that requires multidimensional and coordinated efforts. The involvement of all related stakeholders and the community is critical for the surveillance, prevention and control of regional priority transboundary animal diseases.

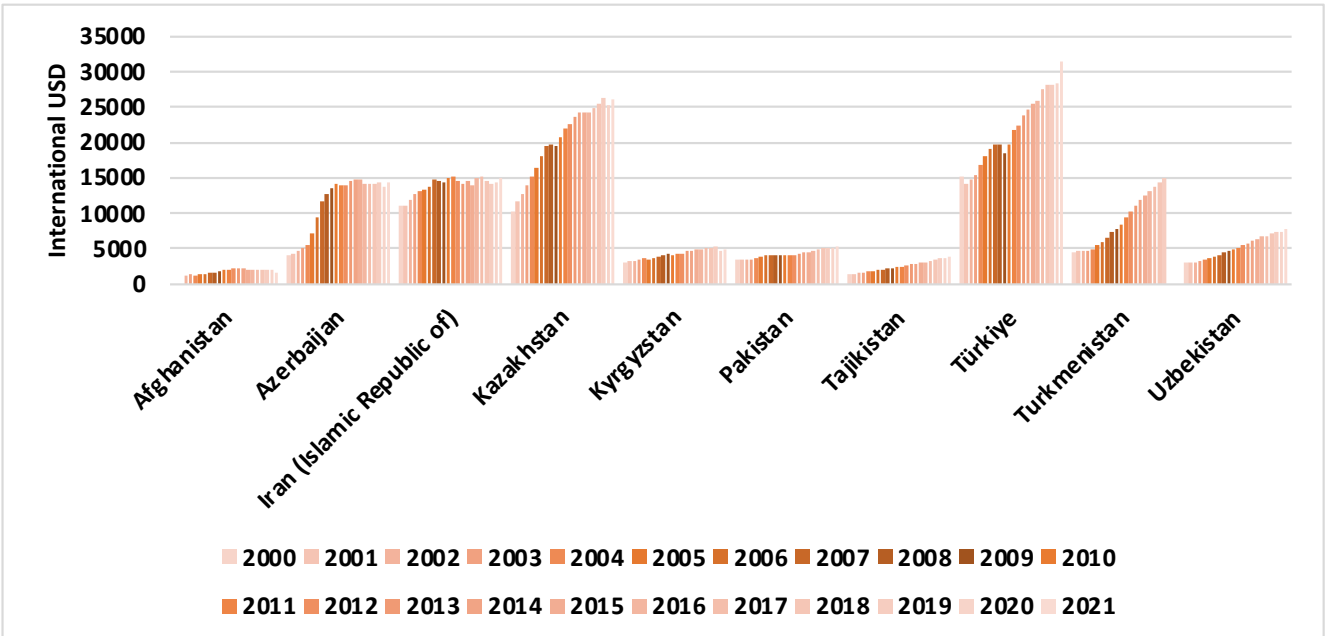
3.4. Food access

Food access refers to the stable availability of nutritious, adequate and safe food. Access to food is much more than just purchasing food. Steady and equal food access for all depends on food systems and social systems that protect and expand food access. Physical and economic accessibility are important factors, along with efficient and safe food systems. Access to food includes a wide variety of structural, economic and social factors.

3.4.1. Purchasing power

With regard to purchasing power in the ECO region during the 2012–2021 period, all countries achieved a substantial increase in the level of GDP per capita. Türkiye, Turkmenistan, Kazakhstan and Uzbekistan achieved significant increases, while the other countries (apart from Afghanistan) experienced a small but steady increase (Figure 19).

Figure 19. Gross domestic product per capita, ECO countries, 2012–2021



Source: **FAOSTAT.** 2024. Suite of Food Security Indicators. In: FAO. Rome. [Cited 24 February 2024]. https://www.fao.org/faostat/en/

Boosting investment in agricultural and rural development is crucial for reversing the rise in undernourishment in the region, particularly in countries experiencing frequent conflicts

and high population growth. Research indicates that agricultural-driven economic growth enhances food access, which in turn improves food security and nutrition, given that majority of the poor live in peri-urban and rural areas.

Nevertheless, enhancing food security is not a straightforward process. It necessitates deliberate, inclusive growth policies that specifically support and integrate smallholders into various stages of the agricultural value chains.

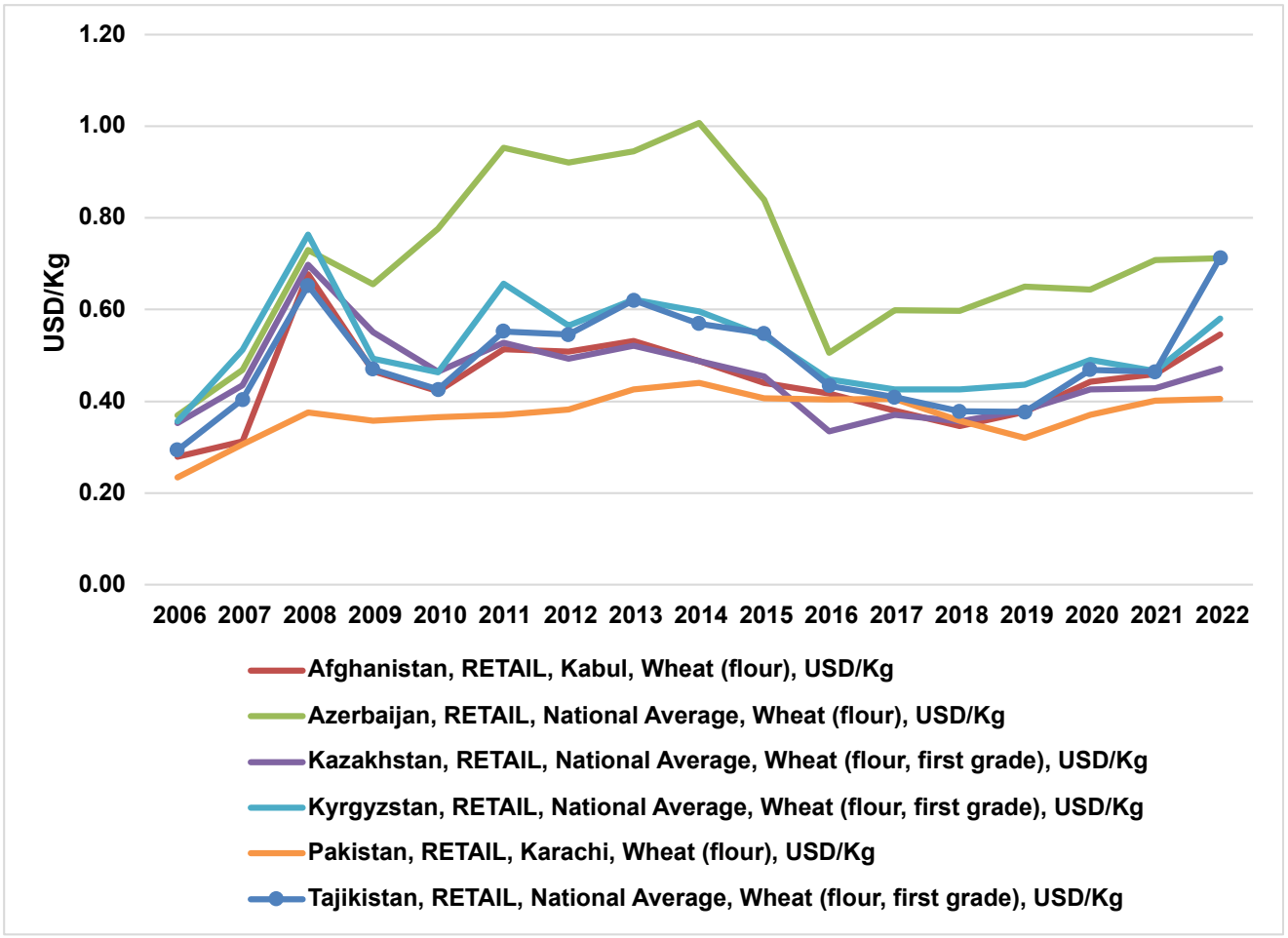
3.4.2. Market prices of key food items

Rising food prices diminish consumers' purchasing power by reducing real incomes. The food and fuel price crisis of 2007 and 2008 highlighted that domestic food prices in the ECO region are particularly susceptible to fluctuations in international markets, largely due to the region's significant reliance on food imports.

Trends in wheat-flour prices show three distinct subperiods: 2007–2014 with increasing prices, 2014–2020 with decreasing prices, and 2021–22 with increasing prices (Figure 20). Relatively speaking, price increases in Pakistan between 2007 and 2014 have been the lowest, unlike the large increases in Kazakhstan, Kyrgyzstan and Tajikistan. Between 2016 and 2020, global prices exhibited minor fluctuations, remaining within a very narrow range. , and national prices converged to reasonable levels. Food prices in ECO countries rose again after 2019. An in-depth analysis of recent trends in food prices is available in the section, Trends in food prices.

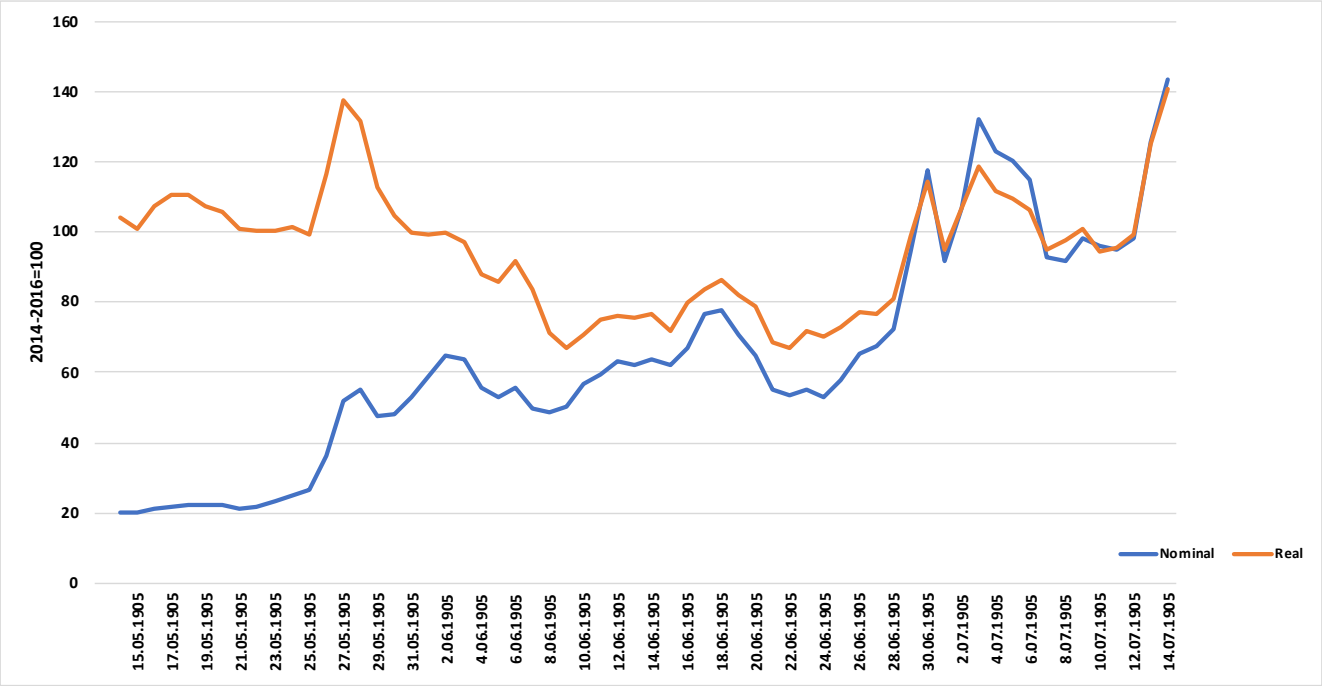
National wheat flour price trends mirror those of the global food price index (Figure 21), indicating that domestic food prices and access to food are highly sensitive to fluctuations in global markets due to the ECO countries' heavy reliance on food imports. The 2008 financial crisis, marked by significant increases in food and fuel prices, demonstrated the vulnerability of domestic food prices to international market volatility. When prices of essential staples rise, the impact on food security is exacerbated, leading to increased undernourishment. Furthermore, with only modest improvements in GDP per capita, adverse shifts in global food prices have hindered efforts to reduce undernourishment.

Figure 20. Annual average monthly wheat flour retail price (USD/kg)



Source: **FAO.** 2022b. Food Price Monitoring and Analysis (FPMA) Tool. In: FAO. Rome. [Cited 22 May 2022]. https://fpma.apps.fao.org/giews/food-prices/tool/public/

Figure 21. Annual world price indices, 1962–2022



Note: 2014–2016 = 100.
Source: **FAO.** 2022c. World Food Situation. In: FAO. Rome. [Cited 20 May 2022]. https://www.fao.org/worldfoodsituation/foodpricesindex/en/

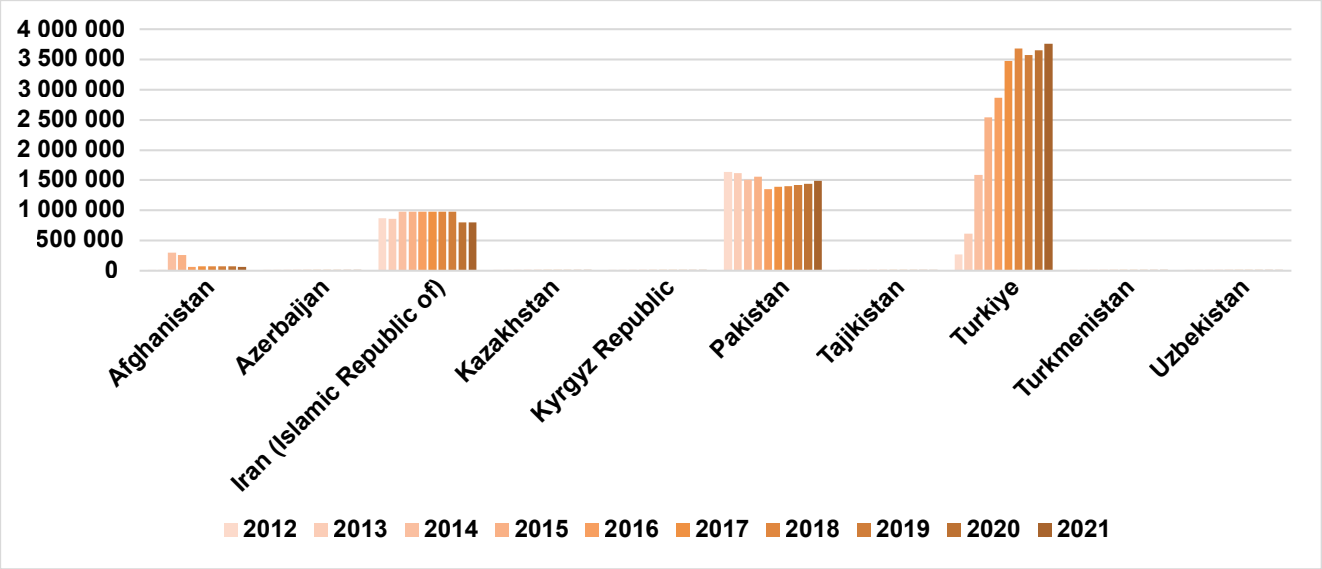
Considering the current poverty rates and GDP per capita, it is clear that income distribution plays a crucial role in enhancing economic access to food for the poor. To address this, labour market regulations, social protection programs, and safety nets should be paired with pro-poor, inclusive income distribution policies. These policies are essential for counteracting the worsening of food insecurity, mitigating income inequality, and improving food access for the disadvantaged through effective social protection and safety net initiatives.

The depreciation of several national currencies in the region against the US dollar and the euro, which started in 2014 and continued through 2015 and 2016, had significant impacts on countries reliant on commodity exports. This depreciation led to reduced commodity exports and fiscal revenues, affecting food availability by diminishing import capacity and impacting food access by limiting the fiscal ability to shield poor households from rising domestic food prices.

3.5. Social protection for vulnerable groups

Social protection programs are increasingly strained in some countries due to rising numbers of refugees and internally displaced persons (IDPs). Türkiye, in particular, faces significant challenges as it accommodates approximately 3.8 million refugees as of 2021. Similarly, Pakistan is experiencing a surge in refugees, with nearly 1.5 million individuals (Figure 22). Refugees are more vulnerable to food and nutritional insecurity compared to local citizens, primarily because they lack access to land for agriculture and do not fully benefit from public social protection programs. Many refugees work in low-wage positions within agriculture, industry, and service sectors. Studies show that refugees face heightened risks of food and nutrition insecurity. Afghanistan and Azerbaijan are also grappling with issues related to providing adequate food and livelihood resources to IDPs. Although IDPs are entitled to public support as citizens of their own countries, this places additional strain on already limited social protection resources.

Figure 22. Refugee population by host country



Source: **World Bank.** 2022a. World Development Indicators Database. In: World Bank. New York. [Cited 10 January 2022]. https://databank.worldbank.org/source/world-development-indicators

Countries in the ECO region have established institutions and frameworks governing social access to food, but there is a need for stronger political commitment to enhance social protection programs for vulnerable populations.

Social protection policies are crucial for improving the well-being of the poorest individuals and play a significant role in implementing the 2030 Agenda. This is highlighted in SDG Target 1.3, which aims to "implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable." According to World Bank data, social safety net program coverage is highest in Kazakhstan and Türkiye, with 24.7 percent (2017) and 14.5 percent (2019) of the population, respectively. These programs offer various forms of support, including cash transfers, disability benefits, in-kind food transfers (such as food stamps, vouchers, rations, supplementary feeding, and emergency food distribution), school feeding, other social assistance, and public works programs (like cash-for-work and food-for-work). Despite this, progress in institutionalizing social access to food is slow, and increased political commitment is needed to address undernourishment and poverty more effectively. To address rising populations and high youth unemployment, a pro-poor, inclusive development strategy should focus on creating jobs, particularly in labor-intensive sectors.

The sources of GDP growth have implications for sectoral employment, incomes, poverty reduction, and food security. The nature of technological change – whether labour-intensive or capital-intensive – affects food security in different ways. In the ECO region, where poverty and food insecurity are often more prevalent in peri-urban and rural areas than in urban areas, labor-intensive technological changes can have immediate positive effects on employment in agri-food sector. Therefore, a pro-poor, inclusive growth strategy should prioritize labor-intensive approaches to enhance food and nutrition security, especially in light of increasing populations and youth unemployment.

World Bank data indicate that overall employment rates in the ECO region did not show significant changes over the past decade, nor did the percentage of employment in agriculture. This suggests that GDP growth in ECO countries has not significantly impacted employment creation.

3.5.1. Food utilization

Food utilization – which means, in short, the consumption of nutritious foods – refers to ingesting and metabolizing appropriate foods in the presence of adequate foods, clean water, and good sanitation.

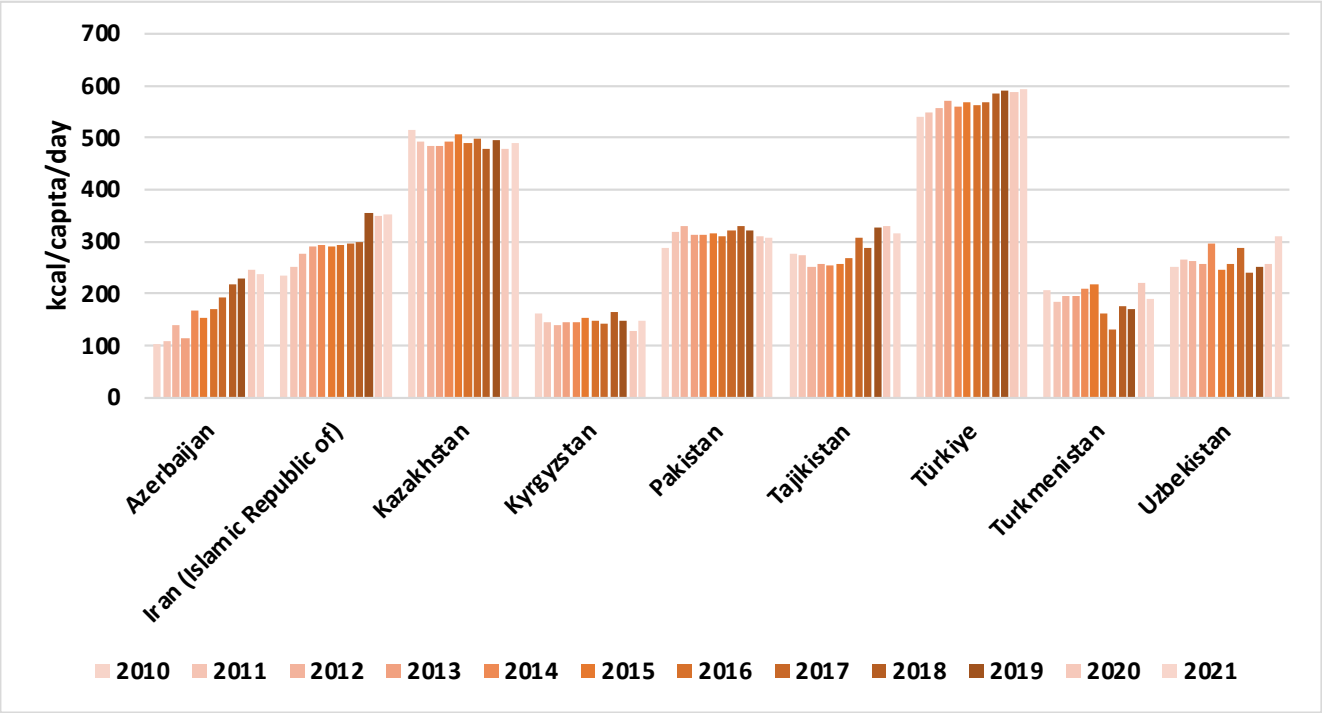
With the utilization of food, it is not enough to have sufficient income to access this food. While increasing income can tend to improve caloric intake, it does not improve nutrition. Increasing the availability of more nutritious foods will increase utilization. Likewise, food safety has a significant role in food utilization as the consumption of safe food and water can ensure the consumption of nutritious food. Nutritional habits and preparation techniques are also factors affecting the utilization of food as even in households with high overall food consumption, malnutrition is observed. In addition, effective sanitation and access to safe water reduce the likelihood of illness and enable individuals to absorb nutrients from the food they eat. Foodborne and waterborne diseases, such as parasitic and other infections, increase the amount of calories and nutrients an individual needs to maintain a healthy body weight.

Food consumption patterns and health conditions in ECO countries reveal a dual challenge of undernutrition and overnutrition. The shift from traditional, short food supply chains to technologically advanced, long supply chains—coupled with rising GDP per capita—has led to increased consumption of highly processed foods high in fats, sugars, and salts but low in essential micronutrients. Alongside this dietary shift, sedentary lifestyles in urban areas exacerbate the issue, resulting in diet-related health problems that impose a significant socioeconomic burden.

3.5.2. Per capita consumption

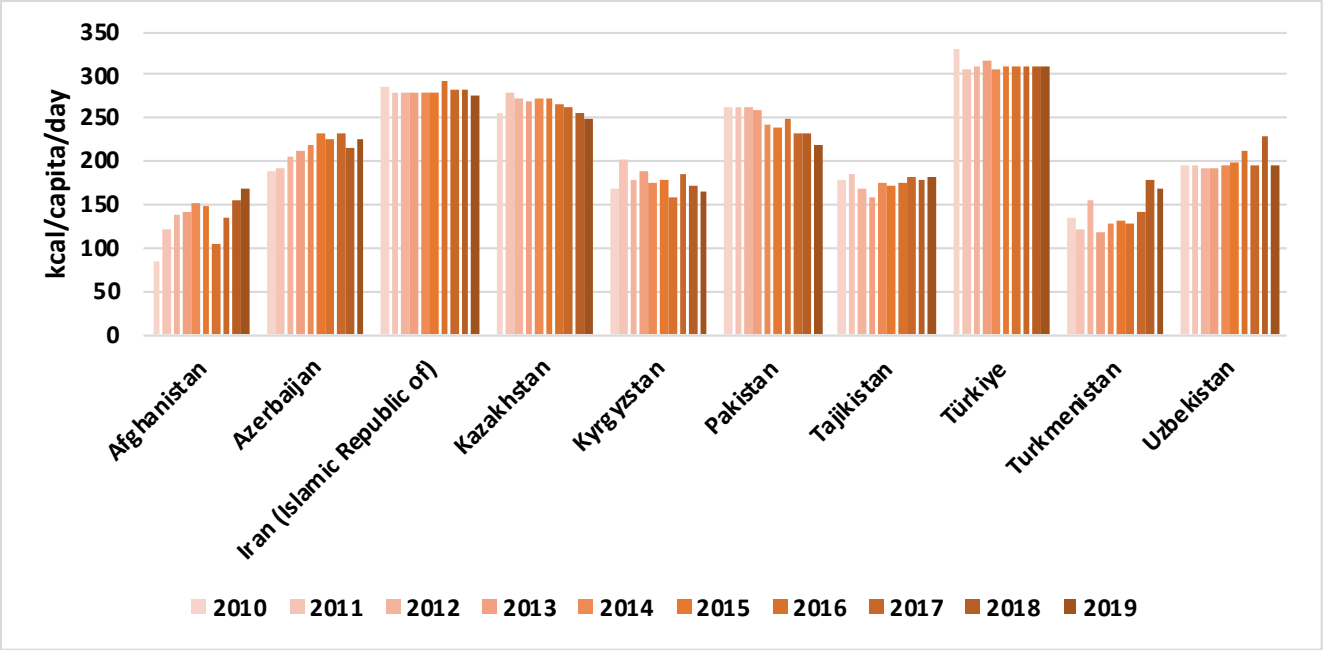
Figures 23 and 24 reveal that, in most ECO countries, the per capita supply of vegetable oil and sugar either increased slightly or remained stable between 2010 and 2021. While the high caloric content of these foods has contributed to a decrease in undernourishment, their adverse effects, such as overnutrition, overweight, and obesity, have become more prevalent in recent years. Consequently, the region now faces a complex food and nutrition landscape characterized by both undernutrition and overnutrition. This dual challenge is common among high and middle-income countries, as well as low-income countries within the ECO region.

Figure 23. Daily per capita supply of vegetable oil, 2010–2021 (g/capita/day)



Source: **FAOSTAT.** 2024. Food Balance Sheets. In: FAO. Rome. [Cited 24 March 2024]. https://www.fao.org/faostat/en/#data/FBS

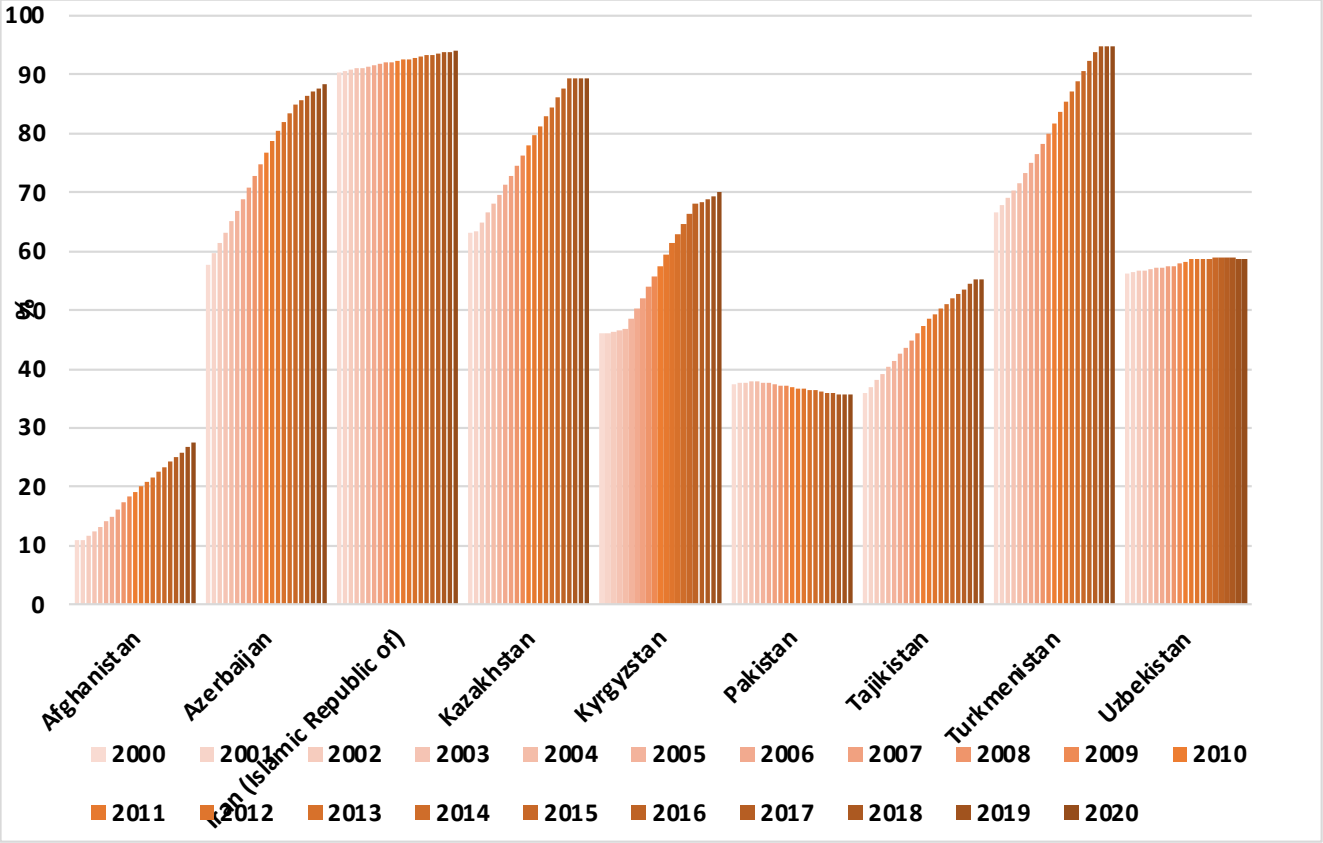
Figure 24. Daily per capita supply of sugar, 2010–2021



Source: **FAOSTAT.** 2024. Food Balance Sheets. In: FAO. Rome. [Cited 24 February 2024]. https://www.fao.org/faostat/en/#data/FBS

Significant strides have been made in fostering healthy food consumption environments. Key factors such as improved hygiene and sanitation, access to safe water, and proper disposal of child faeces are crucial for ensuring that infants and children grow up free from infection and illness. In terms of managed water services, Turkmenistan leads with the highest usage rate at 99 percent, followed by Uzbekistan at 97.8 percent and the Islamic Republic of Iran at 97.5 percent. Despite the overall progress in the ECO region up to 2021, disparities between countries persist, potentially indicating uneven progress toward achieving nutrition targets (Figure 25).

Figure 25. People using safely managed drinking water services, 2000–2020 (percent)



Source: **FAOSTAT.** 2024. Suite of Food Security Indicators. In: FAO. Rome. [Cited 24 February 2024]. https://www.fao.org/faostat/en

Enhanced investment in health is crucial for ensuring sustainable progress. The role of healthy and safe consumption environments in optimizing food utilization is significant and should not be underestimated. Investing in public health infrastructure yields substantial social and economic benefits, highlighting the importance of prioritizing health investments for long-term improvements.

3.5.3. Stability

Food stability refers both to the availability and access of people to secure sources of food. Even if the food intake is sufficient, there is still food insecurity if there is temporary access to food or malnutrition.

Several SDG targets address the stability of food and nutrition security processes. For instance:

SDG 1 (No Poverty) is directly related to ensuring stable food access; SDG 2.4 (Resilient Food Systems) and SDG 13 (Climate Action) aim to enhance the resilience of food systems to climate change; SDG 2.B (Trade Restrictions), SDG 2.A (Investment in Agriculture), SDG 9.B (Infrastructure Development), SDG 11.A (Sustainable Infrastructure), and SDG 15 (Land Conservation and Biodiversity) focus on improving the stability of food availability; SDG 12 (Responsible Production and Consumption) works to stabilize food production and utilization; SDG 16 (Peace, Justice, and Strong Institutions) seeks to enhance the stability of all processes related to food and nutrition security.

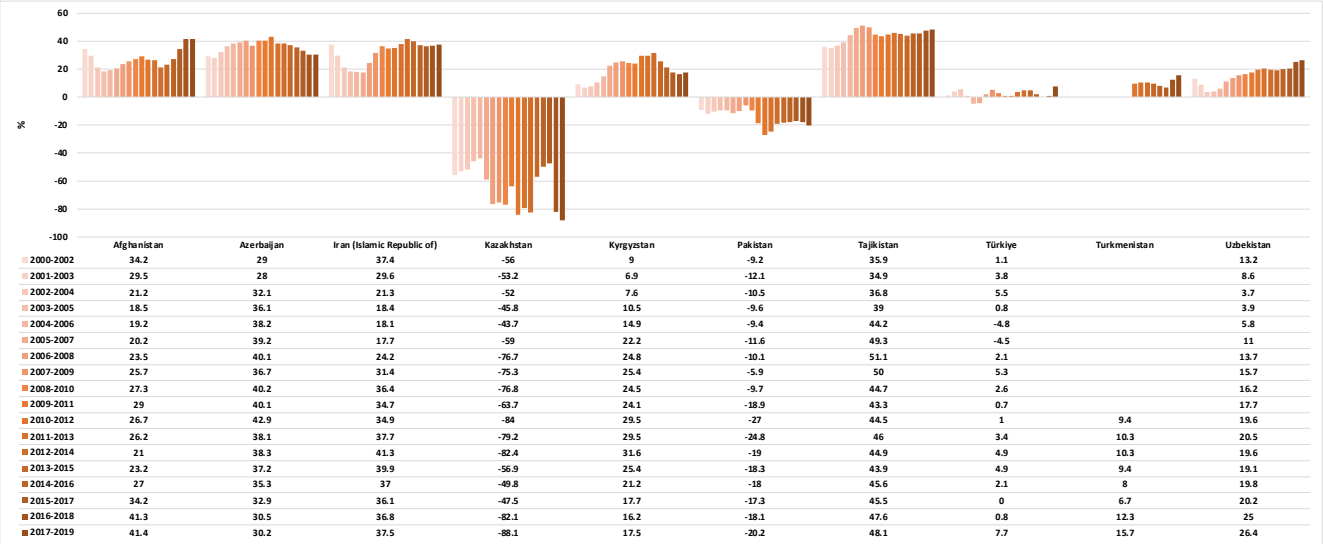
Elements that cause instability in food systems —production, processing, marketing, and consumption—vary across countries based on social, political, natural, and economic contexts. In the ECO region, significant factors include reliance on cereal imports, fluctuations in food production and trade, increased climate-related events, shocks to food prices, political instability, and conflicts.

3.5.4. Dependence on cereal imports

Cereals are key components of the diets in ECO countries and they play a critical role in food availability. High reliance on cereal imports plays a significant role with regard to the instability of food availability in the ECO region.

During the 2017–19 period, five ECO countries were highly dependent on cereal imports. During the 2014–2018 period, the dependency of Afghanistan, Tajikistan, Turkmenistan and Uzbekistan increased continuously, while the dependency of Azerbaijan and the Islamic Republic of Iran declined over time, albeit remaining quite high. The remaining countries in the region have a cereal import dependency rate of under 25 percent. Kyrgyzstan has made notable strides in decreasing its reliance on cereal imports. Türkiye's level of dependency does not threaten food availability, while Kazakhstan and Pakistan are net exporters of cereals.

Figure 26. Cereal import dependency ratio, 2000–2020 (percent)



	Afghanistan	Azerbaijan	Iran (Islamic Republic of)	Kazakhstan	Kyrgyzstan	Pakistan	Tajikistan	Türkiye	Turkmenistan	Uzbekistan
2000-2002	34.2	29	37.4	-56	9	-9.2	35.9	1.1		13.2
2001-2003	29.5	28	29.6	-53.2	6.9	-12.1	34.9	3.8		8.6
2002-2004	21.2	32.1	21.3	-52	7.6	-10.5	36.8	5.5		3.7
2003-2005	18.5	36.1	18.4	-45.8	10.5	-9.6	39	0.8		3.9
2004-2006	19.2	38.2	18.1	-43.7	14.9	-9.4	44.2	-4.8		5.8
2005-2007	20.2	39.2	17.7	-59	22.2	-11.6	49.3	-4.5		11
2006-2008	23.5	40.1	24.2	-76.7	24.8	-10.1	51.1	2.1		13.7
2007-2009	25.7	36.7	31.4	-75.3	25.4	-5.9	50	5.3		15.7
2008-2010	27.3	40.2	36.4	-76.8	24.5	-9.7	44.7	2.6		16.2
2009-2011	29	40.1	34.7	-63.7	24.1	-18.9	43.3	0.7		17.7
2010-2012	26.7	42.9	34.9	-84	29.5	-27	44.5	1	9.4	19.6
2011-2013	26.2	38.1	37.7	-79.2	29.5	-24.8	46	3.4	10.3	20.5
2012-2014	21	38.3	41.3	-82.4	31.6	-19	44.9	4.9	10.3	19.6
2013-2015	23.2	37.2	39.9	-56.9	25.4	-18.3	43.9	4.9	9.4	19.1
2014-2016	27	35.3	37	-49.8	21.2	-18	45.6	2.1	8	19.8
2015-2017	34.2	32.9	36.1	-47.5	17.7	-17.3	45.5	0	6.7	20.2
2016-2018	41.3	30.5	36.8	-82.1	16.2	-18.1	47.6	0.8	12.3	25
2017-2019	41.4	30.2	37.5	-88.1	17.5	-20.2	48.1	7.7	15.7	26.4

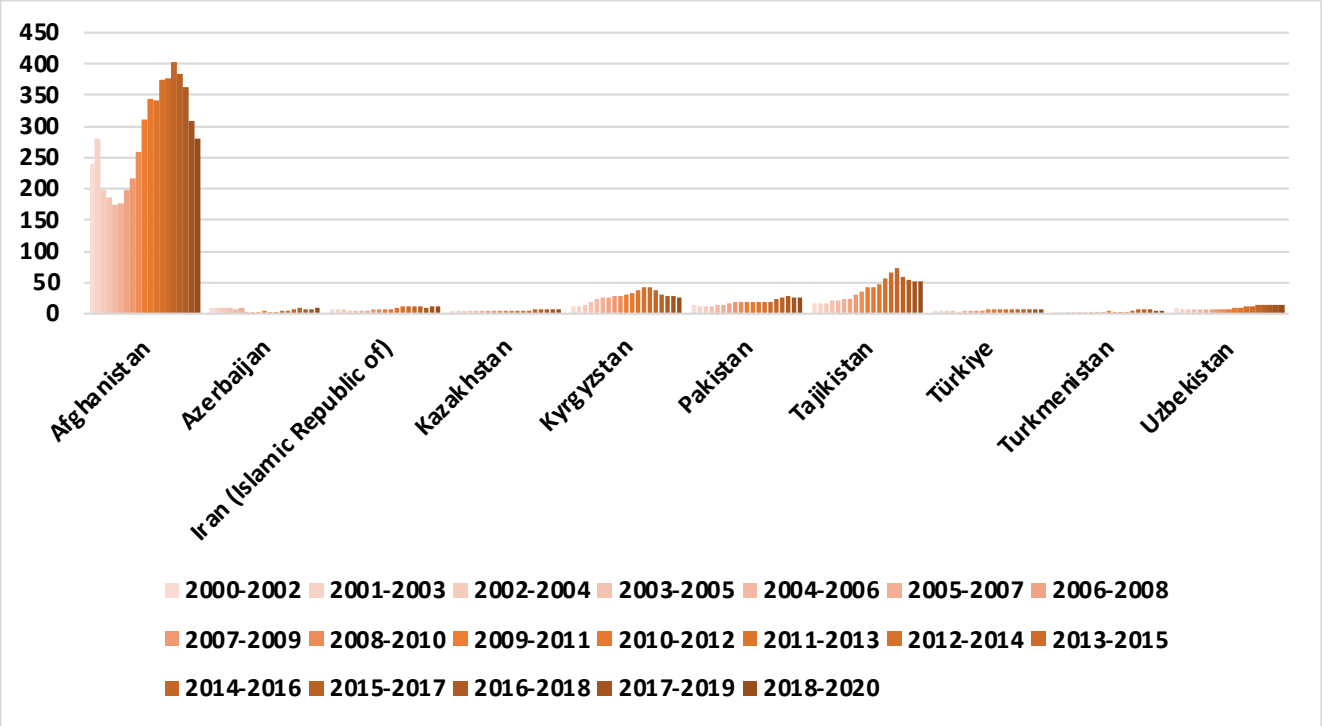
Source: **FAOSTAT.** 2024. Suite of Food Security Indicators. In: FAO. Rome. [Cited 24 February 2024]. https://www.fao.org/faostat/en/

During the COVID-19 pandemic, many ECO countries adjusted their trade policies, ranging from export and import restrictions, to lowering import and technical barriers, to domestic measures the improve the stability of production and logistics.

To ensure the availability of cereals for their citizens, Kazakhstan, Kyrgyzstan, Pakistan, Tajikistan, Türkiye, and Uzbekistan took various policy measures (FAO, 2021). Kazakhstan imposed wheat and wheat-flour export restrictions (quotas); Türkiye lowered import tariffs for rice, grains, and sunflower seed products; Pakistan lowered import tariffs for edible oil; Uzbekistan took measures to eliminate import tariffs on wheat and wheat flour. The cereal imports of several countries in Central Asia were volatile due to temporary wheat export restrictions imposed in the first half of 2020 by the main suppliers – the Russian Federation, Ukraine, and Kazakhstan (Djanibekov and Herzfeld, 2022). Kazakhstan increased its cereal imports by 8 percent, from 20 percent in 2019 to 28 percent of food imports in 2020. Uzbekistan, the largest importer of wheat flour, saw a 5 percent increase, from 21 percent in 2019 to 26 percent in 2020. Azerbaijan saw a 2 percent decrease, from 21 percent in 2019 to 19 percent in 2020.

Regarding the proportion of food imports relative to total exports, Afghanistan remains a concern due to its high level of food import dependence. Tajikistan also faces challenges, with food imports comprising over 50 percent of its total exports. In contrast, Pakistan and Kyrgyzstan show lower food import shares, with Pakistan's share gradually rising and Kyrgyzstan's declining. Other countries in the region exhibit lower food import shares, suggesting a better capacity to finance food imports for their populations.

Figure 27. Value of food imports as percent of total merchandise exports



Source: **FAOSTAT.** 2022. Suite of Food Security Indicators. In: FAO. Rome. [Cited 24 May 2022]. https://www.fao.org/faostat/en/

To increase food availability, imports can be seen as a quick remedy to close the consumption gap. On the other hand, a large amount of data show that food imports do not reduce food insecurity effectively, or as expected. Import dependency has become a source of vulnerability as it exposes countries to the volatility of food prices.

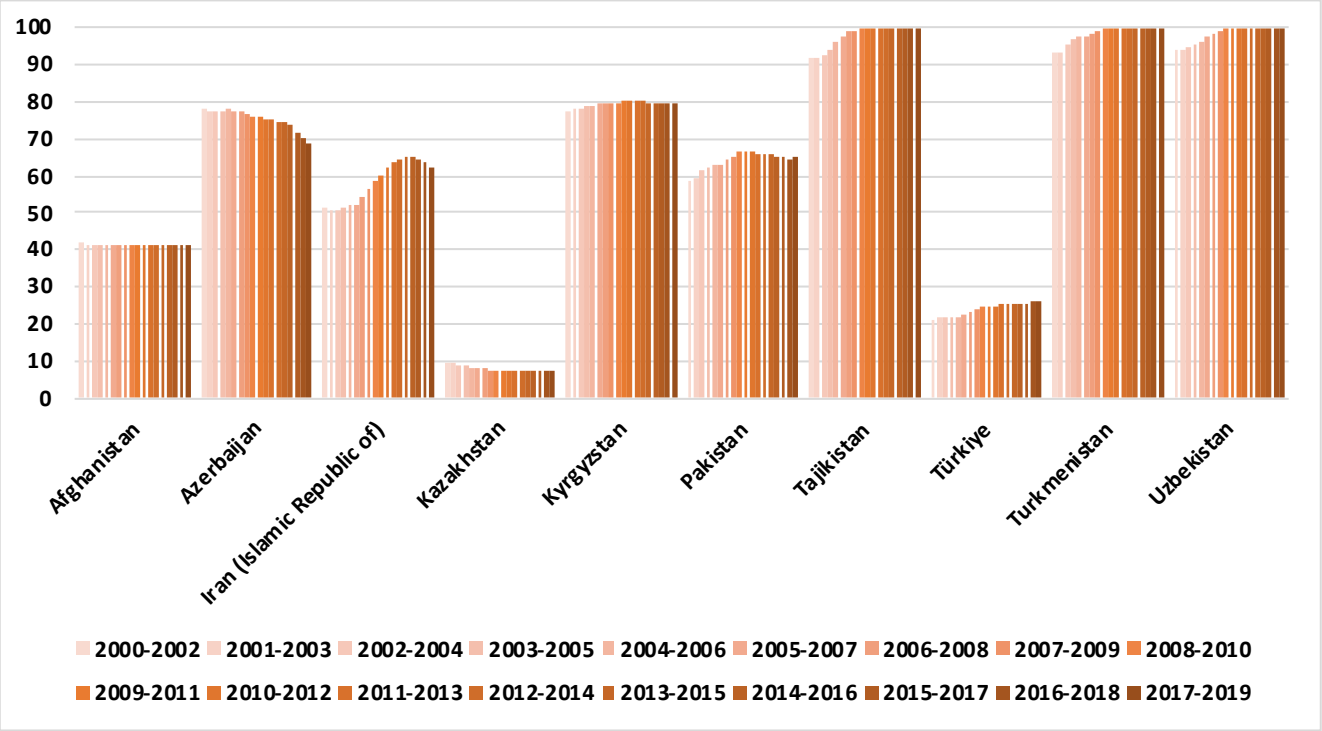
3.6. Conflicts and climate-related disasters

Conflicts and natural disasters risk the stability of food and nutrition security. The agriculture sector is particularly vulnerable to natural hazards and disasters. When disasters and conflicts take place, they have a direct impact on the livelihoods and food security of millions people involved in agriculture in developing countries. Conflicts directly exacerbate food insecurity by severely disrupting access to food. As violence intensifies, individuals are often displaced, losing access to their means of food production and markets, which impairs their ability to produce and acquire adequate food. Additionally, climate change-related natural disasters, such as droughts and floods, further devastate the livelihoods of already vulnerable populations. These events not only negatively affect agricultural production but also create conditions that facilitate the rapid spread of diseases.

Climate-related disasters such as flooding, landslides, and extreme temperatures, have become more frequent. Ensuring the stability of food and nutrition security is becoming increasingly critical. Structural challenges, including the unsustainable use of natural resources, food loss and waste, and the rising frequency of natural disasters, impose additional burdens on the livelihoods of poor and vulnerable populations. Furthermore, enhancing the resilience of agricultural production systems to withstand, absorb, and recover from hazards is essential for maintaining stable food production.

The percentage of arable land equipped for irrigation serves as an indicator of agriculture's vulnerability to water stress and climatic shocks, impacting national food security based on production and trade patterns. This measure encompasses all land equipped to supply water through irrigation, including areas with full and partial control irrigation, equipped lowlands, pastures, and regions designed for spate irrigation. Figure 28 shows the percentage of arable land equipped for irrigation. Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan – and to some extent Azerbaijan, the Islamic Republic of Iran and Pakistan – are very dependent on irrigation for agricultural production. In addition, considering the dependence of agriculture on irrigation in most of the ECO region, climate change will affect food security in these countries. The rapid rates of urbanization and population growth in Afghanistan and Pakistan are expected to further escalate the demand for water.

Figure 28. Percentage of arable land equipped for irrigation



Source: **FAOSTAT.** 2022. Suite of Food Security Indicators. In: FAO. Rome. [Cited 24 May 2022]. https://www.fao.org/faostat/en/

Disasters are nothing new – not for farmers, nor for food security. However, it is important to manage disasters and mitigate their impact on food security. Strategies for climate-change adaptation to mitigate climate change should allow for a comprehensive understanding of the specific impacts of disasters on agriculture.

4. Agrifood trade in Economic Cooperation Organization countries

Introduction

During the COVID-19 pandemic, various containment measures and policy reforms were concurrently adopted to make sure that the health crisis did not turn into a food crisis. Some countries implemented trade-limiting measures, others implemented trade-facilitating measures, and others adopted a mixture of both kinds of measures for targeted agrifood products. Among the commonly adopted policy reforms were:

- Trade restrictions: import restrictions, export bans or quotas; Import restrictions primarily targeted the trade of live animals, fish, and certain horticultural products.

- Import restrictions: suspension of import tariffs and, in some cases raising tariff rate quotas, lowering technical barriers to trade to facilitate imports of critical food items.

- Domestic market measures: aimed at stabilizing production, logistics, and food access included raising domestic food procurement goals and boosting imports to strengthen national reserves for better availability. Additionally, price controls were enforced, and food distribution programs were expanded to enhance economic access to food.

Drawing on the extent of the implementation of these reforms, this report provides an overview of developments in agrifood trade across ECO countries during the 2018–2021 period. The overview explores the impact of the COVID-19 pandemic, as well as the potential impact of the war in Ukraine on agrifood trade across ECO countries.

Following the Introduction, Section 4.2 briefly describes recent changes in macroeconomic indicators in ECO countries, including a summary of trends in the spread of COVID-19 and changes in indicators such as GDP, agricultural GDP, unemployment, and trade. This section aims to provide background information on the general economic conditions implied by sectoral changes in each member country. Section 4.3 elaborates on the most recent developments in agrifood trade across ECO countries. Specifically, this section assesses changes in agricultural (primary) products and food trade, trade policy measures implemented as a response to the pandemic, changes in transaction costs of trade and food prices. In Section 4.4, the potential impact of the war in Ukraine is discussed, with a focus on trade of the main food products. Finally, Section 4.5 concludes the report, making policy recommendations for the development of a resilient agrifood trade system across ECO countries.

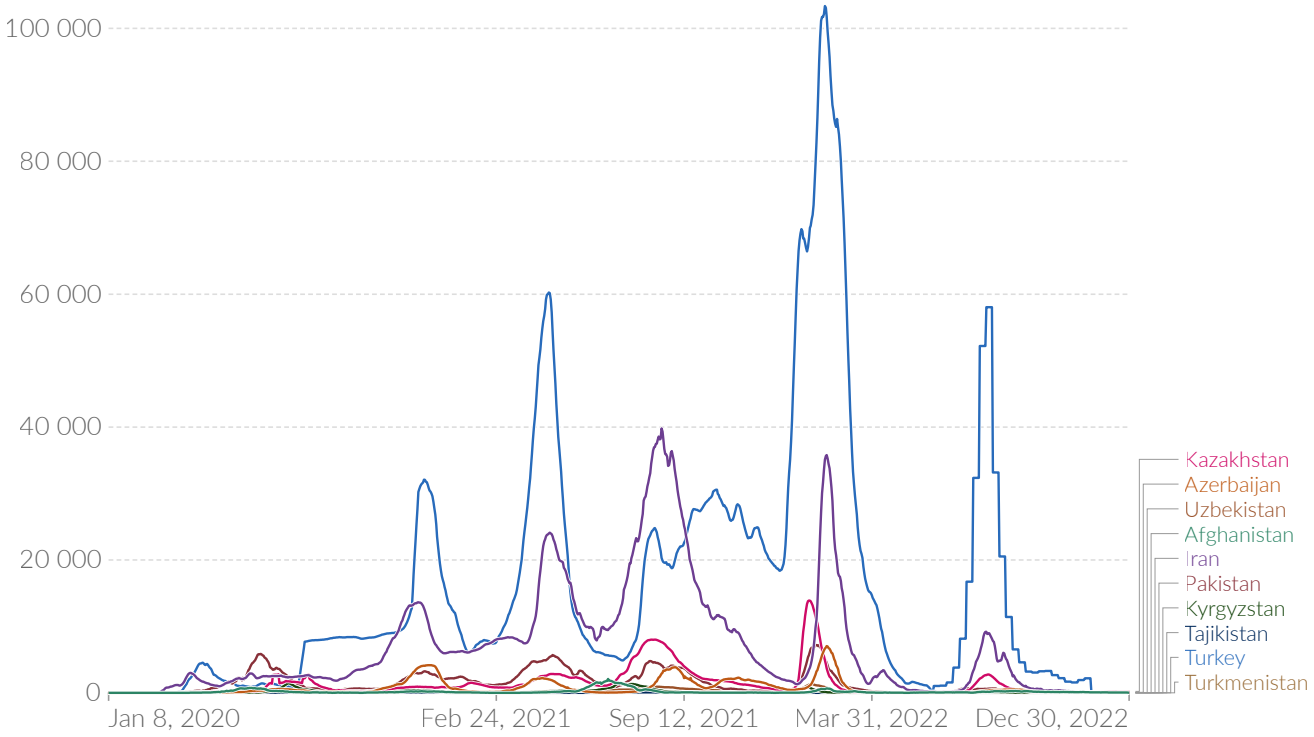
5. Macroeconomic developments during COVID-19

5.1. Trends in the COVID-19 pandemic

Like much of the world, the ECO region has been hit by the new wave of the COVID-19 pandemic, namely via the Omicron and Delta variants. Cumulative numbers show that, at present, more than 26.6 million people in the region (about 8 percent of the population of ECO countries) have been infected and more than 331 000 deaths recorded (Figure 29). As the pace of vaccination picked up, the pandemic began to recede across the ECO region in early 2022. By May of that year, vaccination coverage varied significantly, from a low of 13 percent in Afghanistan to a high of 76 percent in the Islamic Republic of Iran. Of ten ECO countries, seven achieved vaccination rates of above 50 percent. Türkiye has a vaccination rate of 68 percent, and Pakistan 60 percent (Figure 30).

Figure 29. Daily new confirmed COVID-19 cases

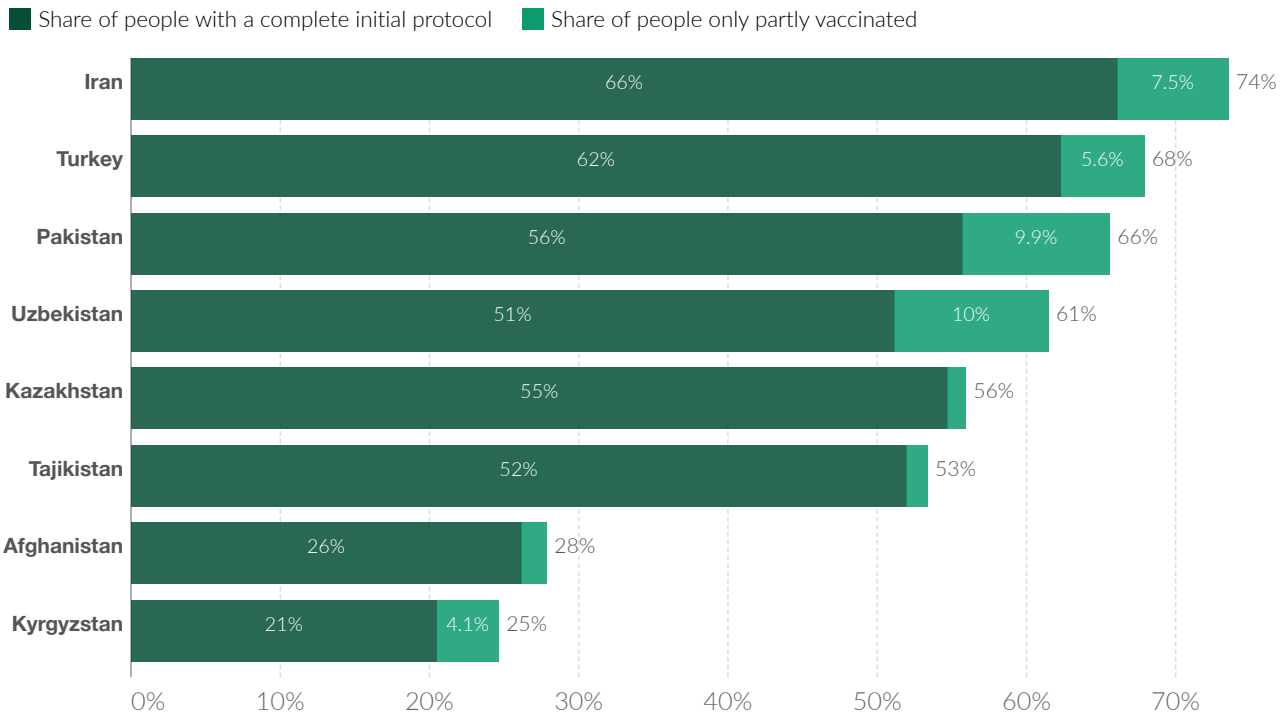
7-day rolling average. Due to limited testing, the number of confirmed cases is lower than the true number of infections.



Source: WHO COVID-19 Dashboard CC BY

Source: **Our World in Data**. 2022. In: Global Change Data Lab. Oxford. [Cited 30 December 2022]. https://ourworldindata.org/coronavirus#explore-the-global-situation

Figure 30. Share of people vaccinated against COVID-19, December 2022



Source: Official data collated by Our World in Data CC BY
Note: Alternative definitions of a full vaccination, e.g. having been infected with SARS-CoV-2 and having 1 dose of a 2-dose protocol, are ignored to maximize comparability between countries.

Source: **Our World in Data.** 2022. In: Global Change Data Lab. Oxford. [Cited 30 December 2022]. https://ourworldindata.org/coronavirus#explore-the-global-situation

Note: Data were not available for Turkmenistan.

5.2. Gross domestic product, agricultural gross domestic product, and unemployment

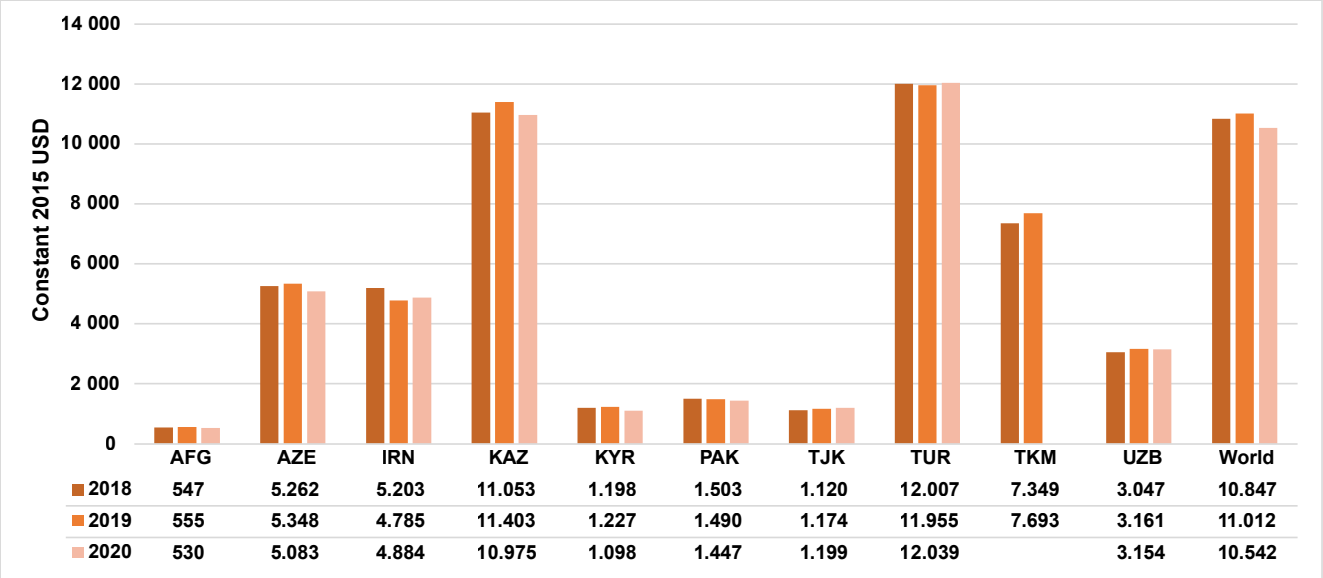
Many countries across the globe have experienced considerable contractions in GDP because of the pandemic and the containment measures implemented to stop its spread. The ECO countries have not been an exception to this trend, albeit with somewhat small reductions in GDP. As seen in Figure 31, of ten ECO countries, only three (Azerbaijan, Kazakhstan and Kyrgyzstan) witnessed a small reduction in GDP per capita from 2019 to 2020. Four countries (Afghanistan, Pakistan, Tajikistan, and Uzbekistan) successfully maintained their GDP per capita. The Islamic Republic of Iran is the only country that witnessed an increase in GDP per capita, despite the heavy toll taken by the pandemic. Compared to the rest of the world, the ECO region has performed better, with a smaller decline in per capita GDP. Türkiye and Kazakhstan outperformed the world average per capita GDP. Overall, the ECO region has not suffered significant income loss from the pandemic.

Agriculture occupies an important place in the economies of Afghanistan, Pakistan, Tajikistan, and Uzbekistan, with a share of GDP between 20 percent and 27 percent. The Islamic Republic of Iran and Kyrgyzstan follow them with 12 percent and 14 percent. These six countries, apart from the Islamic Republic of Iran, witnessed an increase in the share of agricultural value added from 2019 to 2020. The agriculture sector in Azerbaijan, Kazakhstan and Türkiye have a share of around 6 percent, and all of them witnessed a slight increase from 2019 to 2020

(Figure 32). The ECO group average of the share of agricultural value added has increased slightly, from 14 percent in 2018 to 14.5 percent in 2019 and 16 percent in 2020.[1]

The health crisis has also evolved into an economic crisis, jeopardizing the livelihoods and incomes of millions across most ECO countries. . As shown in Figure 33, eight ECO countries witnessed an increase in unemployment after 2019 – Afghanistan, Azerbaijan, the Islamic Republic of Iran, Kyrgyzstan, Pakistan, Tajikistan, Turkmenistan and Uzbekistan. Unemployment in Kazakhstan remained unaffected from the pandemic, while Türkiye saw a reduction in unemployment. The most dramatic increase in unemployment between 2019 and 2021 was observed in Azerbaijan, with a 35 percent rate of unemployment, Kyrgyzstan with 30 percent, Pakistan and Uzbekistan with 22 percent each, and Afghanistan with 18 percent. In Türkiye, the unemployment rate dropped by about 2 percent.

Figure 31. Gross domestic product per capita (constant 2015 USD)

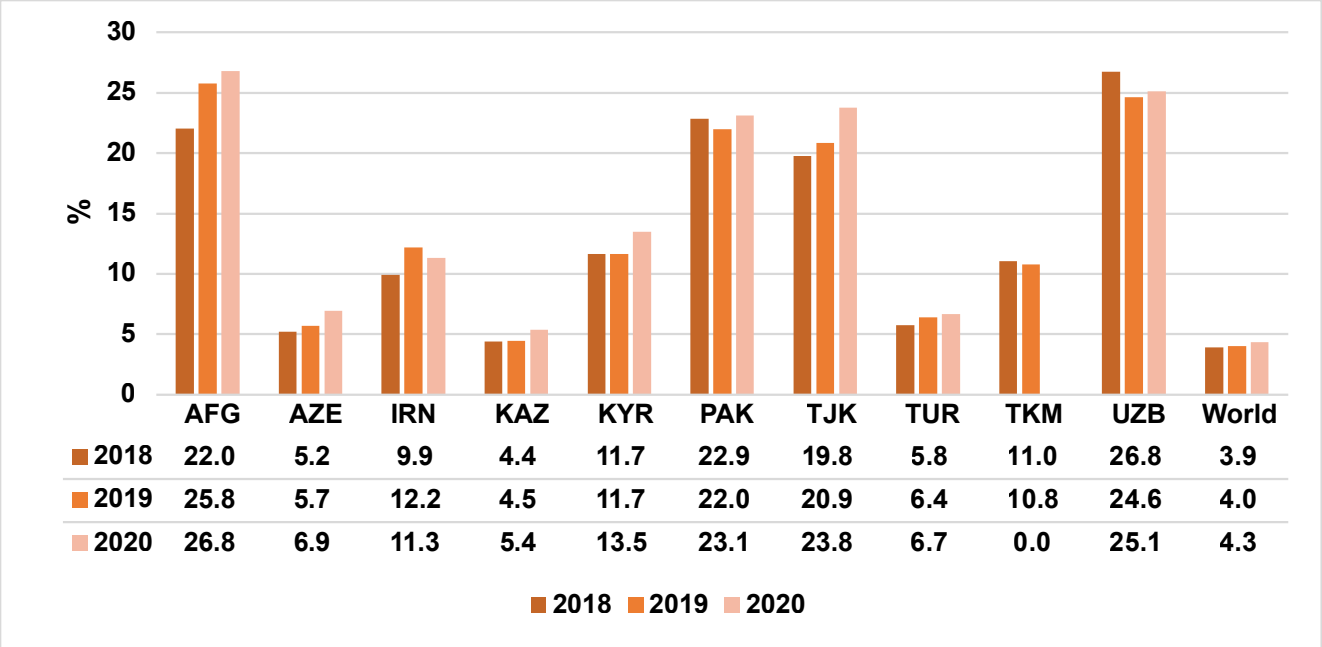


	AFG	AZE	IRN	KAZ	KYR	PAK	TJK	TUR	TKM	UZB	World
2018	547	5.262	5.203	11.053	1.198	1.503	1.120	12.007	7.349	3.047	10.847
2019	555	5.348	4.785	11.403	1.227	1.490	1.174	11.955	7.693	3.161	11.012
2020	530	5.083	4.884	10.975	1.098	1.447	1.199	12.039		3.154	10.542

Source: **World Bank.** 2022a. World Development Indicators Database. In: World Bank. New York. [Cited 24 April 2022]. https://databank.worldbank.org/source/world-development-indicators

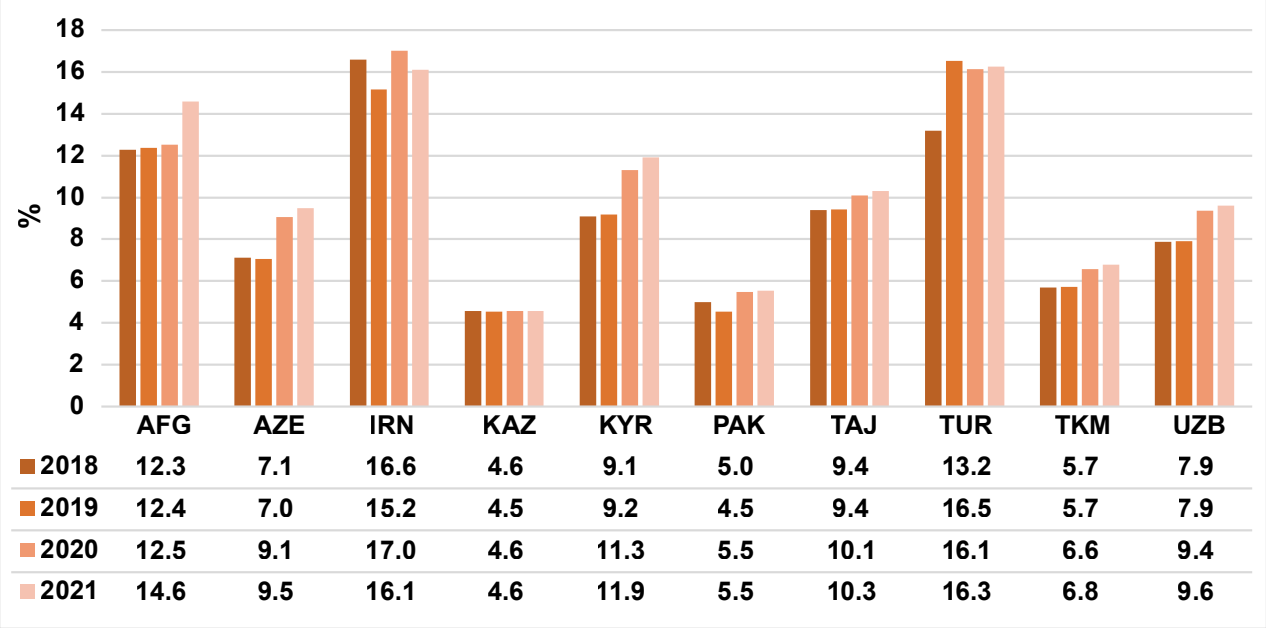
1 Throughout the report, the ECO group averages of the indicators examined are calculated based on the number of the ECO countries for which data are available. Therefore, a comparison of the averages of two indicators can only be made if the country composition of the group is identical. Take, for example, Figure 6 in which case data are available only for eight countries out of ten. Hence, the group average in the context of trade and merchandise trade would only refer to the average over those eight countries. Comparing this average with the group average of GDP in Figure 3 would then be inappropriate and hence should be avoided..

Figure 32. Agricultural value added (percent of GDP)



Source: **World Bank.** 2022a. World Development Indicators Database. In: World Bank. New York. [Cited 24 April 2022]. https://databank.worldbank.org/source/world-development-indicators.

Figure 33. Average unemployment rate



Source: **ILOSTAT.** 2022. Statistics on unemployment and labor underutilization In: ILO. Geneva. [Cited 24 April 2022]. https://ilostat.ilo.org/topics/unemployment-and-labour-underutilization/

5.3. Trade and terms of trade

Of ten ECO countries, eight experienced a varying degree of contraction in the share of trade as a percentage of GDP in 2020 compared with 2019. Figure 34a shows that Kyrgyzstan, Azerbaijan, Uzbekistan and Kazakhstan had a substantial contraction in the 2020 share, but that still accounted for at least 50 percent of GDP in 2020. Considering this, these four countries remain highly exposed to risks of trade shocks (with trade, respectively, accounting for 83 percent, 70 percent, 62 percent and 57 percent of GDP). The Islamic Republic of

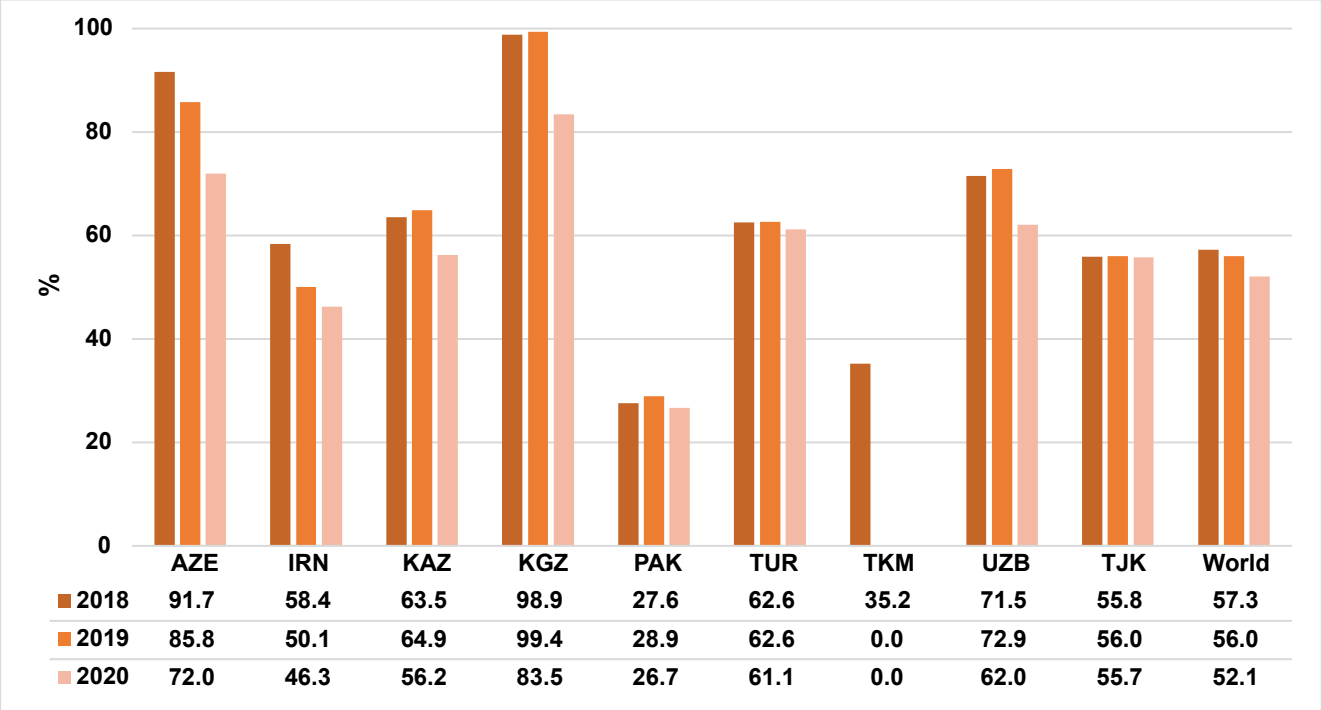
Iran, Türkiye, Pakistan and Tajikistan experienced a negligible reduction. With respect to merchandise trade as a percentage of GDP, the same four countries – Kyrgyzstan, Azerbaijan, Uzbekistan and Kazakhstan – witnessed a reduction, while Türkiye and Tajikistan achieved a slight increase in 2020 compared with 2019 (Figure 34b). Kyrgyzstan is the only country highly exposed to risks of disruptions in merchandise trade, with it accounting for 73.2 percent of GDP in 2020.

The ECO group average of trade share across time reveals a 7 percent reduction, from 66 percent in 2019 to 58 percent in 2020. During the same period, the ECO group average of merchandise trade declined from an average 57 percent in 2019 to 55 percent in 2020. This suggests that during the first year of the COVID-19 pandemic, overall trade suffered a larger reduction relative to the merchandise trade reduction (Figure 34b). This can be partly attributed to the disruptions in services trade, which is part of the general trade account. Apart from Pakistan, the other seven countries in the ECO region achieved a trade–merchandise trade share greater than the world average.

The merchandise export (import) unit value index is a price metric used to track the variation in the average value of diverse merchandise export (import) goods over time. . Turkmenistan, Azerbaijan, Kazakhstan, and the Islamic Republic of Iran suffered a substantial and steady decline in their export prices during 2018–2020, while Kyrgyzstan, Afghanistan, Uzbekistan and Tajikistan witnessed a moderate increase from 2019 to 2020. A declining export price would mean loss of export revenues and hence weakening debt service capacity and narrowing fiscal space. Concerning merchandise import unit prices, Pakistan, Türkiye, Kyrgyzstan, and Tajikistan experienced a decline in 2020 compared with 2019, implying a reduction in the cost of imports. Kyrgyzstan and Tajikistan are the only winners from the increasing export and decreasing import prices observed during 2019–2020 (figures 35a and 35b). The beneficial price changes that Kyrgyzstan and Tajikistan faced during the first year of the pandemic is likely to improve their fiscal space, providing them with financial resources to support the implementation of supportive policy measures.

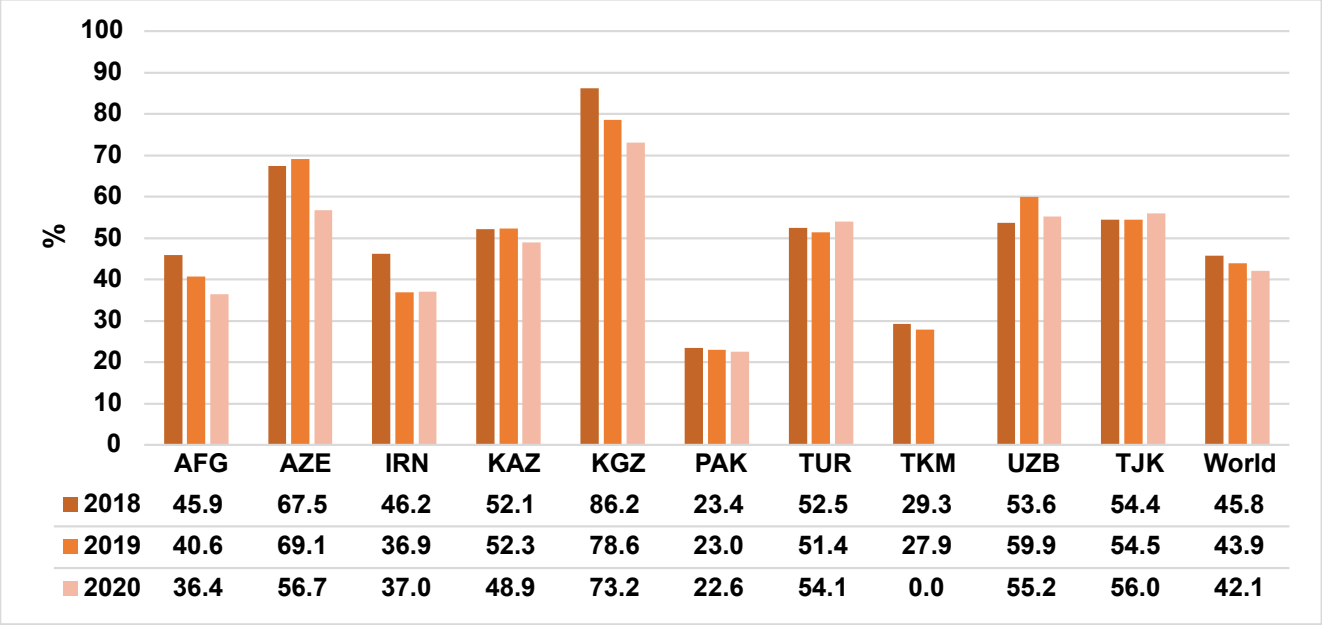
At the country level, some clearly gain from changes in terms of trade (defined as the ratio of unit export price to unit import price), such as Kyrgyzstan and Tajikistan, and some others incur losses, such as Turkmenistan and Azerbaijan. However, at the ECO group level, the average export and import prices show that the group has suffered losses over the 2018–2020 period, which is demonstrated by a continuously declining average export price and a constant average import price (figures 35a and 35b).

Figure 34a. Trade (percent of GDP)



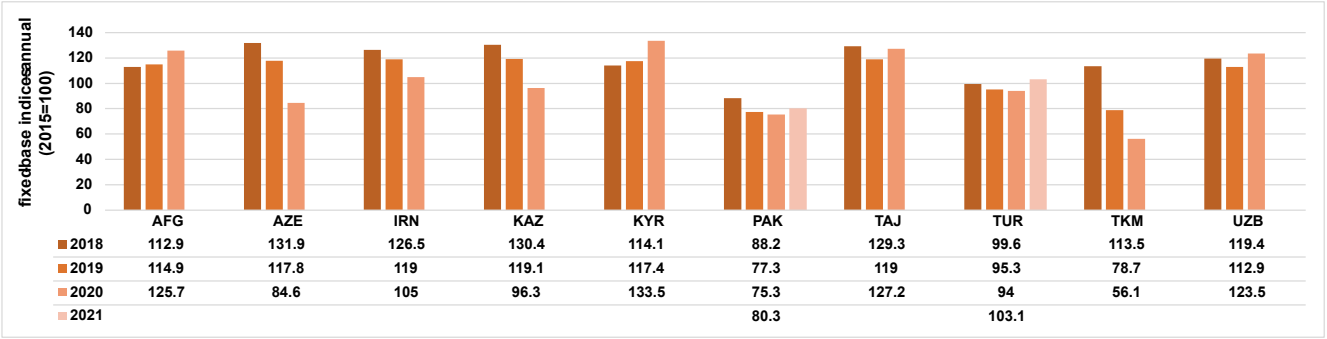
Source: **World Bank.** 2022a. World Development Indicators Database. In: World Bank. New York. [Cited 24 April 2022]. https://databank.worldbank.org/source/world-development-indicators

Figure 34b. Merchandise trade (percent of GDP)



Source: **World Bank.** 2022a. World Development Indicators Database. In: World Bank. New York. [Cited 24 April 2022]. https://databank.worldbank.org/source/world-development-indicators

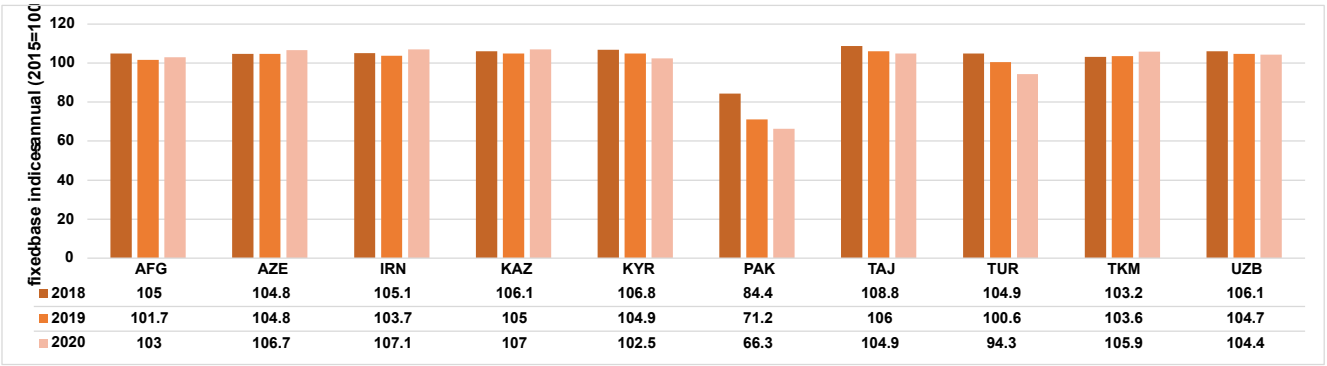
Figure 35a. Merchandise export and import unit value indices



	AFG	AZE	IRN	KAZ	KYR	PAK	TAJ	TUR	TKM	UZB
2018	112.9	131.9	126.5	130.4	114.1	88.2	129.3	99.6	113.5	119.4
2019	114.9	117.8	119	119.1	117.4	77.3	119	95.3	78.7	112.9
2020	125.7	84.6	105	96.3	133.5	75.3	127.2	94	56.1	123.5
2021						80.3		103.1		

Source: **WTO (World Trade Organization).** 2022. WTO Stats: International Trade Statistics. In: *WTO*. Geneva. [Cited 25 May 2022]. https://stats.wto.org/

Figure 35b. Merchandise import unit value indices



	AFG	AZE	IRN	KAZ	KYR	PAK	TAJ	TUR	TKM	UZB
2018	105	104.8	105.1	106.1	106.8	84.4	108.8	104.9	103.2	106.1
2019	101.7	104.8	103.7	105	104.9	71.2	106	100.6	103.6	104.7
2020	103	106.7	107.1	107	102.5	66.3	104.9	94.3	105.9	104.4

Source: **WTO (World Trade Organization).** 2022. WTO Stats: International Trade Statistics. In: *WTO*. Geneva. [Cited 25 May 2022]. https://stats.wto.org/

5.4. Developments in agricultural and food trade

5.4.1. Exports versus imports

Agrifood exports and imports

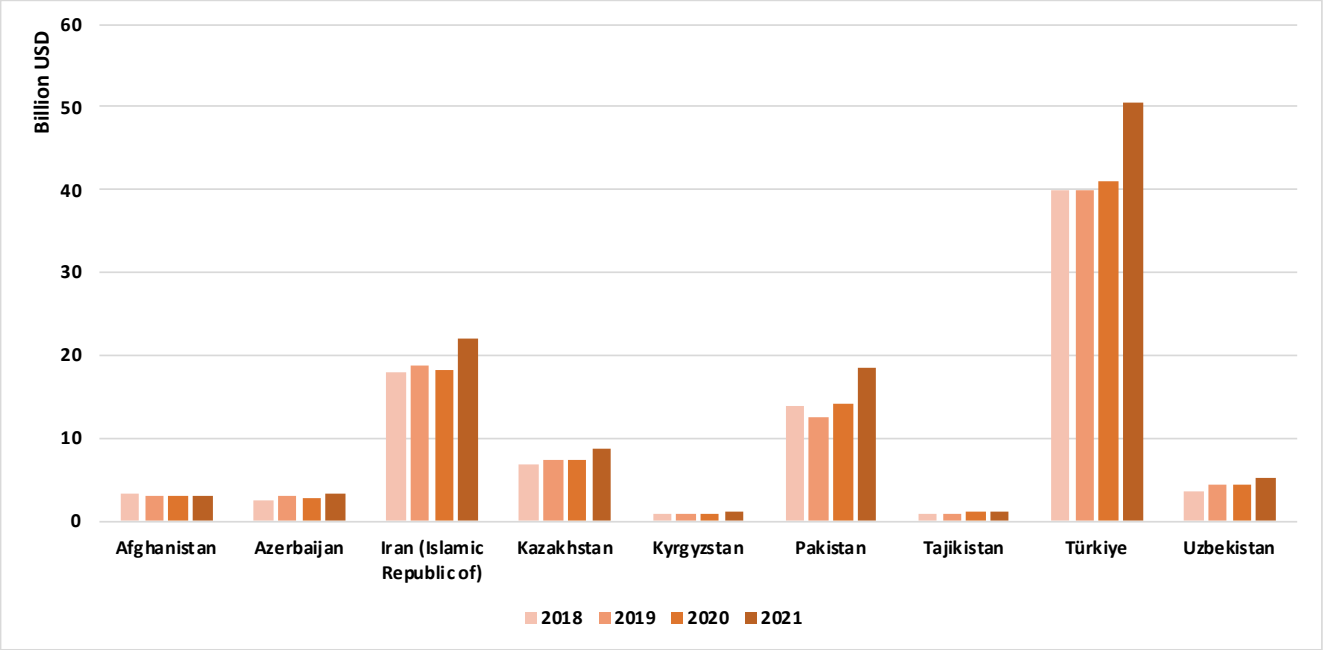
At the global level, the impact on agrifood trade of the first wave of the COVID-19 pandemic and related containment measures was short-lived as most governments facilitated the continuation of food systems and ensured the seamless functioning of agrifood trade and value chains (FAO, 2021). However, the agrifood sector did not go unharmed. COVID-19 led to a reduction in agricultural trade in the range of 5 percent to 10 percent, mostly due to cross-border movement restrictions and governments' restrictive trade reforms (Arita *et al.*, 2021). Meat products and higher-value agrifood products were most severely impacted by the pandemic (USDA, 2021; Arita *et al.*, 2021). Severe disruptions in air shipments reduced trade margins (Arita *et al.*, 2021). Limited evidence suggests that low-income and least developed countries' trade flows were more vulnerable to the pandemic.

At the ECO country level, total agrifood trade remained almost unchanged during the 2019–2020 period.[2] Figure 36a shows that five out of nine countries in the region (data not available for Turkmenistan) – namely Afghanistan, Pakistan, Tajikistan, Türkiye and Uzbekistan – witnessed a slight increase, while the remaining four experienced a slight reduction. However, the share of agrifood exports (the percentage of total agrifood trade) shows that, in 2020, the Islamic Republic of Iran, Kyrgyzstan and Türkiye achieved a modest increase compared to 2019; as opposed to the significant reduction experienced by Pakistan, Afghanistan, Uzbekistan, Tajikistan and Kazakhstan. The number remained unchanged in Azerbaijan. The export shares in Figure 36b complement the import shares. Türkiye and Kazakhstan stand alone in the ECO region, with their comparable export and import shares, while others in the ECO region have an import share higher than that for exports. Tajikistan and Afghanistan have the largest import shares, reflecting their dependence on agrifood imports. As to the ECO group average of total agrifood trade, no significant change has been recorded. However, the group average of export shares recorded a negligible reduction in 2020.

With their readiness to use the International Plant Protection Convention's ePhyto Solution (that is, electronic phytosanitary certificates), Afghanistan, Azerbaijan, Kazakhstan, Kyrgyzstan, Pakistan, Tajikistan, Turkmenistan, and Uzbekistan show a willingness to adopt sanitary and phytosanitary measures for safer agrifood trade through digital innovation (Lazaro *et al.*, 2021). This should not only promote agrifood trade opportunities for these ECO countries, but also reduce the cost of trade, while improving the flow of agricultural products between them and the rest of the world.

2 According to the World Trade Organization's "SITC rev. 3 definitions" for commodity groups, agricultural products consists of two subgroups: food (with SITC codes: 0, 1, 4, 22) and raw materials (with SITC codes: 21, 23, 24, 25, 26, 29). Trends in agricultural products should therefore be interpreted as the trend of the sum of food and raw materials trade. Similarly, trends in food trade would reflect only the trend of food items with SITC codes including 0, 1, 4, 22. The term "agrifood trade" is used to refer to agricultural products trade, including food and raw materials.

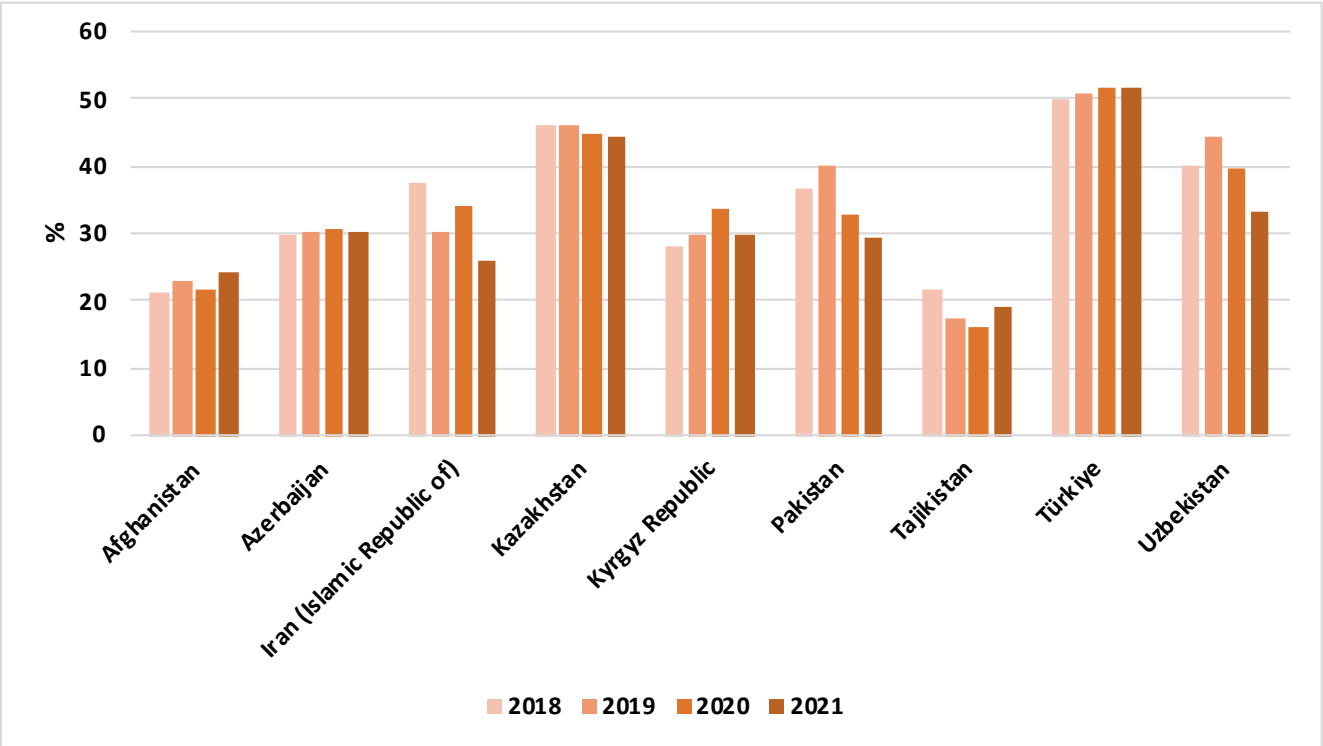
Figure 36a. Agrifood trade



Note: Agrifood trade is considered the sum of agricultural product exports and imports, including trade of food items.

Source: **WTO (World Trade Organization).** 2022. WTO Stats: International Trade Statistics In: WTO. Geneva. [Cited 21 May 2022]. https://stats.wto.org/

Figure 36b. Share of agrifood exports in total agrifood trade



Source: **Author's calculation based on WTO data.** 2023. WTO Stats: International Trade Statistics. In: WTO. Geneva. [Cited 21 May 2023]. https://stats.wto.org/

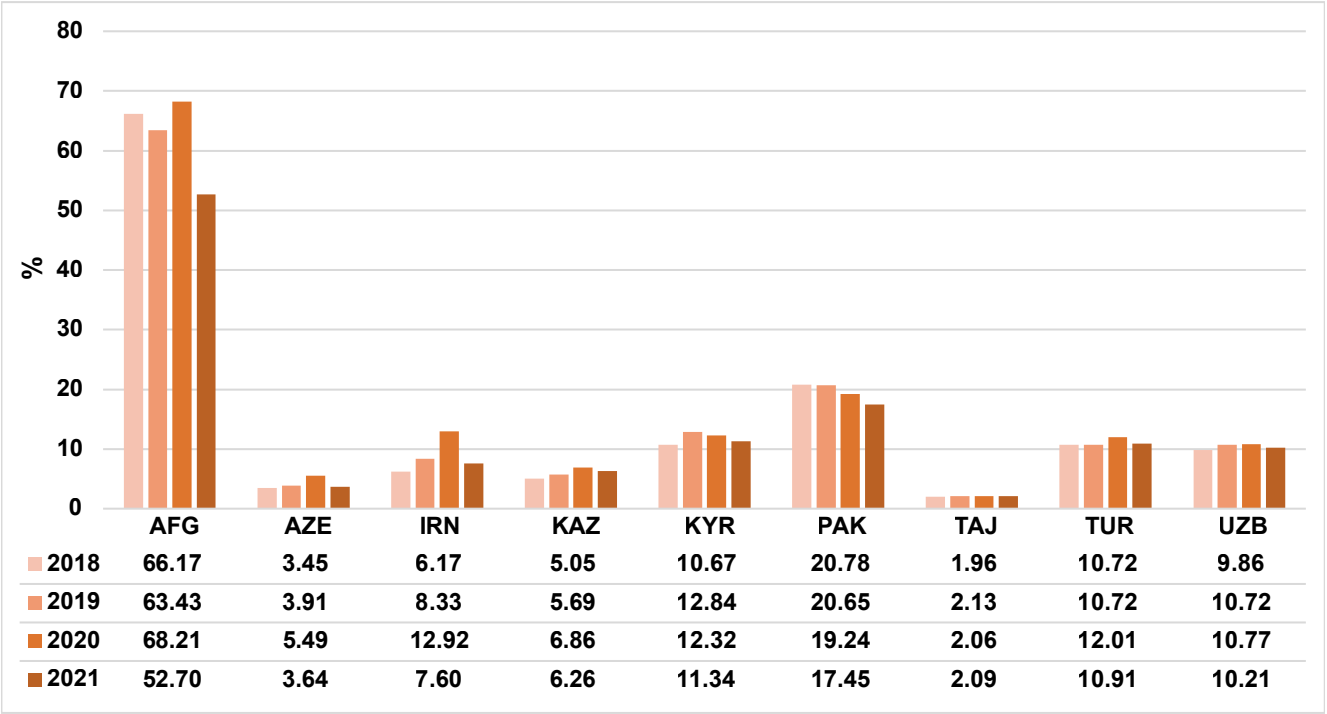
Food exports and imports

Despite the trade restrictive containment measures implemented in 2020, ECO countries have not witnessed much reduction in food trade volume. As shown in Figure 37b, a relatively larger increase has been observed in food imports in Pakistan, Azerbaijan, Kyrgyzstan, Tajikistan, and Uzbekistan. They all had food imports significantly larger than the world average. Concerning food exports, Azerbaijan, Kazakhstan, Türkiye and Tajikistan witnessed a slight increase, while Pakistan and Uzbekistan had a reduction in food exports. Tajikistan witnessed the largest gap between food exports and imports, with food imports 25 percent of merchandise imports in 2020, as opposed to 2.06 percent food exports as a percentage of merchandise exports. This suggests that Tajikistan faces significant food import dependence, which further suggests the need for increased exports to finance food imports (through export revenues). The situation in Pakistan and Türkiye paints a different picture, with larger food exports relative to food imports.

Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan were net importers of food in 2019-2020. As shown in Figure 37a and Figure 37b, food imports in Tajikistan exceeded food exports by 20 percent in 2019 and 23 percent in 2020, implying that during the first year of the pandemic, food imports increased further by 3.1 percent despite trade-limiting containment measures. Tajikistan, Azerbaijan and Kazakhstan had the largest negative net food trade balance in 2019–2020. Food exports by Azerbaijan, Kazakhstan, Tajikistan and Türkiye moderately increased in 2020 compared with 2019. Pakistan, however, saw a moderate reduction in exports.

The ECO group averages over time indicate that, despite the negative effects of the pandemic and the cross-border movement restrictions imposed, average trade has increased. Average food imports increased from 12.5 percent in 2019 to 14.5 percent in 2020, while average food exports increased slightly from 9.5 percent in 2019 to 10 percent in 2020. The average increase has been more pronounced for food imports (twice as high as for food exports).

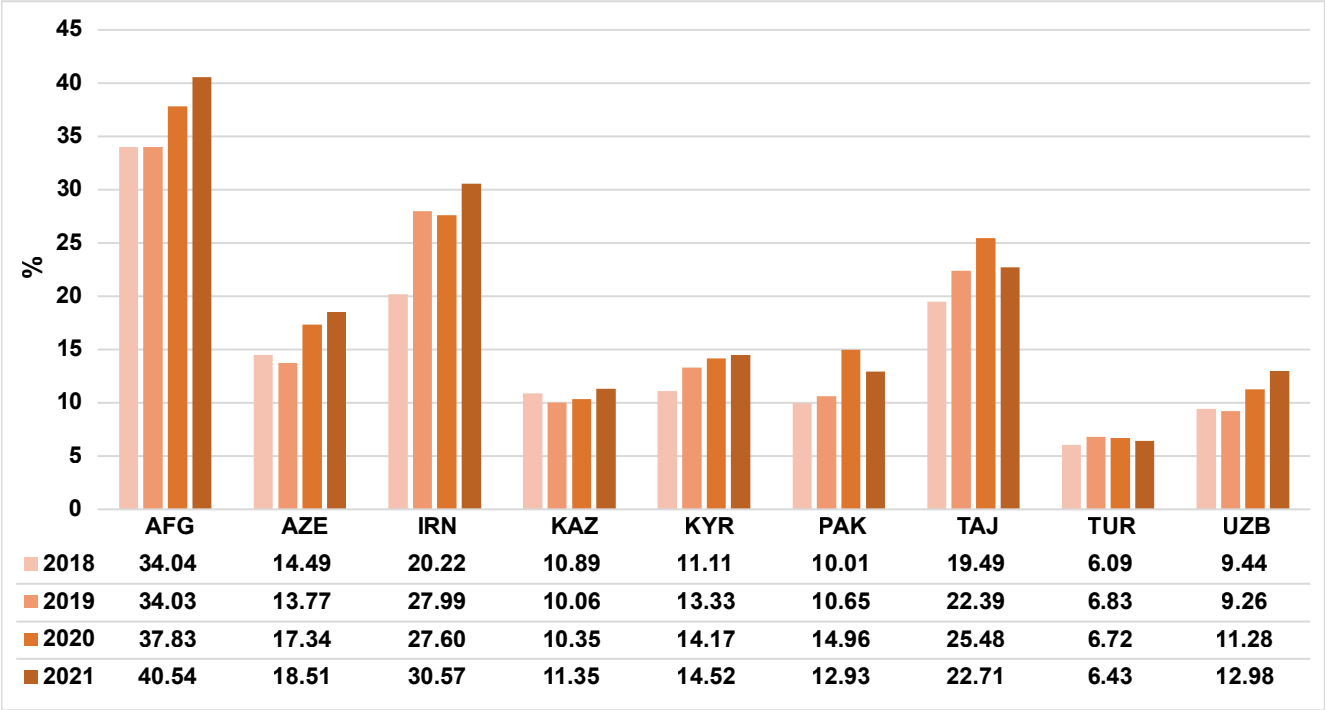
Figure 37a. Food exports (percent of merchandise exports)



	AFG	AZE	IRN	KAZ	KYR	PAK	TAJ	TUR	UZB
2018	66.17	3.45	6.17	5.05	10.67	20.78	1.96	10.72	9.86
2019	63.43	3.91	8.33	5.69	12.84	20.65	2.13	10.72	10.72
2020	68.21	5.49	12.92	6.86	12.32	19.24	2.06	12.01	10.77
2021	52.70	3.64	7.60	6.26	11.34	17.45	2.09	10.91	10.21

Source: **Author's calculation based on WTO data.** 2023. WTO Stats: International Trade Statistics. In: WTO. Geneva. [Cited 21 May 2023]. https://stats.wto.org/

Figure 37b. Food imports (percent of merchandise imports)



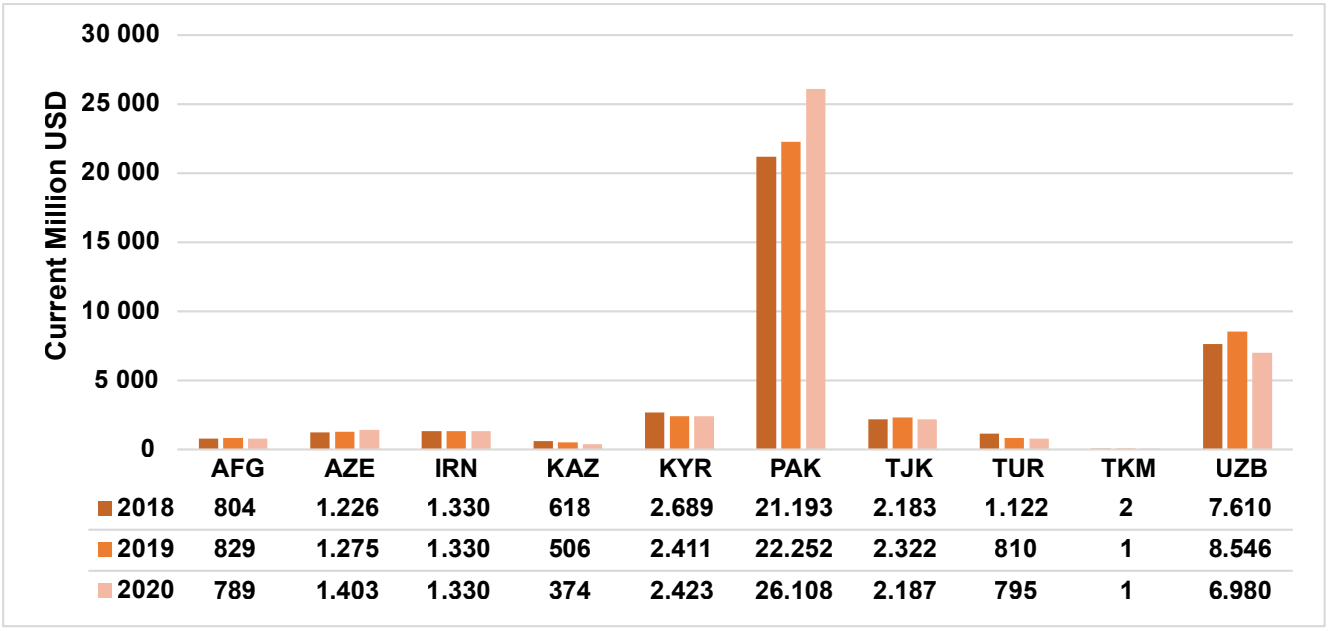
	AFG	AZE	IRN	KAZ	KYR	PAK	TAJ	TUR	UZB
2018	34.04	14.49	20.22	10.89	11.11	10.01	19.49	6.09	9.44
2019	34.03	13.77	27.99	10.06	13.33	10.65	22.39	6.83	9.26
2020	37.83	17.34	27.60	10.35	14.17	14.96	25.48	6.72	11.28
2021	40.54	18.51	30.57	11.35	14.52	12.93	22.71	6.43	12.98

Notes: The reader is referred to https://www.wto.org/english/res_e/statis_e/tech_e.pdf for the definitions of trade-related indicators used: "Food comprises the commodities in the standard international trade classification (SITC) sections 0 (food and live animals), 1 (beverages and tobacco), and 4 (animal and vegetable oils and fats) and SITC division 22 (oil seeds, oil nuts, and oil kernels). Merchandise exports by the reporting economy residuals are the total merchandise exports by the reporting economy to the rest of the world as reported in the IMF's Direction of trade database, less the sum of exports by the reporting economy to high-, low-, and middle-income economies according to the World Bank classification of economies. Includes trade with unspecified partners or with economies not covered by World Bank classification. Data are as a percentage of total merchandise exports by the economy".

Source: **Author's calculation based on WTO data.** 2023. WTO Stats: International Trade Statistics. In: WTO. Geneva. [Cited 21 May 2023]. https://stats.wto.org/

Concerning remittances received in 2020, Figure 38a shows that the remittances received in current values (million USD) increased substantially in Pakistan despite COVID-19 restrictions. On the contrary, Uzbekistan witnessed a moderate decline in remittances received. The other ECO countries maintained past trends. Remittances received as the percentage of GDP, however, show a slightly different picture, as they include changes in GDP (Figure 38b). For example, a small increase in Kyrgyzstan's remittances in current value shown in Figure 38a corresponds to about a 5 percent jump in the share of GDP, implying that Kyrgyzstan also experienced a contraction in GDP in 2020. Trends in the remittances as a percentage of GDP indicate that Kyrgyzstan experienced the largest jump in remittances received, followed by Pakistan, Azerbaijan, and the Islamic Republic of Iran. On the other hand, remittances as a percentage of GDP decreased in Uzbekistan, Tajikistan, and Afghanistan.

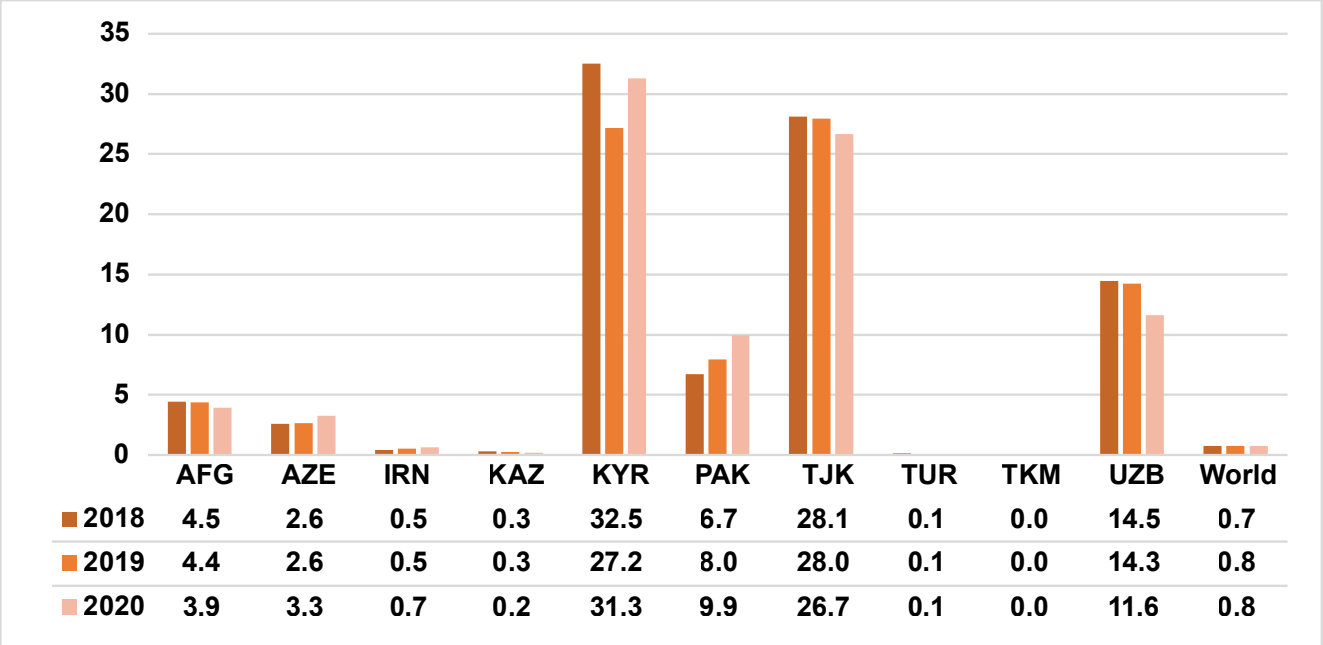
Figure 38a. Personal remittances received (million USD)



	AFG	AZE	IRN	KAZ	KYR	PAK	TJK	TUR	TKM	UZB
2018	804	1.226	1.330	618	2.689	21.193	2.183	1.122	2	7.610
2019	829	1.275	1.330	506	2.411	22.252	2.322	810	1	8.546
2020	789	1.403	1.330	374	2.423	26.108	2.187	795	1	6.980

Source: **World Bank.** 2022a. World Development Indicators Database. In: World Bank. New York. [Cited 24 April 2022]. https://databank.worldbank.org/source/world-development-indicators

Figure 38b. Personal remittances received (percent of GDP)



	AFG	AZE	IRN	KAZ	KYR	PAK	TJK	TUR	TKM	UZB	World
2018	4.5	2.6	0.5	0.3	32.5	6.7	28.1	0.1	0.0	14.5	0.7
2019	4.4	2.6	0.5	0.3	27.2	8.0	28.0	0.1	0.0	14.3	0.8
2020	3.9	3.3	0.7	0.2	31.3	9.9	26.7	0.1	0.0	11.6	0.8

Source: **World Bank.** 2022a. World Development Indicators Database. In: World Bank. New York. [Cited 24 April 2022]. https://databank.worldbank.org/source/world-development-indicators

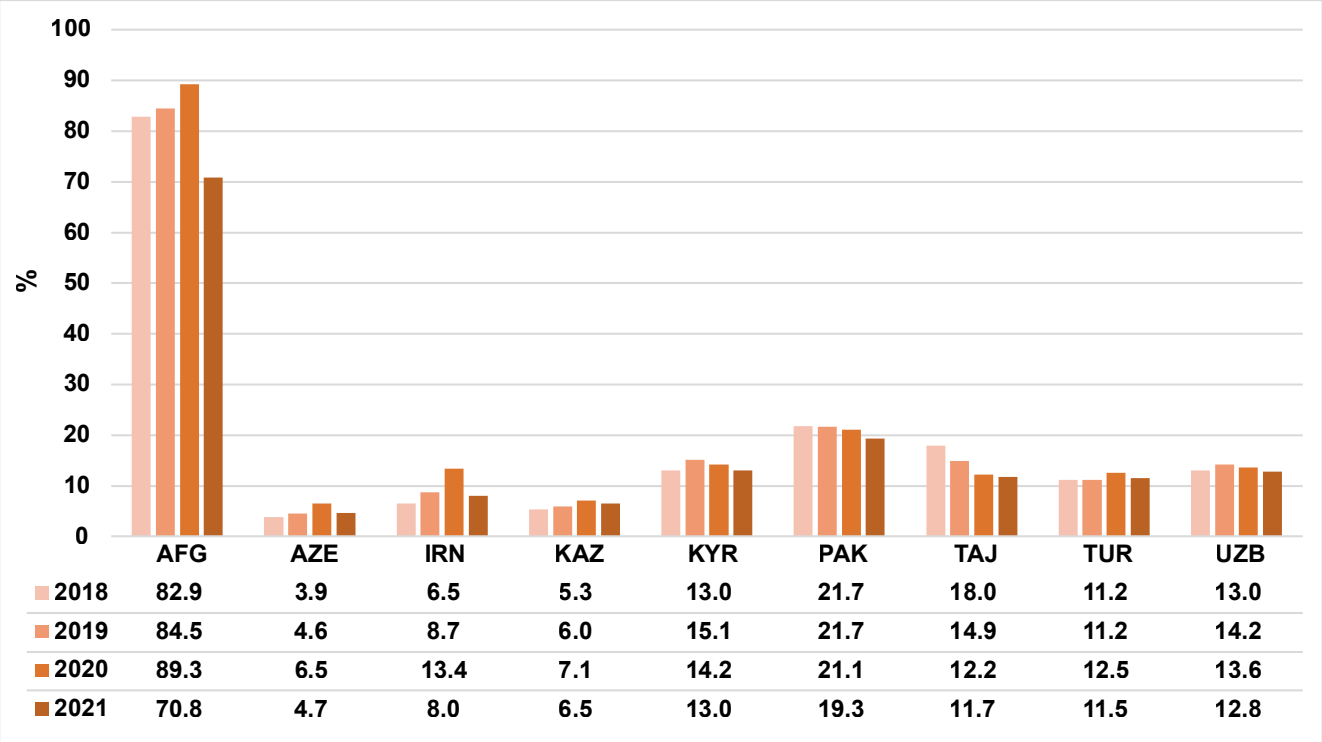
Agricultural products, exports and imports

Agricultural exports did not show a pronounced change from 2019 to 2020. Figure 39a reveals that Afghanistan, Azerbaijan, the Islamic Republic of Iran, Kazakhstan and Türkiye witnessed a modest increase in exports. As for agricultural imports, Afghanistan, Azerbaijan, Pakistan, Tajikistan, and Uzbekistan recorded a modest increase; the Islamic Republic of Iran is the only country that experienced a modest reduction. Overall, during the 2019–2020 period, ECO countries did not show significant changes in agricultural trade. The annual average of agricultural exports and imports remained unchanged from 2018 to 2020. A comparison of the ECO group average of food trade with the group average of agricultural product trade underlines a strong shift towards food imports. The trends evident in the ECO group averages in Figure 37a, Figure 37b, Figure 39a and Figure 39b suggest that, despite the pandemic and disruptions in global agrifood value chains, most ECO countries managed to increase their food imports in 2020.

Afghanistan and Tajikistan show a distinct pattern of trade (Figure 39a and Figure 39b). Afghanistan represents an outstanding case, with agricultural exports and imports accounting for about 89 percent and 39 percent (respectively) of merchandise exports and imports in 2020. Tajikistan, however, shows the opposite trend, with a 2.7 percent decrease and 3.8 percent increase in agricultural exports and imports, a change from 14.9 percent in 2019 to 12.2 percent in 2020 (for exports), and 24.9 percent in 2019 to 28.7 percent in 2020 (for imports).

The ECO group (except Turkmenistan) average of agricultural exports as a percentage of merchandise exports increased 1 percent, from 20 percent in 2019 to 21 percent in 2020, whereas the average agricultural imports as percentage of merchandise imports increased from 18.7 percent in 2019 to 20.7 percent in 2020.

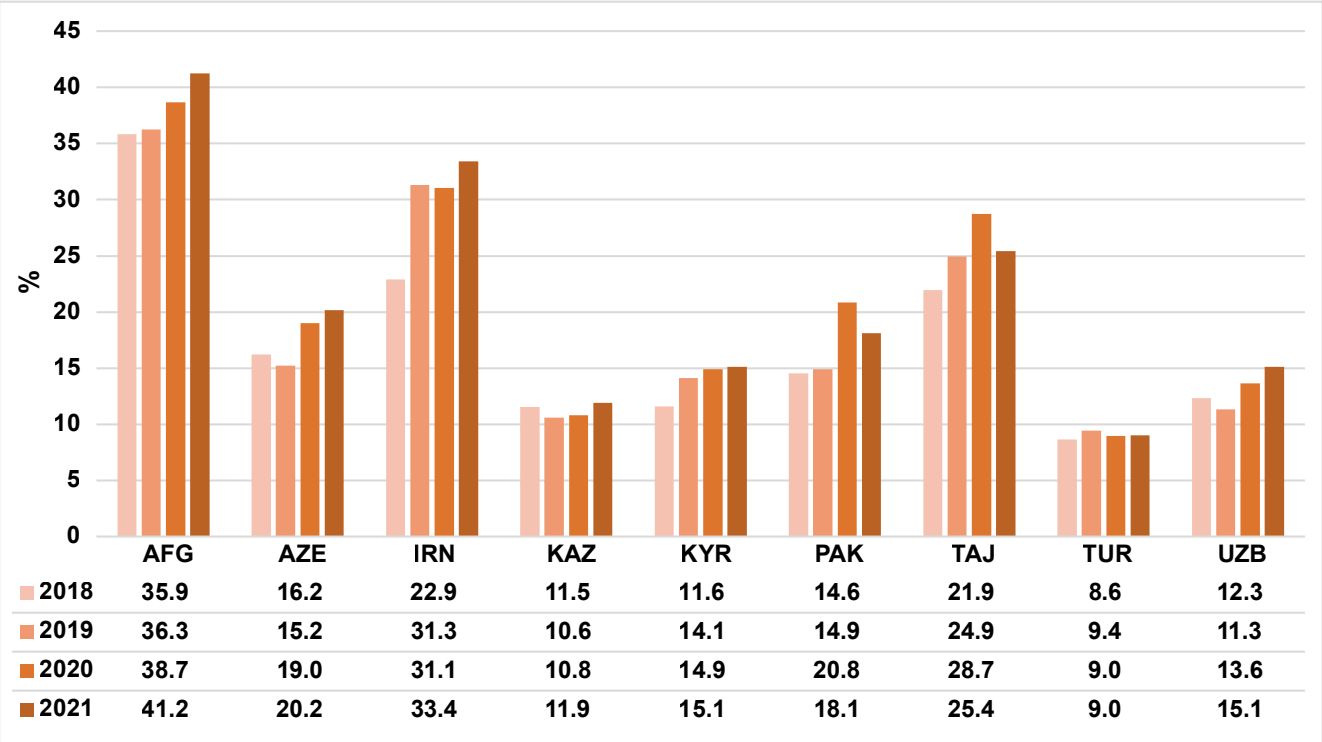
Figure 39a. Agricultural exports as percent of merchandise exports



	AFG	AZE	IRN	KAZ	KYR	PAK	TAJ	TUR	UZB
2018	82.9	3.9	6.5	5.3	13.0	21.7	18.0	11.2	13.0
2019	84.5	4.6	8.7	6.0	15.1	21.7	14.9	11.2	14.2
2020	89.3	6.5	13.4	7.1	14.2	21.1	12.2	12.5	13.6
2021	70.8	4.7	8.0	6.5	13.0	19.3	11.7	11.5	12.8

Source: **Author's calculation based on WTO data.** 2023. WTO Stats: International Trade Statistics. In: WTO. Geneva. [Cited 21 May 2023]. https://stats.wto.org/

Figure 39b. Agricultural imports as percent of merchandise imports



	AFG	AZE	IRN	KAZ	KYR	PAK	TAJ	TUR	UZB
2018	35.9	16.2	22.9	11.5	11.6	14.6	21.9	8.6	12.3
2019	36.3	15.2	31.3	10.6	14.1	14.9	24.9	9.4	11.3
2020	38.7	19.0	31.1	10.8	14.9	20.8	28.7	9.0	13.6
2021	41.2	20.2	33.4	11.9	15.1	18.1	25.4	9.0	15.1

Source: **Author's calculation based on WTO data.** 2023. WTO Stats: International Trade Statistics. In: WTO. Geneva. [Cited 21 May 2023]. https://stats.wto.org/

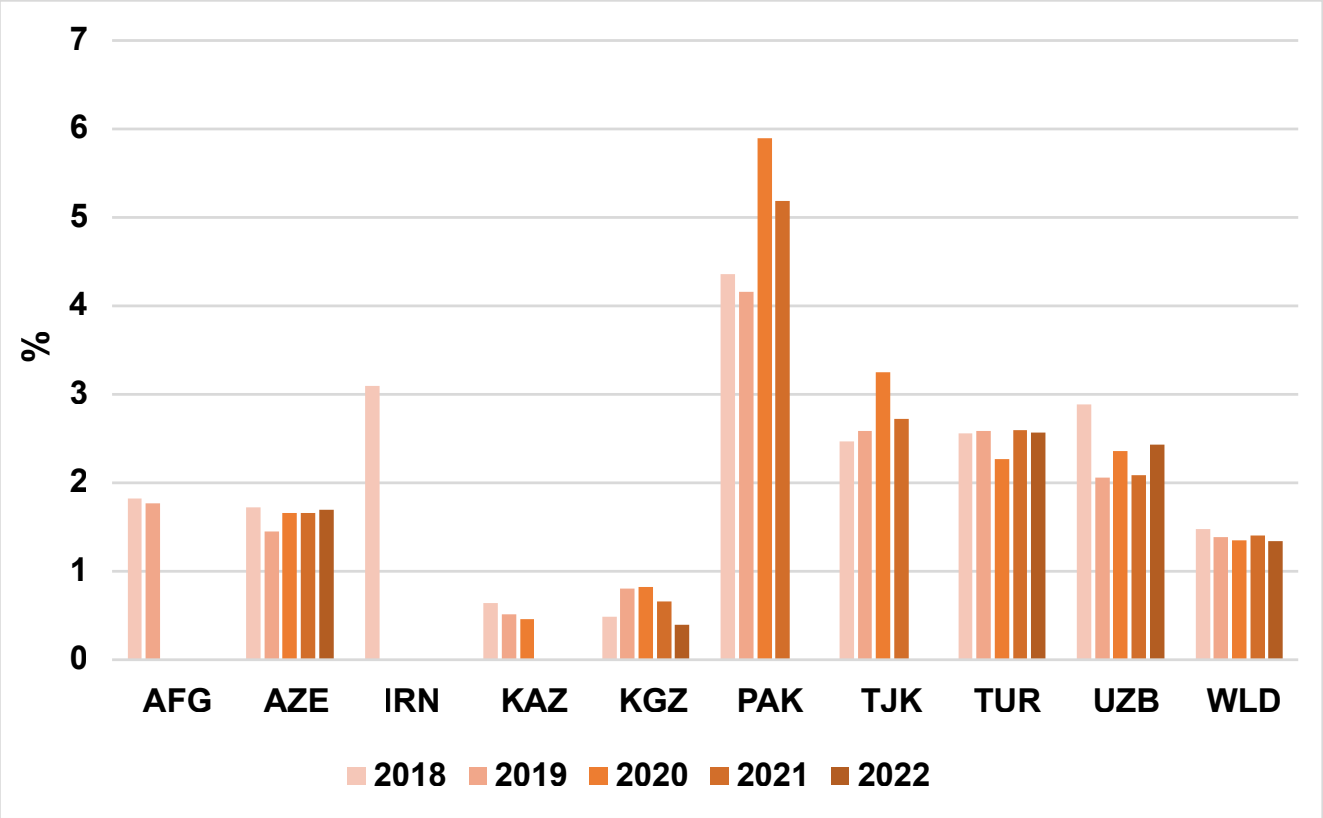
Agricultural raw materials, exports and imports

As demonstrated in Figure 40a, Tajikistan witnessed a modest increase in agricultural raw-material exports in 2020 (from 17 percent in 2019 to 20 percent in 2020). Concerning imports, Pakistan showed a significant increase, followed by Tajikistan, Uzbekistan and

Azerbaijan. Across the globe, the agricultural raw-materials trade has remained almost unchanged, at 1.3 percent of global merchandise trade in 2020. The ECO group averages of both agricultural raw-material exports and imports (percentages of merchandise exports and imports) increased moderately from 2019 to 2020. This suggests that the agricultural raw-materials trade across ECO countries has not been a limiting factor on agricultural production, although pandemic-related trade disruptions were expected to lead to a contraction in raw-materials trade as well.

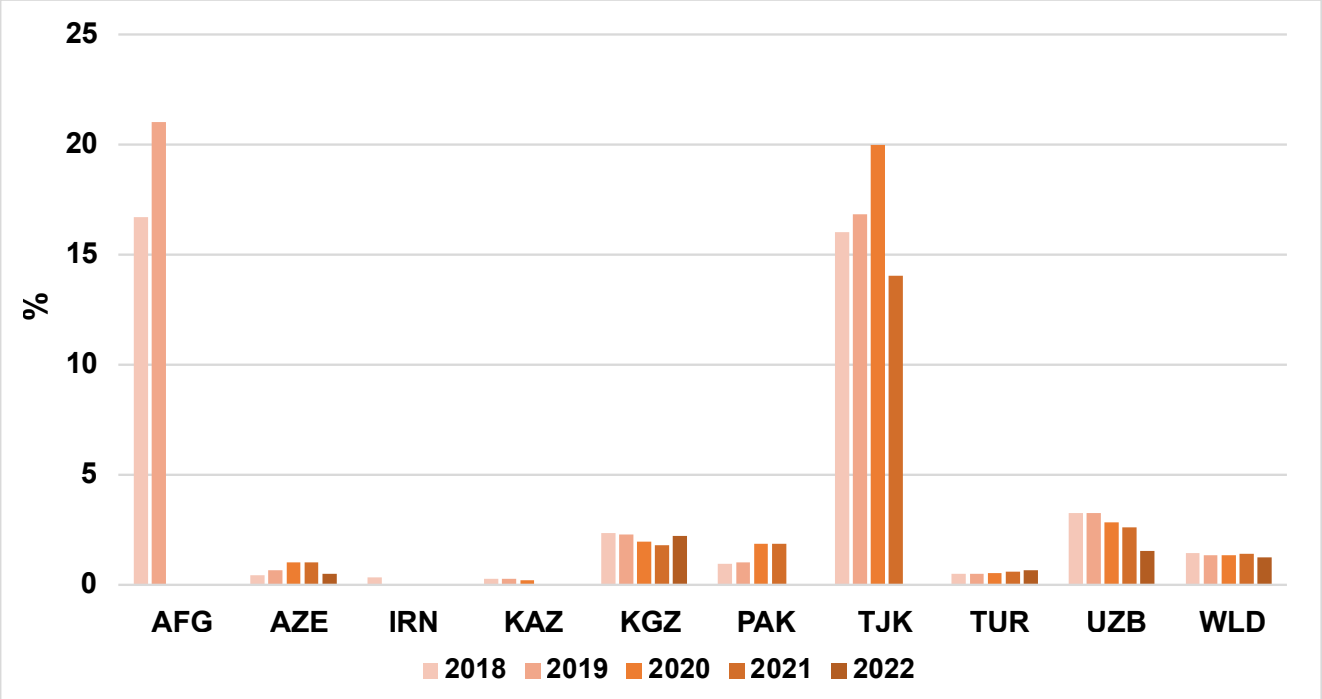
On the production side, agricultural raw-materials trade shows a moderate change in only two countries – Tajikistan and Pakistan (figures 40a and 40b). Relatively speaking, Tajikistan is the largest exporter of agricultural raw materials as a percentage of its merchandise exports, with a jump from 16.8 percent in 2019 to 20 percent in 2020, compared to a moderate increase in its imports. Pakistan's agricultural raw-material imports jumped from 4 percent in 2019 to 6 percent in 2020, compared to a slight increase in its exports, from 1 percent in 2019 to 2 percent in 2020.

Figure 40a. Agricultural raw-material exports as percentage of merchandise exports



Source: **World Bank.** 2022a. World Development Indicators Database. In: World Bank. Washington, DC. [Cited 25 May 2022]. https://databank.worldbank.org/source/world-development-indicators

Figure 40b. Agricultural raw-material imports as percentage of merchandise exports



Note: "Agricultural raw materials comprise SITC section 2 (crude materials except fuels) excluding divisions 22, 27 (crude fertilizers and minerals excluding coal, petroleum, and precious stones), and 28 (metalliferous ores and scrap)."

Source: **World Bank.** 2022a. World Development Indicators Database. In: World Bank. Washington, DC. [Cited 25 May 2022]. https://databank.worldbank.org/source/world-development-indicators

5.4.2. Agrifood policy measures as a response

Kazakhstan, Kyrgyzstan, Pakistan, Tajikistan, Türkiye, and Uzbekistan have responded to the pandemic by adjusting their trade policies, ranging from export and import restrictions, to lowering import and technical barriers to domestic measures for the stability of production and logistics. Table 2 maps the specific policy measures implemented by ECO countries according to five groups of food product (FAO, 2021). The policy measures include trade restrictions (import restrictions and export bans or quotas), lowering import barriers (suspending import tariffs, raising tariff rate quotas), lowering technical barriers to trade to facilitate the import of critical food items, and domestic measures to ensure stability of production, logistics and access to food. The five food groups are wheat and wheat flour, maize and maize flour, rice, meat and dairy products, and vegetable oils.

To ensure the availability of cereals (wheat, maize, rice) for their citizens, Kazakhstan, Kyrgyzstan, Pakistan, Tajikistan, Türkiye, and Uzbekistan implemented various policy measures (FAO, 2021). Kazakhstan imposed wheat and wheat flour export restrictions (quotas); Türkiye lowered import tariffs for rice, grains, and sunflower seed products; Pakistan lowered import tariffs for edible oil; Uzbekistan took measures to eliminate import tariffs on wheat and wheat flour. The cereal imports of several countries were volatile due to temporary wheat export restrictions imposed in the first half of 2020 by suppliers such as the Russian Federation, Ukraine, and Kazakhstan (Djanibekov and Herzfeld, 2022). Kazakhstan increased its cereal imports by 8 percent, from 20 percent in 2019 to 28 percent of total food imports in 2020. Uzbekistan, the largest importer of wheat flour, saw a 5 percent increase from 21 percent in 2019 to 26 percent in 2020. Azerbaijan saw a 2 percent decrease, from 21 percent in 2019 to 19 percent in 2020.

To support consumers and ensure the stability of food markets, price-control measures were implemented in several ECO countries (FAO, 2021). Kazakhstan set price ceilings for several socially important food products such as flour and rice; Kyrgyzstan set maximum levels of wholesale and retail prices for several food items; Tajikistan and Kyrgyzstan, net-importing countries, implemented export restrictions to ensure enough domestic supplies. Kyrgyzstan, as a net rice-importing country, implemented a six-month ban on rice exports and also announced funding to purchase wheat and wheat flour as emergency stocks for price stabilization.

For market stability, Pakistan and Kyrgyzstan employed trade policy measures (FAO, 2021). Pakistan, which is a smaller global wheat supplier, briefly restricted intradistrict movements of wheat crops and imposed a ban on exports of wheat and wheat flour, maize, and maize flour. Net-importing countries such as Kyrgyzstan, expanded cereal purchases, including through imports, to build up food reserves. Prices of essential food items such as bread went up relatively more in wheat-importing countries such as Kyrgyzstan, Tajikistan, and Uzbekistan (Djanibekov and Herzfeld, 2022). Until the end of 2020, Uzbekistan suspended its import tariffs on wheat, flour, meat, and dairy products, and issued a temporary export subsidy for perishable and vegetables.

Concerning live animals, Kazakhstan and Kyrgyzstan (net exporters) imposed temporary export bans until October 2020 and after November 2020 (FAO, 2021; Djanibekov and Herzfeld, 2022). Pakistan and Tajikistan also imposed live animal export restrictions. Live animal imports in Azerbaijan and Uzbekistan (net importers) accounted for 4 percent of total food imports. Meat imports declined in all of the countries, except Uzbekistan, where meat imports more than doubled in 2020 (Djanibekov and Herzfeld, 2022). This was partly due to the shift from live animal imports to meat imports as Kazakhstan imposed export bans for live animals. A more severe decline in meat imports was observed in Tajikistan.

Apart from Kyrgyzstan, all Central Asian countries and Azerbaijan were net importers of dairy products and eggs, in both 2019 and 2020 (Djanibekov and Herzfeld, 2022). Azerbaijan and Kazakhstan were the largest importers of this commodity group, each accounting for 8 percent of their total food imports in 2020. In Kazakhstan and Uzbekistan, the increase in dairy and eggs imports was more than 25 percent. Imports of dairy products and eggs were relatively less important for Tajikistan and Uzbekistan, accounting for 2 percent of their total food imports in 2020.

Kazakhstan, Kyrgyzstan, and Pakistan – as net importers of vegetable oils – introduced export restrictions (FAO, 2021). Kazakhstan introduced price controls on cooking oils to ensure domestic market stability. Türkiye, Pakistan, and Uzbekistan reduced or temporarily suspended import duties on vegetable oils to increase domestic availability. Türkiye, in particular, reduced the tariff on crude sunflower seed oil from 30 percent to 18 percent, and on sunflower seeds from 13 percent to 9 percent. ; Pakistan suspended duty on soy, rape, palm and sunflower oils; and Uzbekistan suspended the tariff on vegetable oils.

Kazakhstan is the largest importer of vegetables and fruits, and this accounted for about 13 percent of its total food imports in 2020, 1 percent less than in 2019 (Djanibekov and

Herzfeld, 2022). Kyrgyzstan also saw a 1 percent decline, from 16 percent in 2019 to 15 percent in 2020. Azerbaijan, the second-largest importer, saw an increase from 10 percent in 2019 to 11 percent in 2020. Regarding the export of vegetables and fruits, the pandemic caused disruptions in agrifood trade. Enhanced border control measures for additional inspections led to delays that adversely affected the timely handling of highly perishable fruits and vegetables. Uzbekistan is the largest exporter of fruits and vegetables, followed by Azerbaijan and Kyrgyzstan. Azerbaijan increased vegetable exports despite the pandemic, while Kazakhstan and Uzbekistan suffered large reductions (of 27 percent and 16 percent, respectively) in exports. One of the reasons for the decline in Kazakhstan's exports was specific bans and quotas imposed on certain vegetables until 1 June 2020. Vegetable exports by Kyrgyzstan and Uzbekistan reached half of their 2019 levels in May 2020. Regarding fruits, almost half of the agrifood exports by Azerbaijan consisted of fruits, and this did not change much in 2020. In Uzbekistan, fruit exports declined by 11 percent compared with 2019 values. High transportation costs, extended border crossing times and the reduced purchasing power of Kazakh and Russian consumers impacted Uzbekistan's fruit exports to these markets. Kazakhstan was the hardest hit, with a 65 percent loss on 2019 values. Kyrgyzstan saw a 9 percent decline.

Table 2. Agrifood trade policy measures

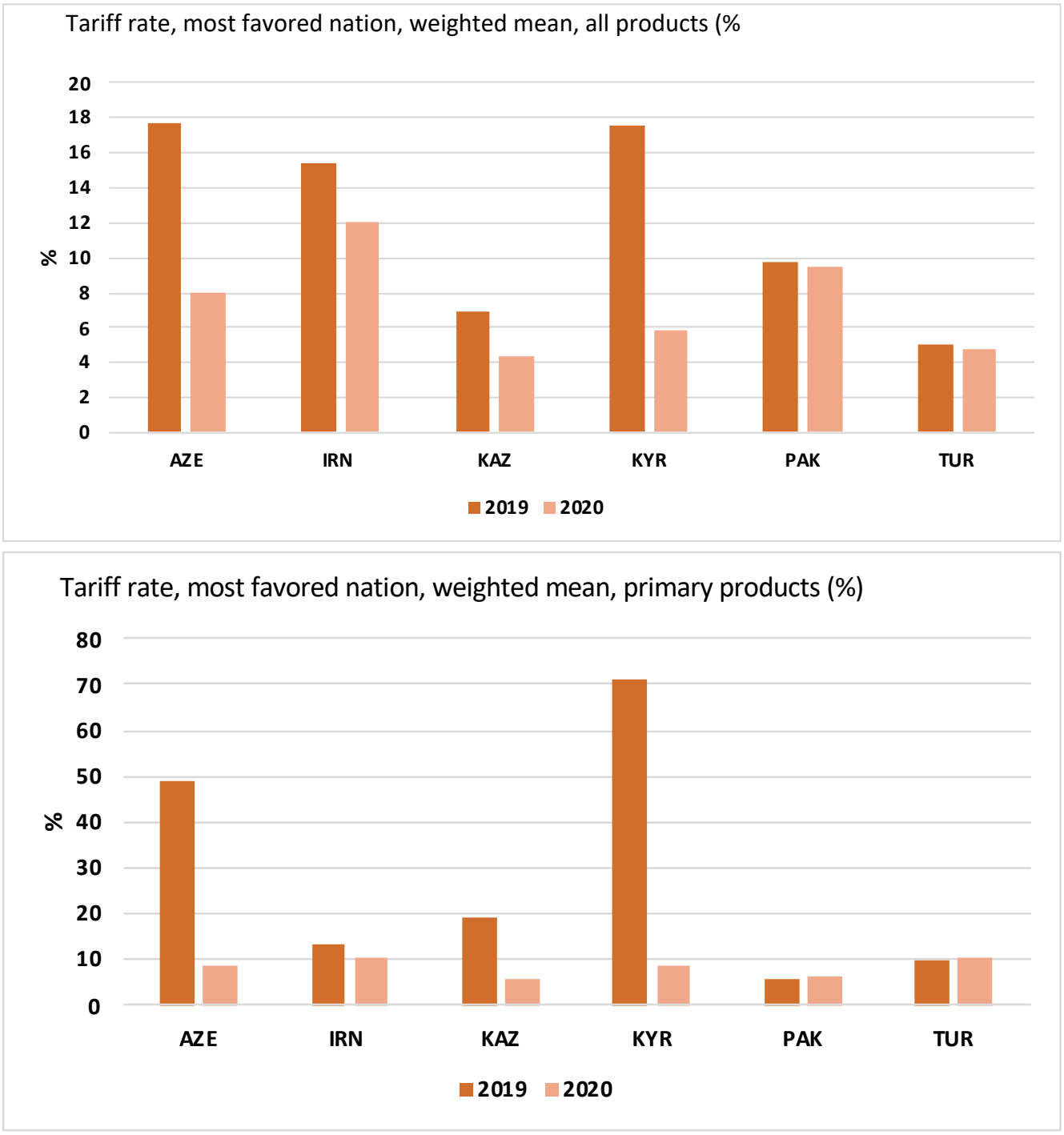
		Border measures			Domestic measures	
		Export restrictions	Lowering export duties	Lowering import restrictions/ subsidizing imports	Domestic market controls, stock release/ food aid	Food reserves
Wheat & wheat flour	Net exporter	Pakistan Kazakhstan		Kazakhstan	Pakistan Kazakhstan	
	Net importer	Kyrgyzstan Tajikistan Pakistan		Kyrgyzstan Uzbekistan	Kyrgyzstan	Kyrgyzstan
Maize & maize flour	Net importer	Pakistan				
Rice	Net exporter			Kazakhstan	Kazakhstan Pakistan	
	Net importer	Kyrgyzstan		Kyrgyzstan Türkiye		
Meat & dairy products	Net importer	Kyrgyzstan Pakistan Tajikistan		Uzbekistan	Kazakhstan	
Vegetable oils	Net importer	Kazakhstan Kyrgyzstan Pakistan		Pakistan Türkiye Uzbekistan	Kazakhstan	

Source: **FAO.** 2021. Agricultural trade & policy responses during the first wave of the COVID-19 pandemic in 2020. Rome. https://www.fao.org/3/cb4553en/cb4553en.pdf

During the pandemic, the overall tendency has been to lower tariffs to promote imports to ensure the availability of adequate goods domestically. As shown in Figure 41, in 2020, average tariff rates for all products were substantially lowered in Azerbaijan, the Islamic Republic of

Iran, Kazakhstan, Kyrgyzstan. Pakistan and Türkiye lowered it only slightly. Concerning the average tariffs for primary products, proportionally very large reductions were introduced in Kyrgyzstan, with a reduction from 70 percent in 2019 to 8 percent in 2020, followed by Azerbaijan with a reduction from 50 percent in 2019 to 10 percent in 2020, Kazakhstan with a reduction from 20 percent to 5 percent, and the Islamic Republic of Iran with a reduction from 13 percent to 10 percent. Pakistan and Türkiye kept the average tariffs unchanged.

Figure 41. Tariff rates (all products versus primary products)*



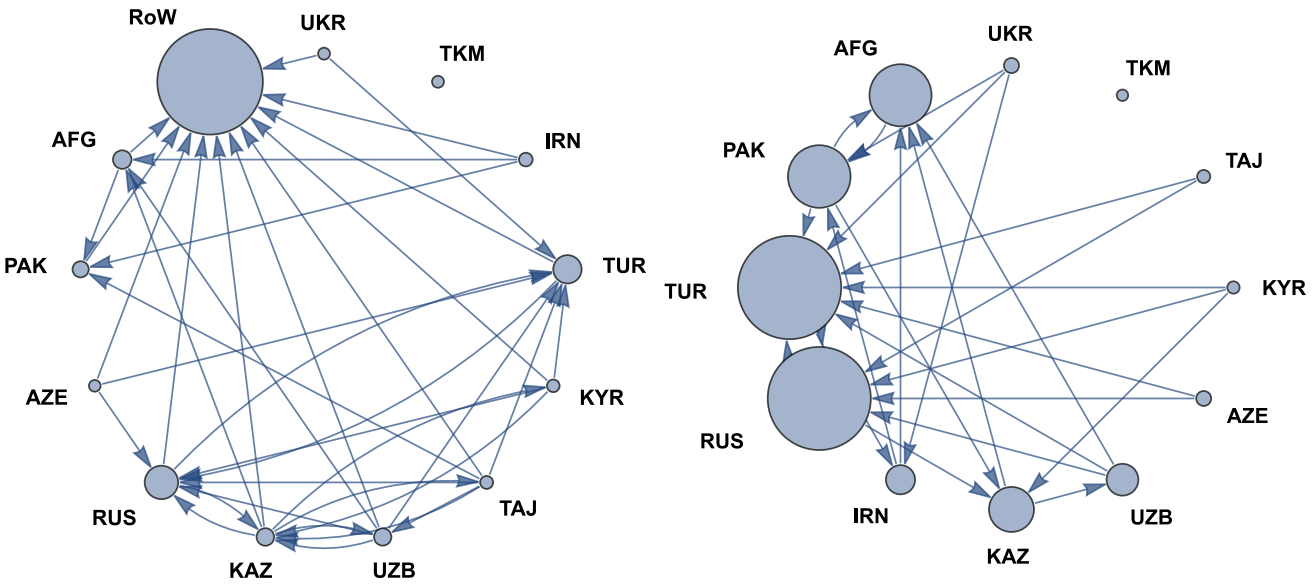
Source: **World Bank.** 2022a. World Development Indicators Database. In: World Bank. Washington, DC. [Cited 25 May 2022]. https://databank.worldbank.org/source/world-development-indicators

The Most-Favored Nation (MFN) principle is a fundamental aspect of the multilateral trading system established after World War II. It aims to replace the inefficiencies and distortions of power-based (bilateral) agreements with a rules-based framework where trade rights are not influenced by the economic or political influence of individual participants. Under this principle, any favorable trade terms granted to one country must be automatically extended to all other members of the system. This ensures that all participants benefit from concessions negotiated by major trading partners without needing additional negotiations. More information is available here: https://www.wto.org/english/tratop_e/serv_e/cbt_course_e/c1s6p1_e.htm

The agrifood export and import networks illustrated in figures 42, 43, 44 and 45 provide critical information on the structure of trade linkages across ECO+2 countries (ECO countries plus the Russian Federation and Ukraine), including the rest of the world (RoW) (see Annex I for the agrifood export/import matrices used to create figures 42, 43, 44 and 45). On the left side of Figure 42, the vertices with different sizes (that is, normalized total of agrifood exports) and the arrows between the vertices (that is, export shares of total agrifood exports) suggest that at the 5 percent export threshold level, Kazakhstan, the Russian Federation, Türkiye and Uzbekistan appear to have a large number of export linkages – measured by the number of arrows to and from these three countries – followed by Afghanistan, Pakistan, and Tajikistan. With only two directed arrows, Ukraine does not have much influence on agrifood exports to the ECO region.

On the right side of Figure 42, the vertices with different sizes (total ECO+2 agrifood exports) suggest that Afghanistan, Pakistan, the Russian Federation and Türkiye appear to have high export shares, implied by large vertex sizes, followed by Kazakhstan and Uzbekistan. The number of arrows between the vertices (agrifood export shares for ECO+2), however, shows the intensity of export linkages of a reporting country within the ECO+2 region. Kazakhstan, the Russian Federation, Türkiye and Uzbekistan lead in terms of export linkages. Interestingly, although Kazakhstan and Uzbekistan have relatively smaller export shares, they have a diversified export portfolio of trade partners. The export network of ECO+2 countries is highly connected, albeit with a low export volume.

Figure 42. Network of world agrifood exports (left) versus network of ECO+2 agrifood exports (right) at the 5 percent threshold level (by reporting countries)

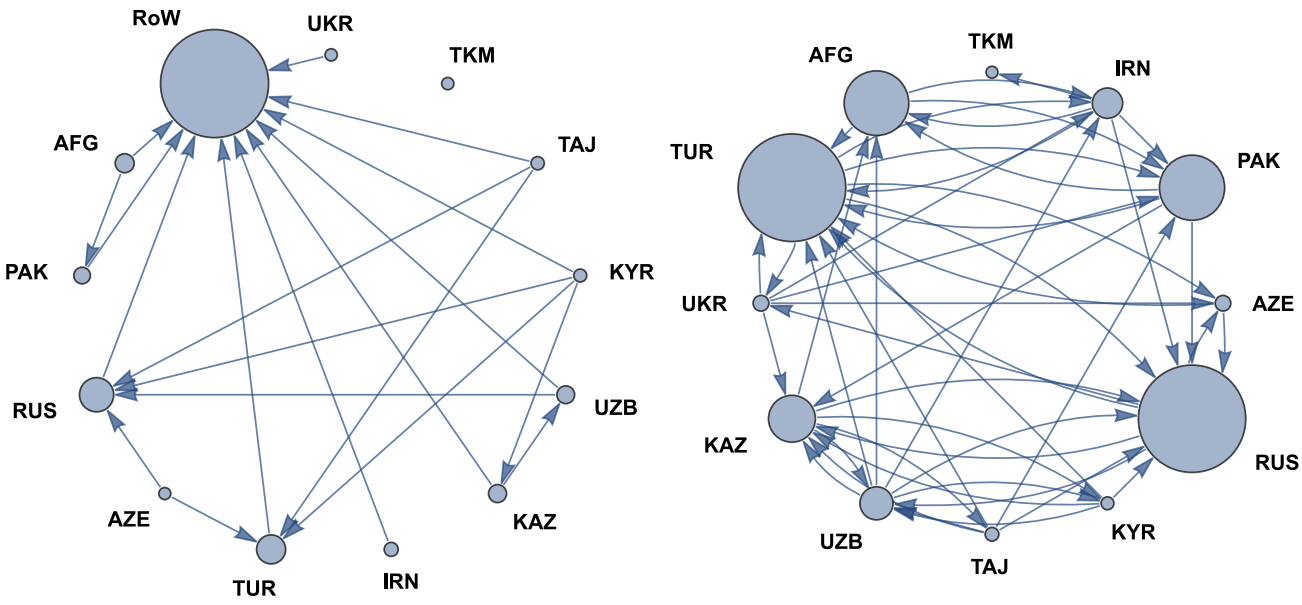


Source: Author's elaboration based on UN Comtrade data. Data retrieved on 31 May 2022 https://comtradeplus.un.org/

In order to identify the dominant countries in the agrifood export network, we map the export linkages at the 15 percent threshold (Figure 43). That is to say, the linkages shown in the network represent the export shares that are at least 15 percent. In the agrifood export network on the left side of Figure 43, export shares are calculated based on the world's total agrifood exports. The vertex sizes are therefore small compared to the network on the right side, where export shares are based on ECO+2 total agrifood exports. The comparison of the

two networks suggests that the export linkages within the ECO region is not so dense if the linkages of the ECO countries are assessed relative to global total agrifood exports. Türkiye, with three linkages, is the leading country in the ECO region, followed by Kazakhstan and Kyrgyzstan, with two linkages each. The Russian Federation is dominant with four export linkages, while Ukraine remains isolated with no linkage with the ECO region. It should be noted that even at the 5 percent threshold level, Ukraine remains largely isolated from the ECO region (Figure 42). The right side of Figure 43 confirms that a relatively large number of ECO countries report agrifood exports to Türkiye, the Russian Federation and Afghanistan, which is implied by the number of arrows to these countries. Ukraine has an important place in agrifood exports to the Islamic Republic of Iran, Pakistan and Türkiye, as shown with three arrows from Ukraine to these countries. The war in Ukraine might have dire consequences for these countries if food-supply channels are disrupted..

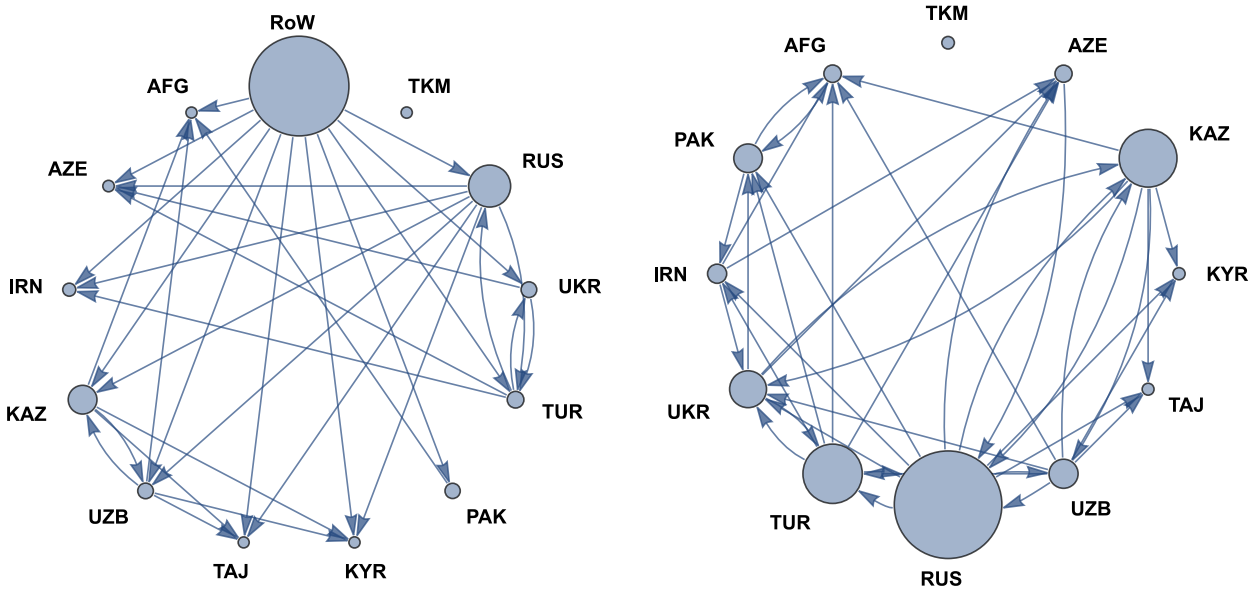
Figure 43. Network of world agrifood export (left) versus network of ECO+2 agrifood exports (right) at the 15 percent threshold level (by reporting countries)



"Source: Author's elaboration based on UN Comtrade data. Data retrieved on 31 May 2022. https://comtradeplus.un.org/

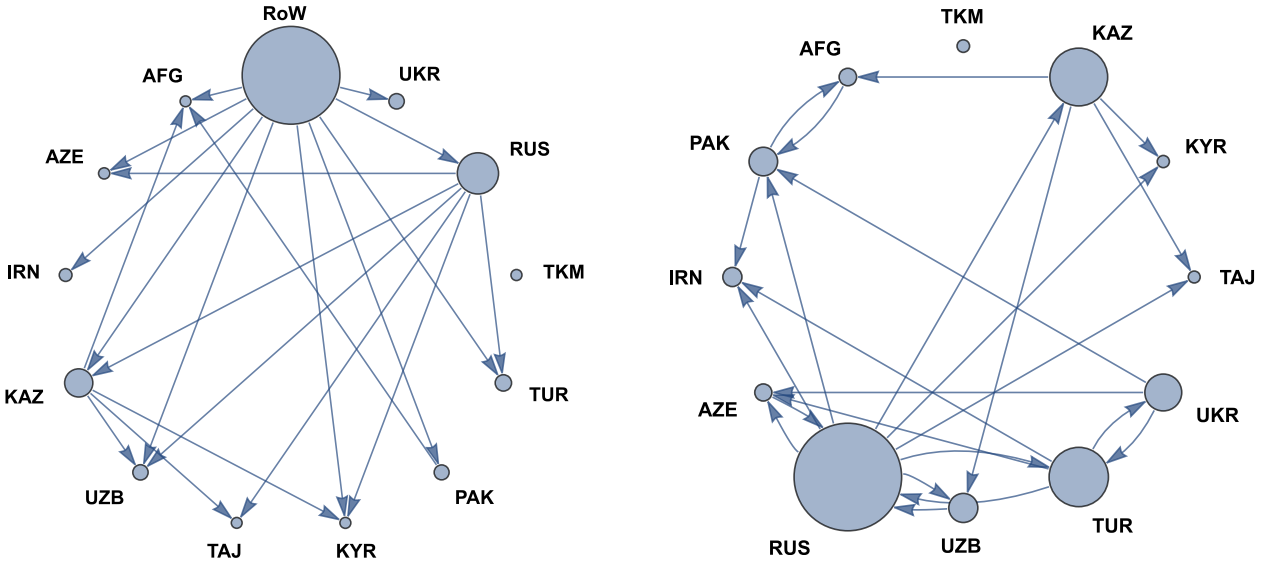
Figures 44 and 45 show the agrifood import networks at the 5 percent and 15 percent thresholds. The networks on the left sides are relative to world total agrifood imports, and those on the right are relative to ECO+2 total agrifood imports. Relative to world imports in Figure 44, the Russian Federation and Kazakhstan are dominant with relatively large vertex sizes, followed by Türkiye, Uzbekistan and Pakistan. However, relative to ECO+2 imports, the Russian Federation, Kazakhstan, Türkiye, Ukraine and Uzbekistan are dominant. On the left side of Figure 45, with a 15 percent threshold level, the Russian Federation and Kazakhstan occupy an important place, while on the right side, the Russian Federation, Türkiye, and Kazakhstan are followed by Ukraine and Azerbaijan. Overall, the ECO region has strong agrifood trade linkages with the Russian Federation and Ukraine, Although Ukraine has fewer important bilateral trade linkages with ECO countries, disruptions in these linkages – together with agrifood re-exporting possibilities among ECO countries – may hamper the scope of trade within the ECO region more than expected.

Figure 44. Network of world agrifood imports (left) versus network of ECO+2 agrifood imports (right) at the 5 percent threshold level (by reporting countries)



Source: Author's elaboration based on UN Comtrade data. Data retrieved on 31 May 2022. https://comtradeplus.un.org/

Figure 45. Network of world agrifood imports (left) versus network of ECO+2 agrifood imports (right) at the 15 percent threshold level (by reporting countries)



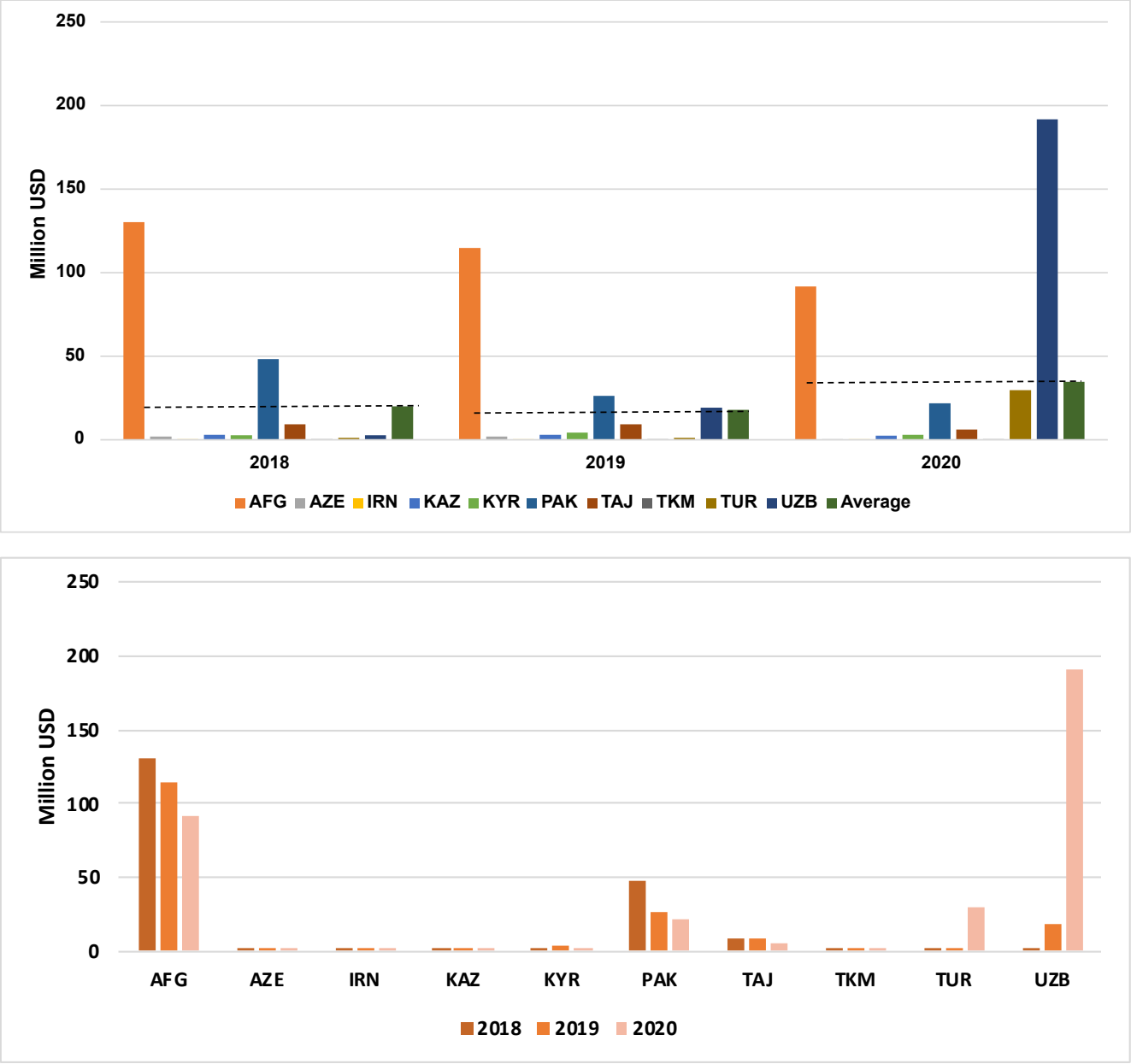
Source: Author's elaboration based on UN Comtrade data. Data retrieved on 31 May 2022. https://comtradeplus.un.org/

5.5. Aid for trade

5.5.1. Official development assistance (ODA) for agricultural development

As shown in Figure 46, Uzbekistan saw a large increase in ODA for agricultural development in 2020 compared with 2019, followed by Türkiye with a modest increase. Afghanistan experienced a relatively large decline in its ODA resources, followed by Pakistan and Tajikistan (which saw a slight reduction). Other ECO countries had negligible allocations for agricultural activities. The ECO group average of agriculture-related ODA allocations substantially increased, from USD 18 million in 2019 to USD 35 million in 2020. This is mainly due to the increase in Uzbekistan's ODA in 2020, as well as the increase for Türkiye. Overall, ODA allocated for agricultural development in ECO countries has not been substantial.

Figure 46. Official development assistance for agricultural development (million USD)

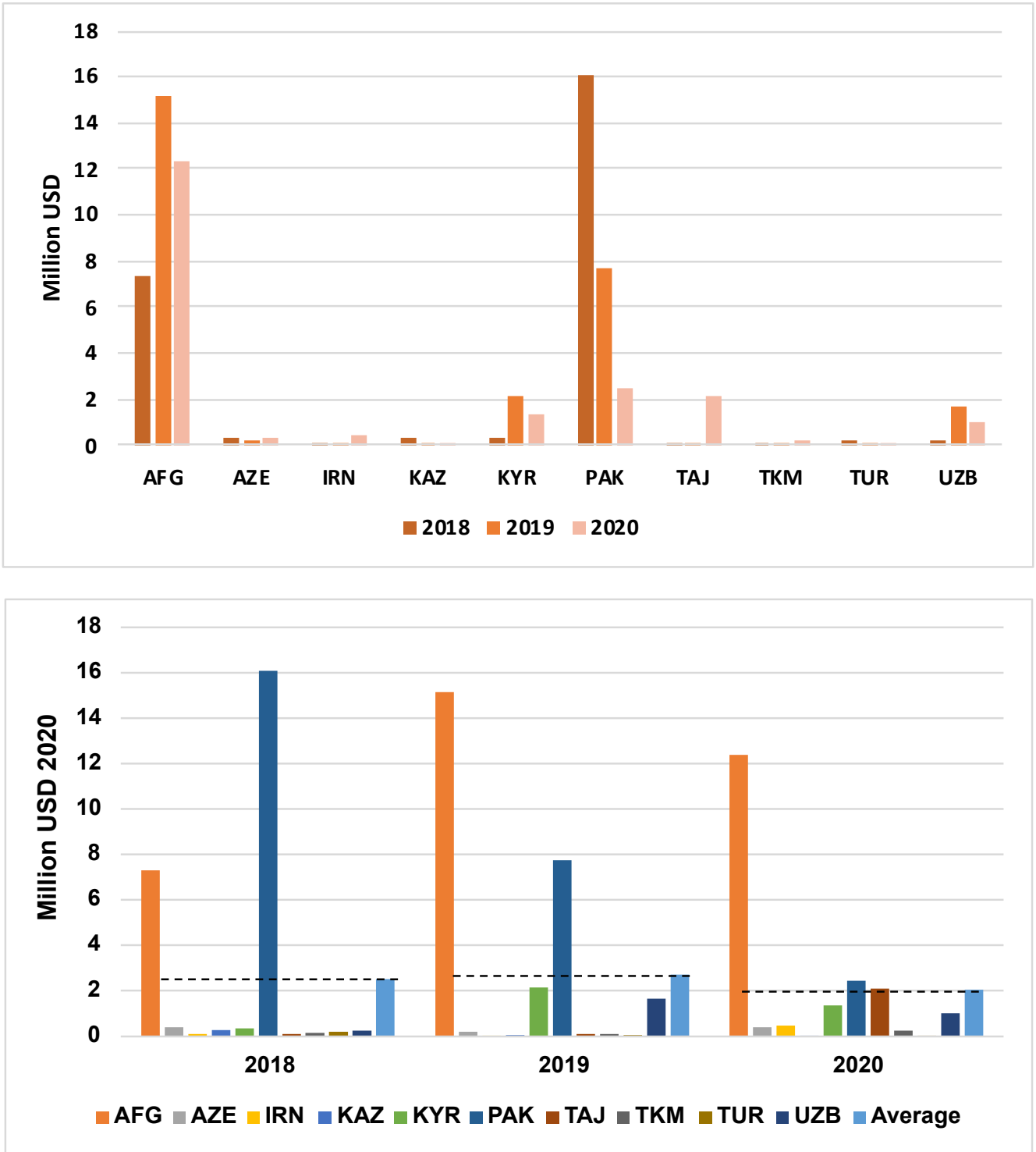


Source: **OECD (Organisation for Economic Co-operation and Development).** 2022. OECD.Stat. In: *OECD*. Paris. [Cited 4 May 2022]. https://stats.oecd.org/Index.aspx?DataSetCode=CRS1#

5.5.2. Official development assistance for trade policies and regulations

As seen in Figure 47, in 2020 Pakistan witnessed a substantial reduction in ODA resources received for the design and implementation of trade policies and regulations. It is followed by Afghanistan, with a moderate reduction its ODA allocations. Kyrgyzstan and Uzbekistan also experienced a reduction in ODA in 2020. Tajikistan is the only country that had an increased ODA allocation in 2020 compared with 2019. Overall, the ECO group average of trade policy-related ODA allocations declined from USD 2.7 million in 2019 to USD 2 million in 2020 – an already small amount for trade policy support was reduced to almost nothing.

Figure 47. Official development assistance for trade policies and regulations



Source: **OECD (Organisation for Economic Co-operation and Development).** 2022. OECD.Stat. In: OECD. Paris. [Cited 4 May 2022]. https://stats.oecd.org/Index.aspx?DataSetCode=CRS1#

5.5.3. Official development assistance for infrastructure and Information and Communication Technologies (ICT) investment

Trade facilitation is critical, especially for perishable agricultural products. The World Trade Organization (WTO)-led Aid for Trade (AfT) initiative aims to mobilize resources to address and alleviate trade barriers. . It is too early to predict the impact of the COVID-19 pandemic on AfT flows to ECO countries; however, a temporary decline is likely due to donors' contracting GDP and the channelling of available resources to respond to the pandemic. Aid for Trade can bring large benefits to the receiving countries, especially in compliance with sanitary and phytosanitary measures in the agricultural and food sector. Recent data from the Organisation for Economic Co-operation and Development (OECD, 2022) reveal that ODA for ECO countries lost momentum in 2020, but differences across countries remain.

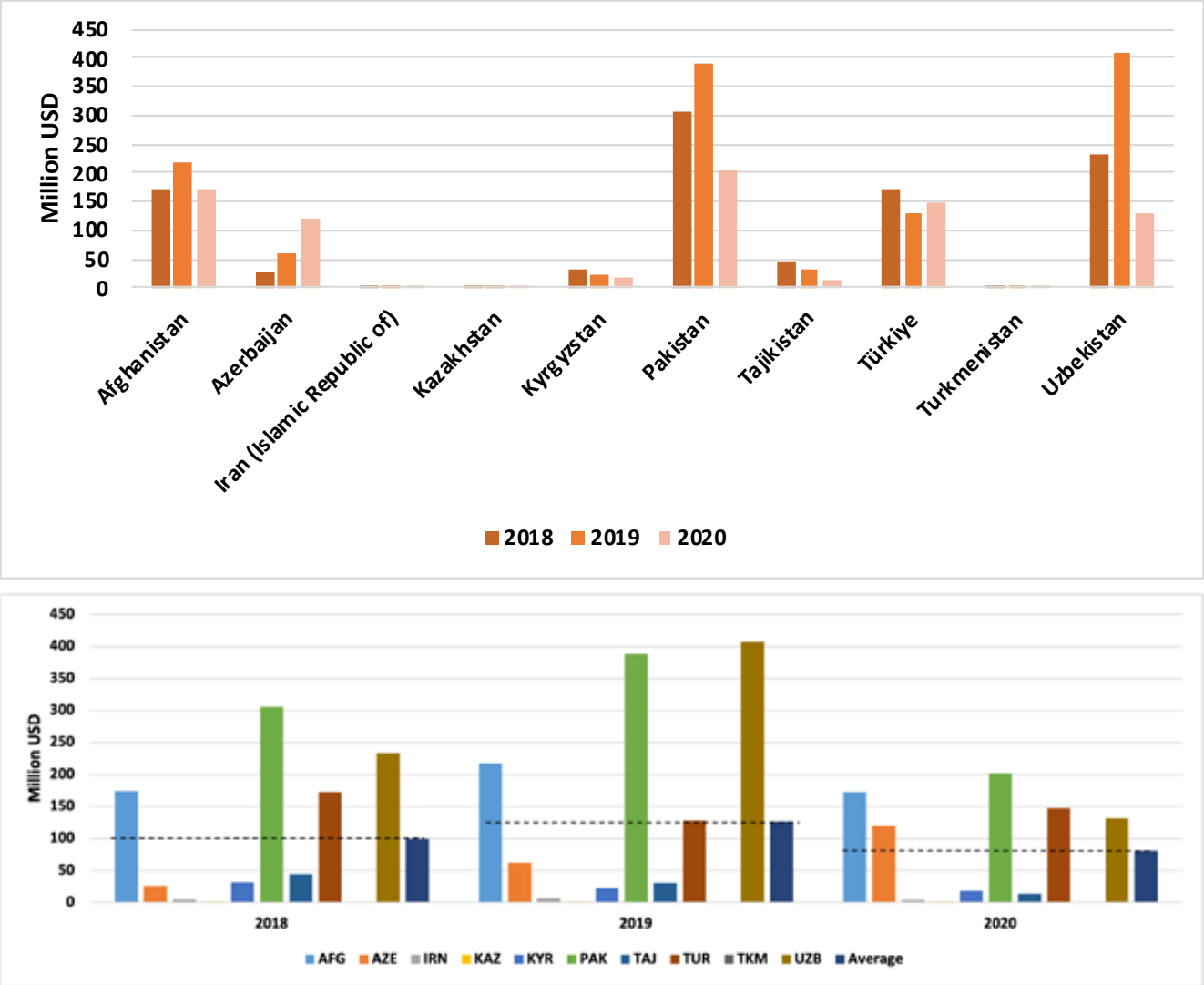
Targeted investment should improve trade facilitation through hard and soft channels. The hard channel is to invest in infrastructure, such as roads and ports, railways, and ICT, and to promote competition in trade services. The soft channel is to make trade reforms and regulations incentivizing more effective trade flow through, for example, openness to trade and access to finance. Since enhancement in overall economic infrastructure directly contributes to the improvement of trade capacity, ECO countries that receive increasing ODA are expected to gain more from trade.

As seen from Figure 44, during 2018–2020, of ten ECO countries, five received a considerable amount of ODA aimed to support their infrastructural development, including Afghanistan Azerbaijan, Pakistan, Türkiye, and Uzbekistan. Despite the pandemic and an overall decline in the ODA allocations of developed countries, Azerbaijan and Türkiye received an increasing ODA allocation in 2020 compared with 2019. Relatively speaking, Azerbaijan benefitted most from ODA distributions in 2020. Pakistan and Uzbekistan saw large reductions in 2020 compared with 2019, while Afghanistan saw a modest reduction.

The ECO group average for ODA infrastructural investment decreased substantially, from USD 127 million in 2019 to USD 81 million in 2020. This decline is mainly attributed to reductions in the ODA receipts of Afghanistan, Pakistan, Tajikistan, and Uzbekistan. Azerbaijan and Türkiye saw small increases. The decline (due to the pandemic) is especially troubling because it brought allocations in 2020 to below the 2018 average.

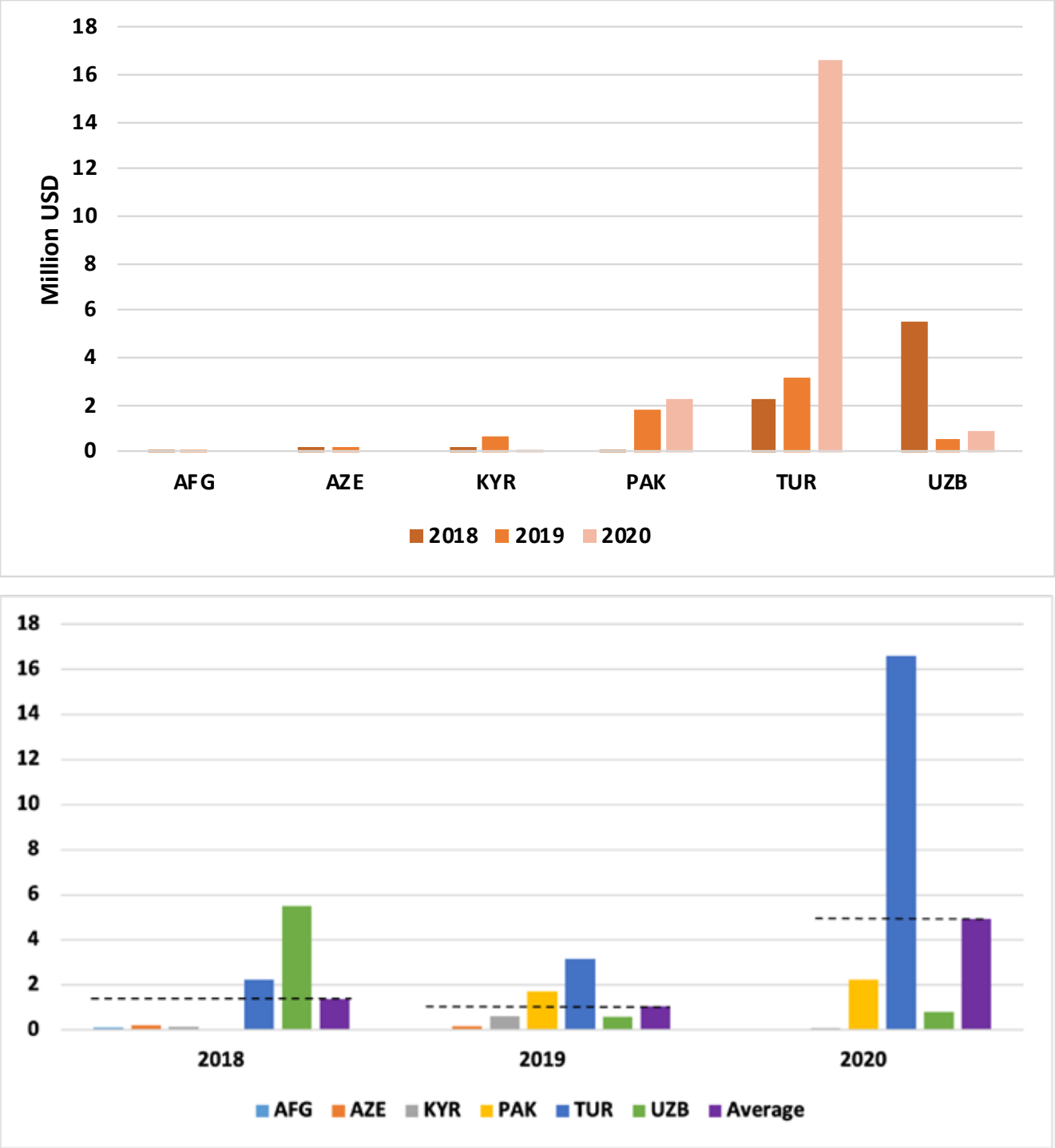
Figure 49 indicates that Türkiye is the only country that received modest assistance in 2020 for ICT investment purposes. The group average has increased from USD 2 million in 2019 to USD 5 million 2020. Given the total GDP of Kyrgyzstan, Pakistan, Türkiye and Uzbekistan, ODA distributed for ICT investment is negligible.

Figure 48. Official development assistance for infrastructural investment



Source: **OECD (Organisation for Economic Co-operation and Development).** 2022. OECD.Stat. In: OECD. Paris. [Cited 4 May 2022]. https://stats.oecd.org/Index.aspx?DataSetCode=CRS1

Figure 49. Official development assistance for ICT investment



Source: **OECD (Organisation for Economic Co-operation and Development).** 2022. OECD.Stat. In: OECD. Paris. [Cited 4 May 2022]. https://stats.oecd.org/Index.aspx?DataSetCode=CRS1

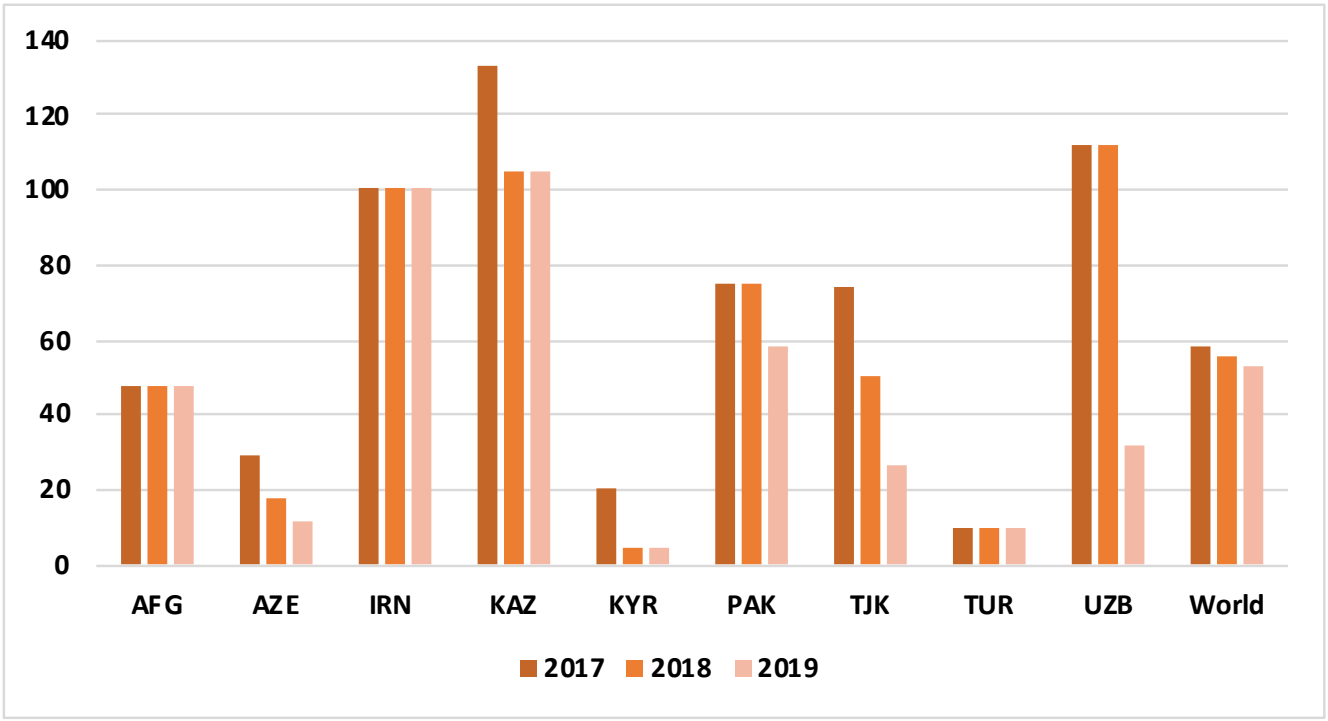
Transaction cost of trade

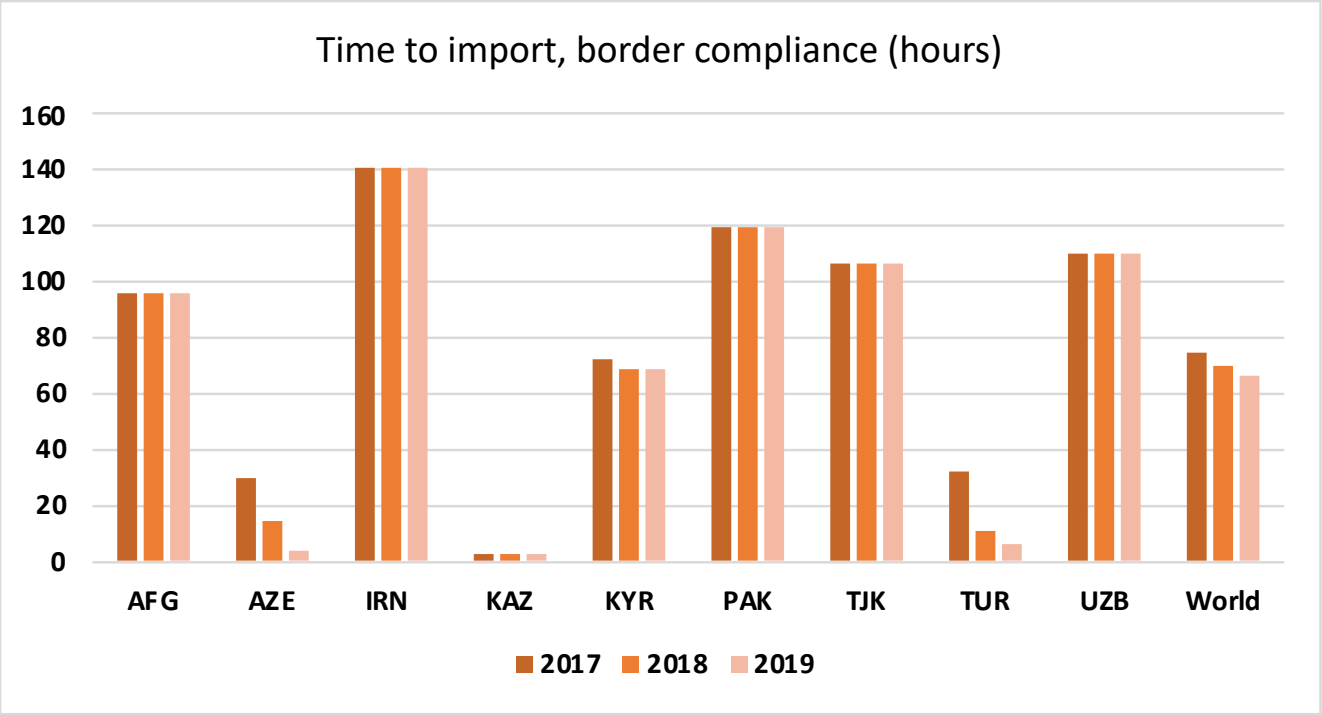
Together, time spent for administrative clearance of exports and imports, the speed of the flow of goods from source to destination, and the cost of cross-border clearance, define the so-called transaction cost of trade. Data available for the pre-pandemic period (2017–2019) indicate that Azerbaijan, Kazakhstan, Kyrgyzstan, Pakistan, Tajikistan, and Uzbekistan have improved the efficiency of trade by reducing the time (hours) spent on export border compliance control (Figure 50). As for time spent on import border compliance control, only Azerbaijan and Türkiye recorded an efficiency gain. Together, Azerbaijan and Türkiye are the only two ECO countries showing a small amount of time spent on border clearance control.

This implies that trade flow from and to these countries takes, relatively, a small amount of time for border clearance. Data from 2019 onwards are not yet available to assess the impact of the pandemic on trade flow to and from the ECO region. In general, the average time to export from ECO countries has been decreasing since 2017, and this decrease is substantially larger than the decline observed for the average time taken to import (Figure 50). However, due to containment measures and cross-border movement restrictions, the pandemic is likely to increase the transaction costs, making retail prices more expensive for consumers.

Compared to the world average time spent on export border compliance, Afghanistan, Azerbaijan, Kyrgyzstan, Tajikistan, Türkiye and Uzbekistan perform better, with a lower than average time. The Islamic Republic of Iran and Kazakhstan, and to a lesser extent Pakistan, show longer times than the world average. With respect to time spent on import border compliance, Azerbaijan, Kazakhstan, and Türkiye show shorter times than the world average; Kyrgyzstan's time is comparable to the world average; and in other ECO countries, time spent on import border compliance is much longer than the world average.

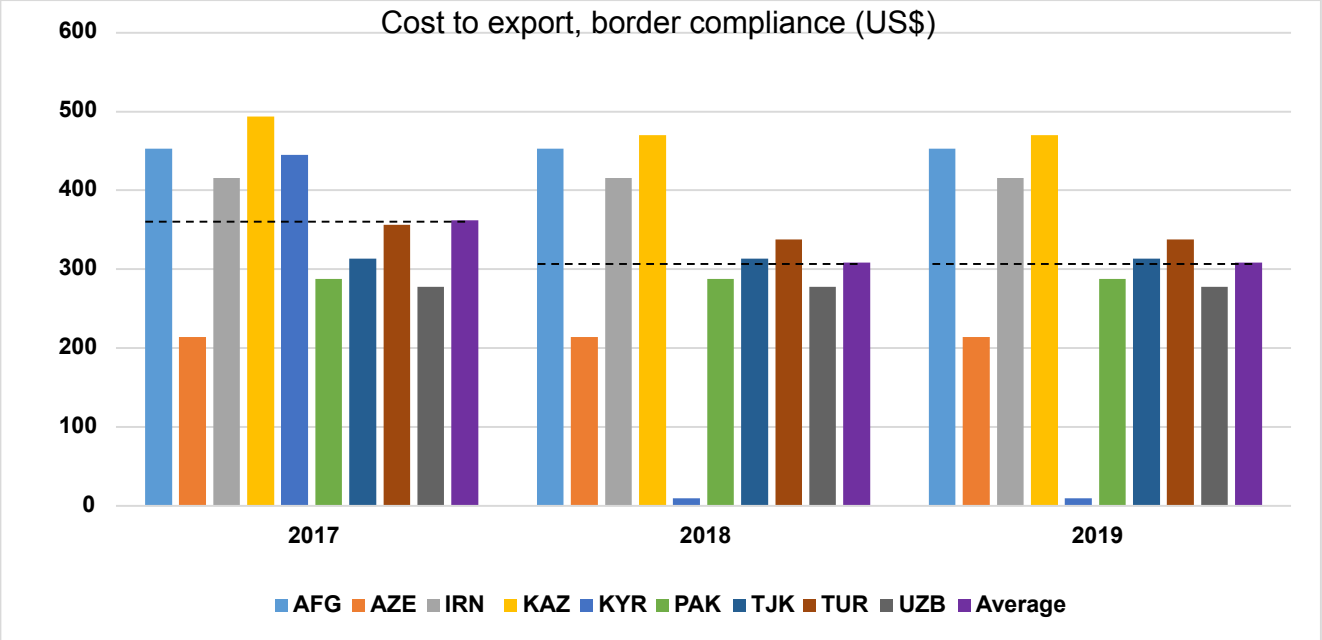
Figure 50. Trade efficiency

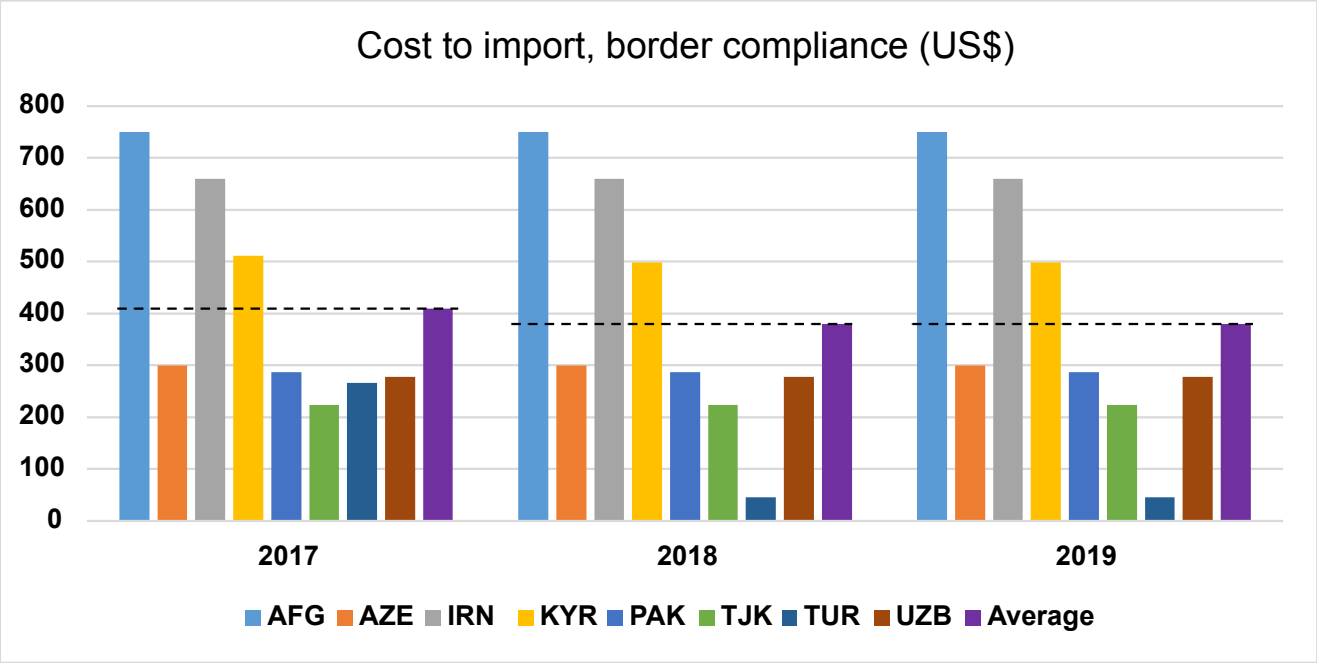




Source: **World Bank.** 2022a. World Development Indicators Database. In: World Bank. Washington, DC. [Cited 25 May 2022]. https://databank.worldbank.org/source/world-development-indicators

Figure 51. ECO group average transaction cost of trade



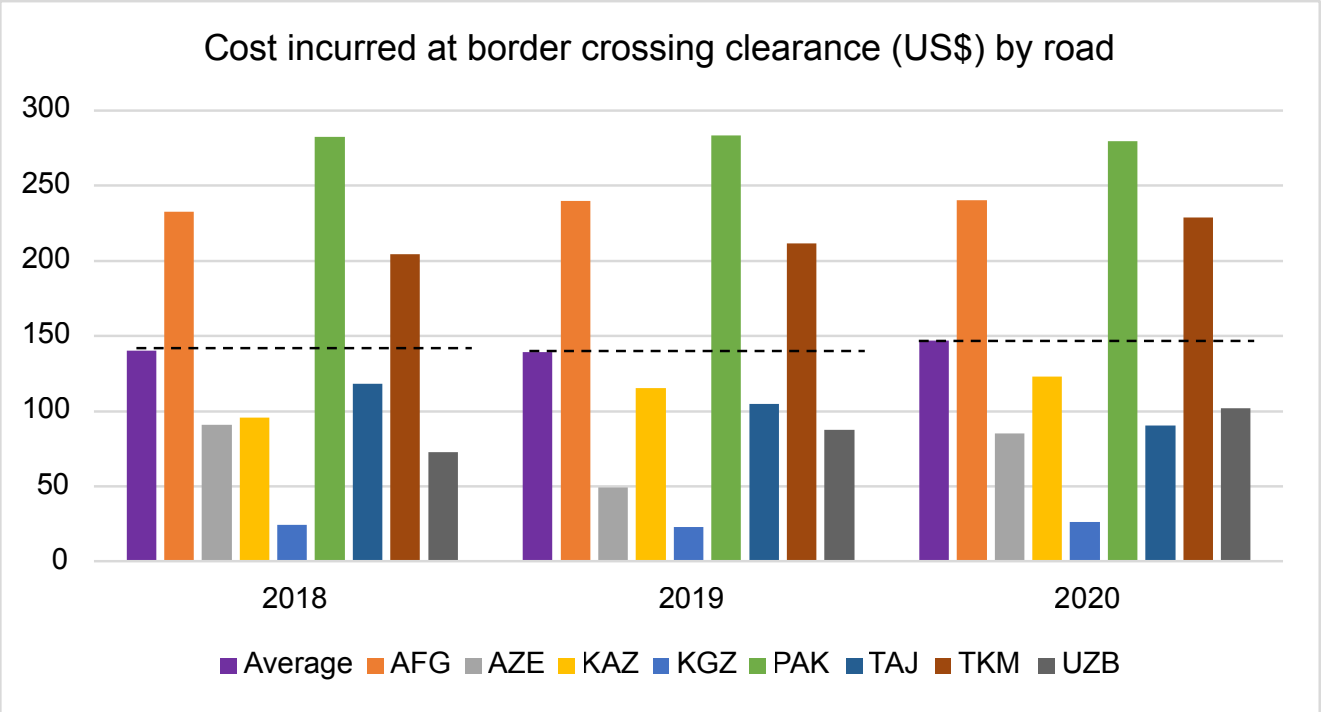


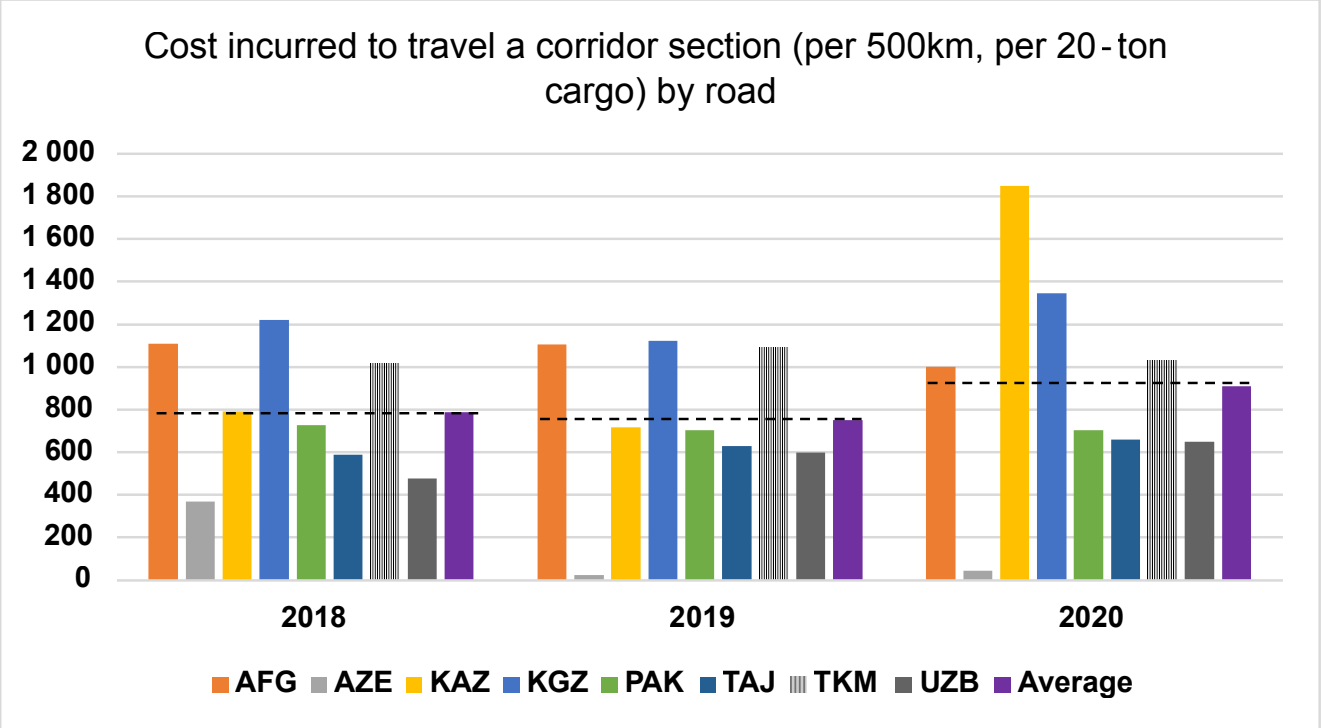
Source: World Bank. 2022a. World Development Indicators Database. In: World Bank. Washington, DC. [Cited 25 May 2022]. https://databank.worldbank.org/source/world-development-indicators

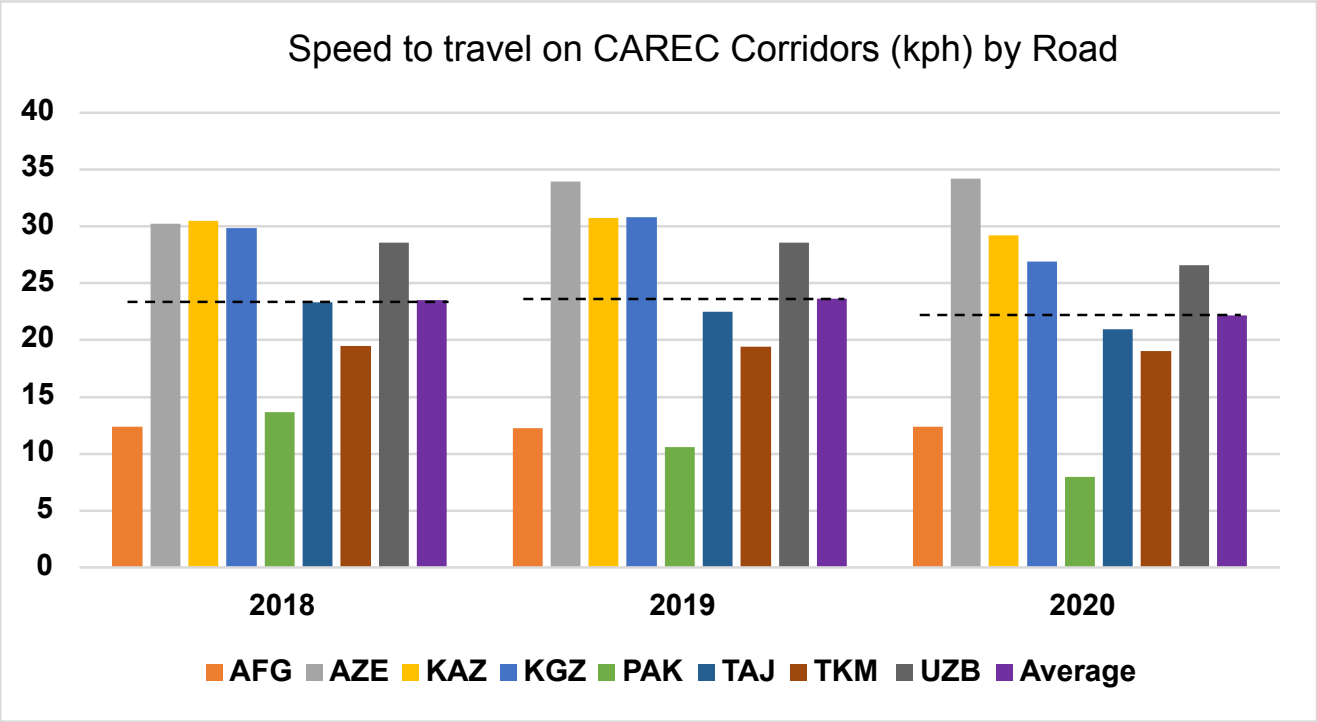
The pandemic prompted governments to take various travel and trade measures that restricted the flow of goods and the mobility of people, which in turn reduced market transactions and hence led to economic contractions in many countries across the globe. Data reveal that speed of trade and cross-border travel indeed slowed down across ECO countries. The ECO group average cost incurred at border crossing and in travelling a corridor section by road increased, while the speed to travel on a corridor section by road decreased (Figure 52). At the country level, Kazakhstan faced a substantial jump in the cost of travel, followed by Kyrgyzstan, while Pakistan witnessed a spike in the time taken to clear a border crossing by road (Figure 52). Furthermore, in 2020, ECO countries experienced a significant decline in air transportation (measured by the number of registered carrier departures worldwide) compared with 2019. Türkiye suffered the largest blow, followed by the Islamic Republic of Iran, Kazakhstan, and Pakistan. The ECO group average for air transportation over time further shows a substantial decline in 2020, with an almost 50 percent contraction compared with 2019 (Figure 54).

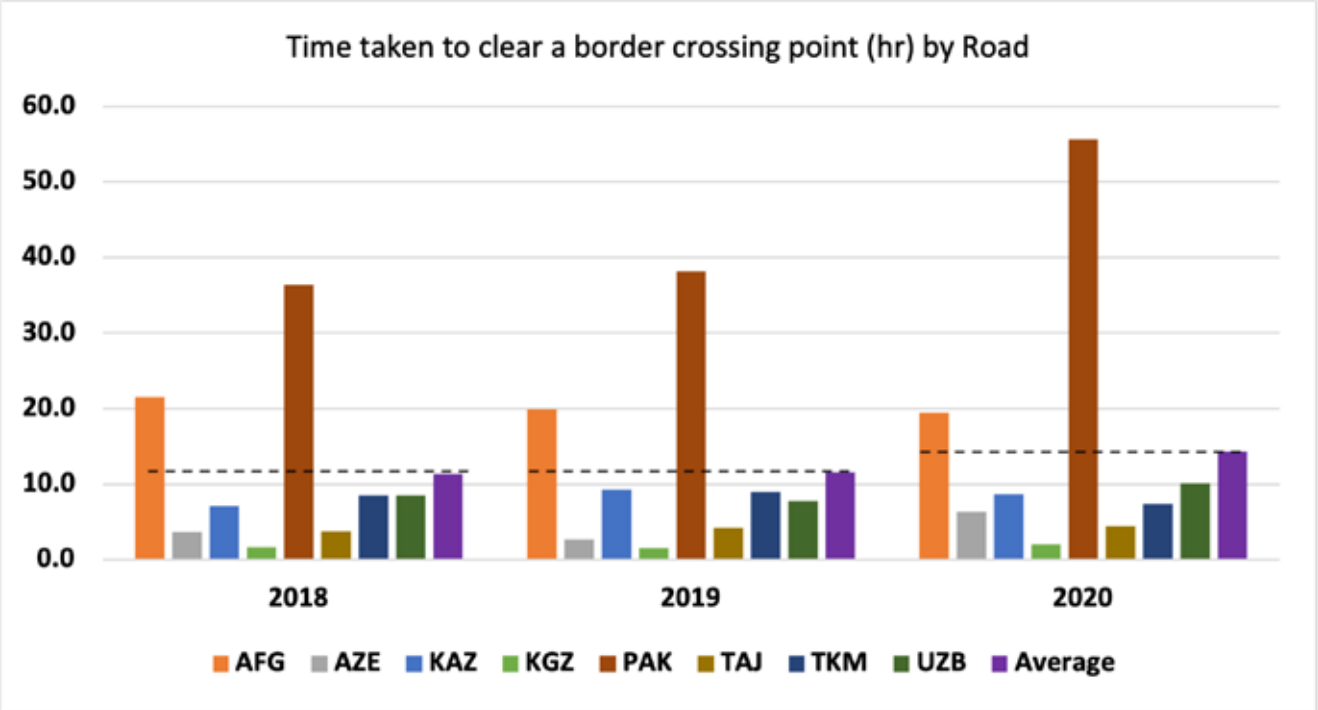
Kim and Mariano (2020) estimate the trade impact of reducing times and costs at border-crossing points within the Central Asia Regional Economic Cooperation (CAREC) region consisting of Afghanistan, Azerbaijan, China, Georgia, Kazakhstan, Kyrgyzstan, Mongolia, Pakistan, Tajikistan, Turkmenistan, and Uzbekistan. Their study finds that the time taken at the border for imports is more influential in promoting trade than at the border for exports; and with imports, time is a more objective metric than cost when assessing changes in trade flows. Estimates indicate that reducing border crossing times for imports by 10 percent can boost intraregional trade among CAREC countries by 1.41 percent.

Figure 52. Average trade facilitation, cost and time of border crossing, speed of travel



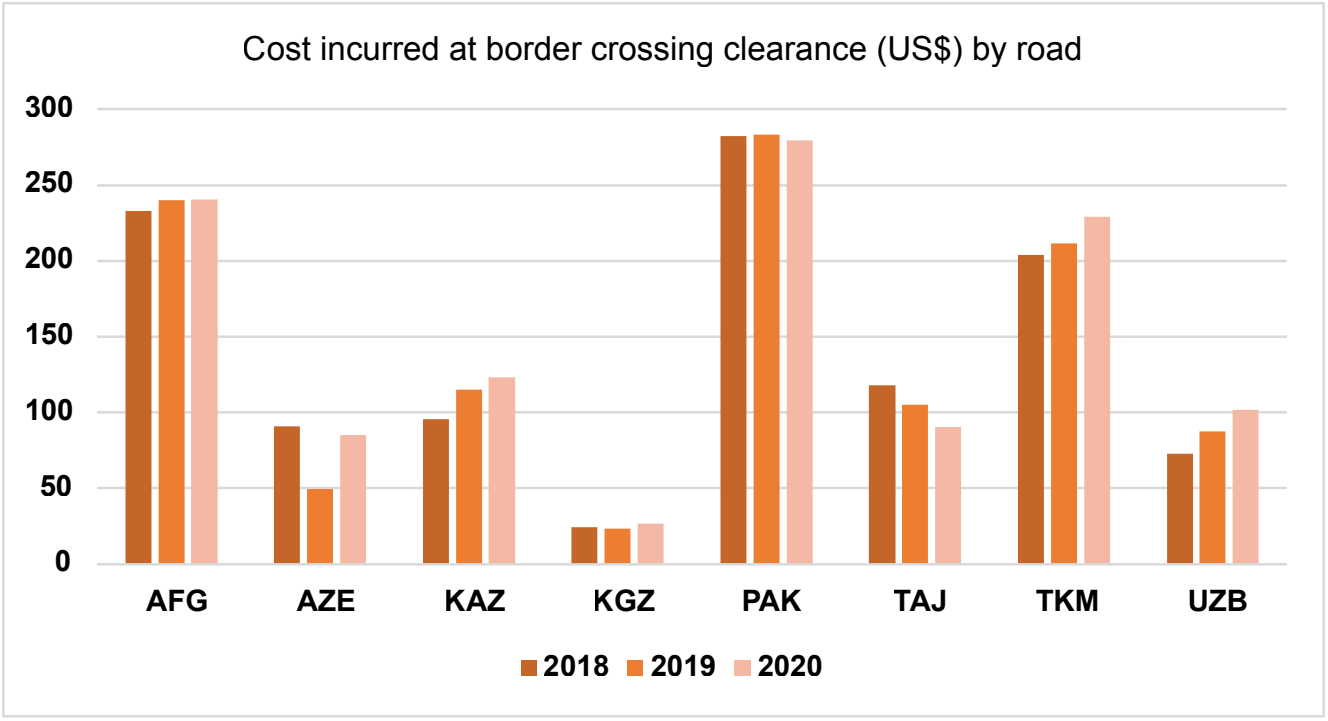


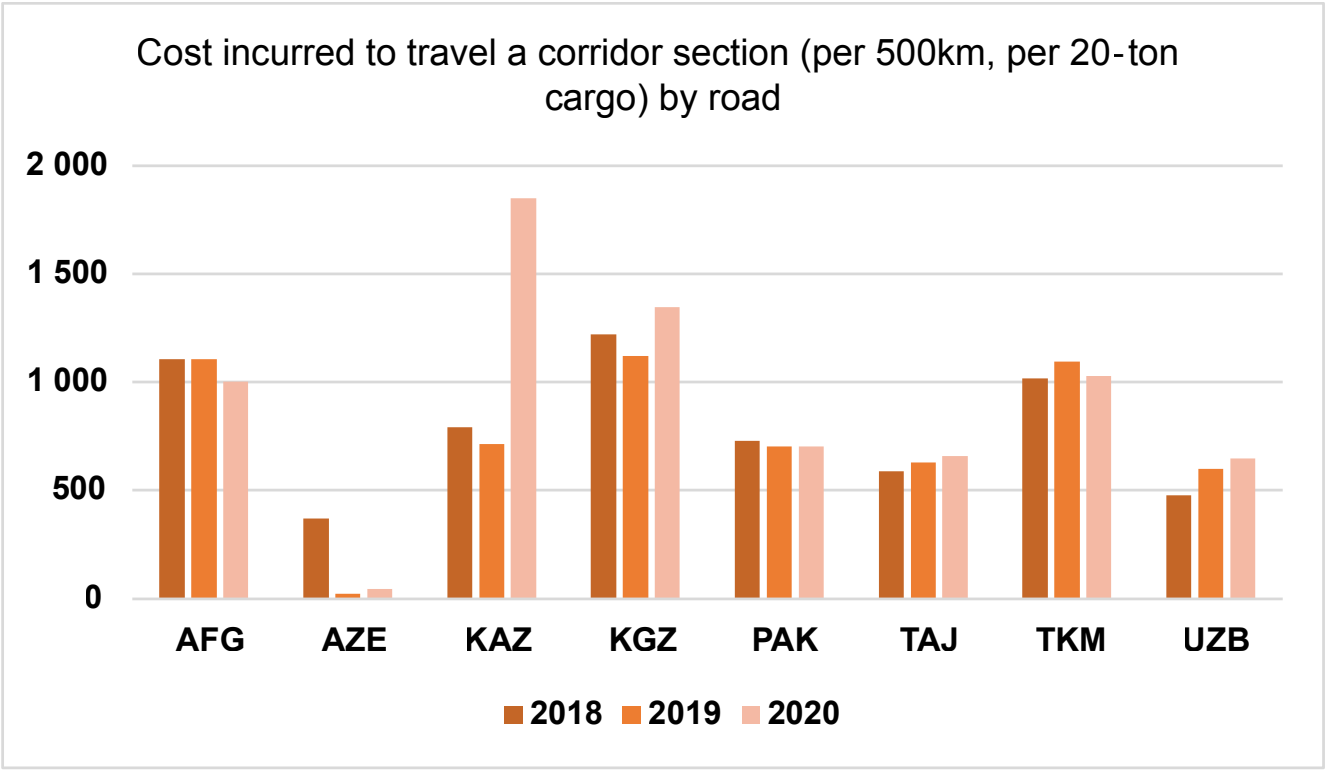


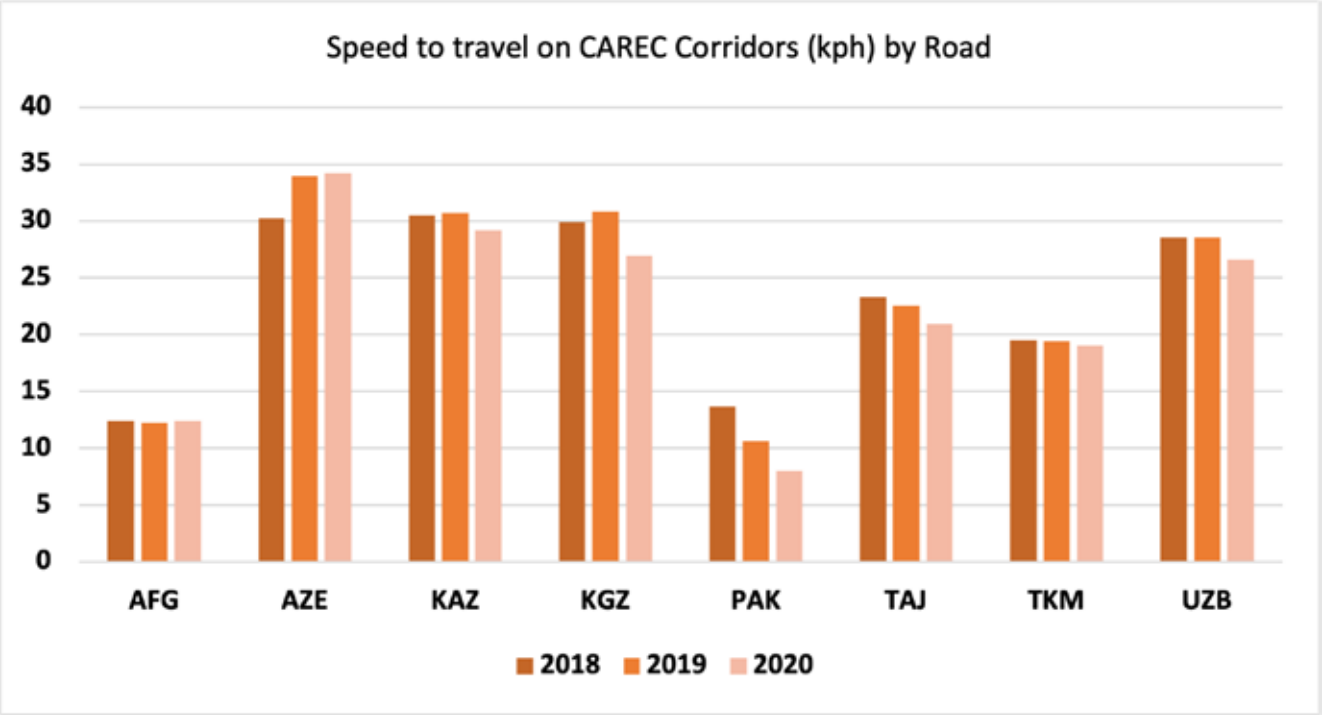


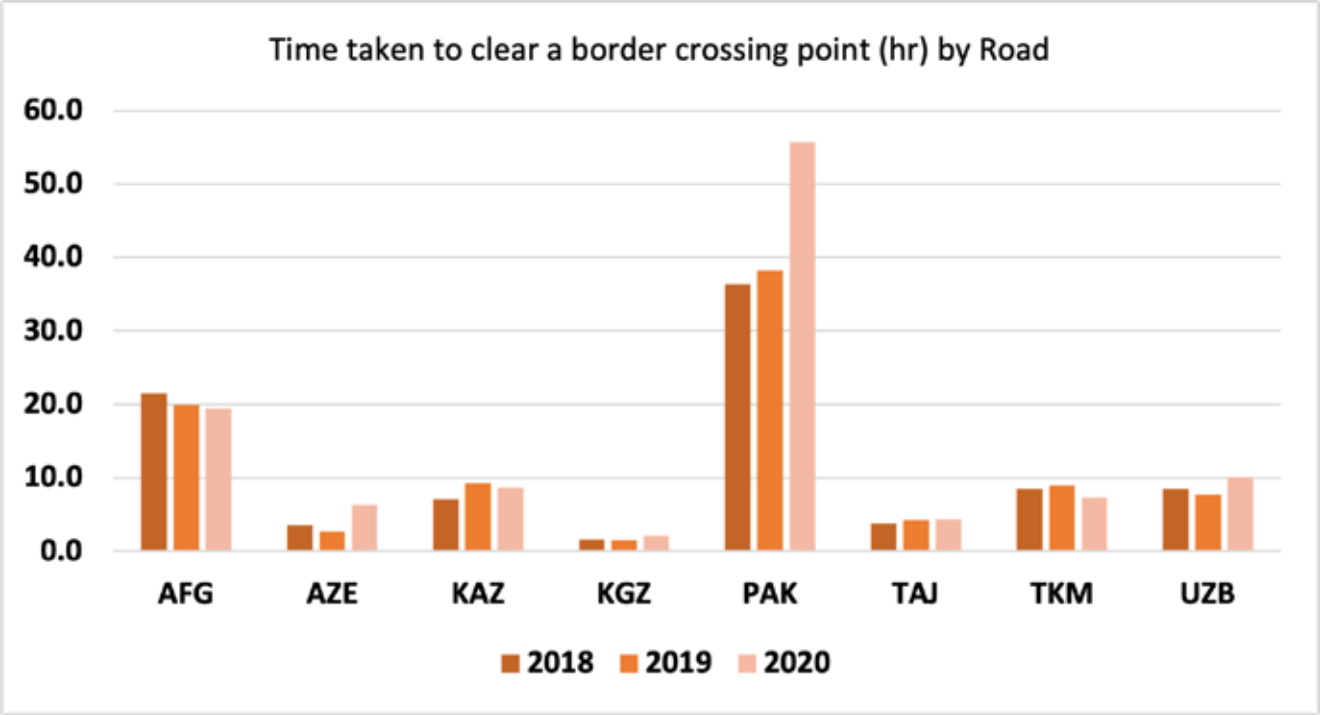
Source: **ADB (Asian Development Bank).** 2010–2020. Central Asia Regional Economic Cooperation Corridor Performance Measurement and Monitoring. In: ADB. Manila. [Cited 26 March 2022]. https://data.adb.org/dataset/central-asia-regional-economic-cooperation-carec-program-corridor-performance-measurement

Figure 53. Country-specific trade facilitation, cost and time of border crossing, speed of travel



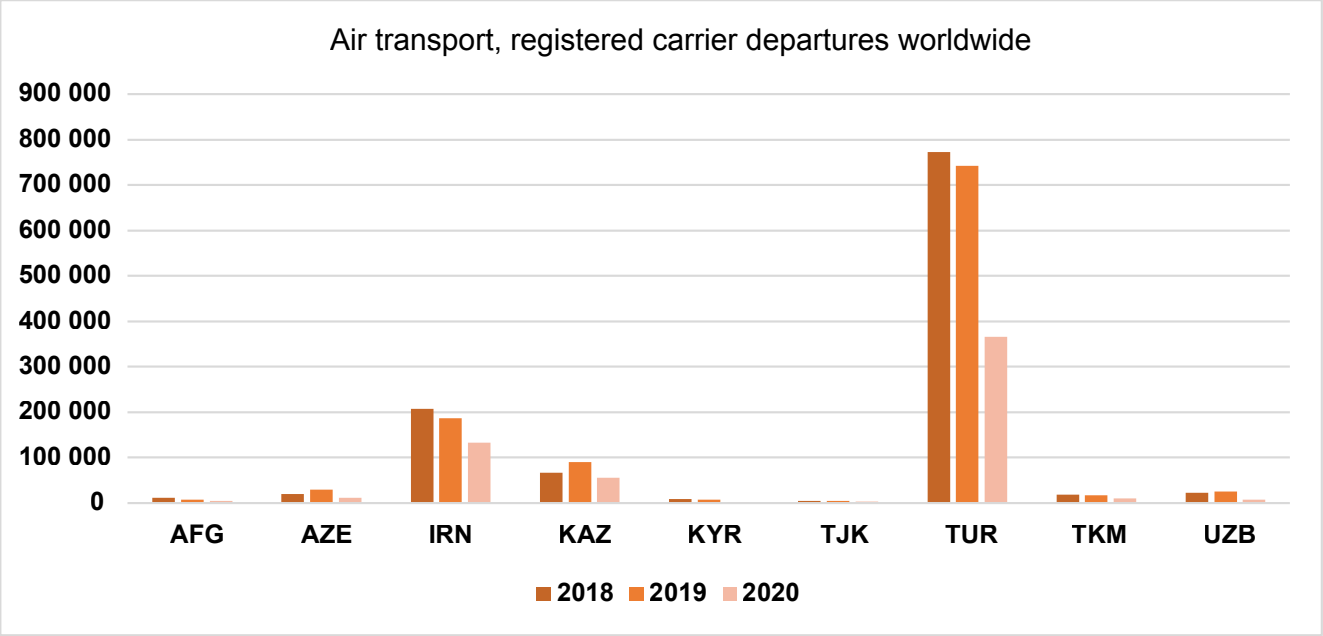


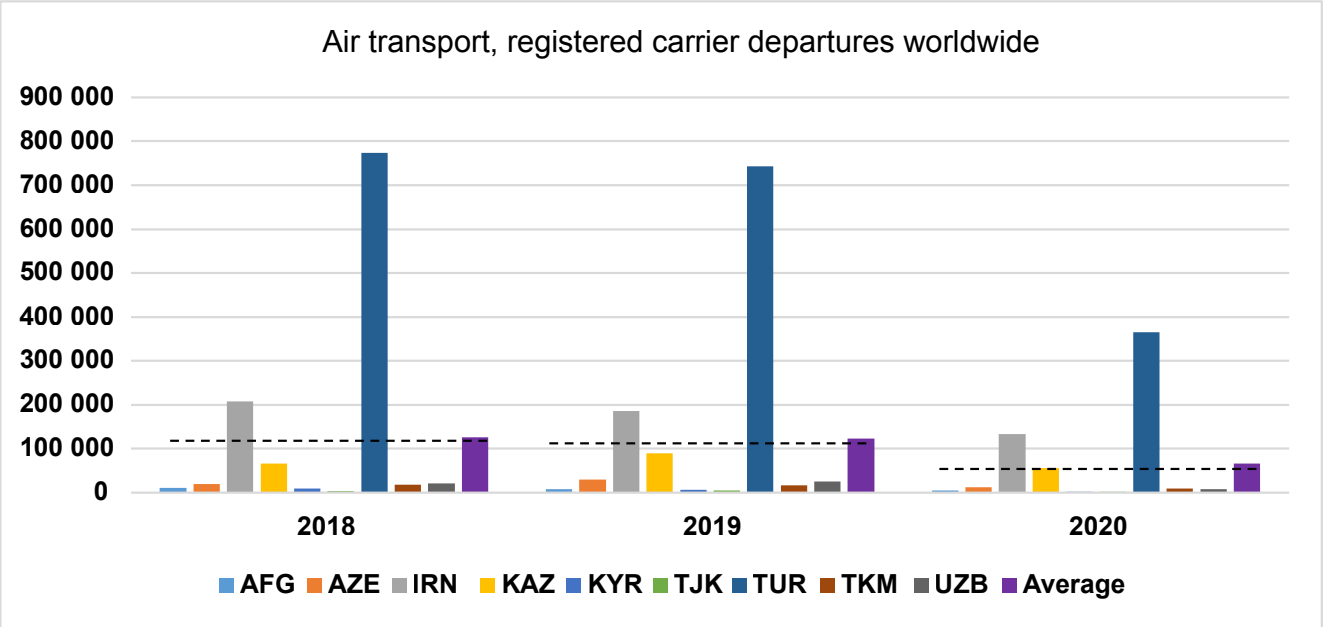




Source: **ADB (Asian Development Bank).** 2010–2020. Central Asia Regional Economic Cooperation Corridor Performance Measurement and Monitoring. In: ADB. Manila. [Cited 26 March 2022]. https://data.adb.org/dataset/central-asia-regional-economic-cooperation-carec-program-corridor-performance-measurement

Figure 54. Trade facilitation, air transport





Source: **World Bank. 2022a**. World Development Indicators Database. In: World Bank. Washington, DC. [Cited 25 May 2022]. https://databank.worldbank.org/source/world-development-indicators

5.6. Box 1. Definitions of the trade facilitation indicators

Indicators 1, 2 and 3 were obtained from the World Bank database (https://data.worldbank.org/indicator/IS.AIR.PSGR), while indicators 4, 5, 6, 7 were obtained from the Asian Development Bank (ADB) database (https://kidb.adb.org/).

1. Time to export, border compliance (hours) – border compliance captures the time (measured in hours) and the cost (measured in USD) associated with compliance with the economy's customs regulations and with regulations relating to other inspections that are mandatory for the shipment to cross an economy's border, as well as the time and the cost for handling that takes place at its port or border. The World Bank Doing Business project (doingbusiness.org) provides the data to calculate this indicator.

2. Time to import, border compliance (hours) – border compliance captures the time (measured in hours) and the cost (measured in USD) associated with compliance with an economy's customs regulations and with regulations relating to other inspections that are mandatory for the shipment to cross an economy's border. The time and cost for this segment include time and cost for customs clearance and inspection procedures conducted by other government agencies. The World Bank Doing Business project (doingbusiness.org) provides the data to calculate this indicator.

3. Air transport, registered carrier departures worldwide (number) – registered carrier departures worldwide are domestic takeoffs and takeoffs abroad of air carriers registered in the country. The air transport data represent the total (international and domestic) scheduled traffic carried by the air carriers registered in a country. For statistical uses, departures are equal to the number of landings made or flight stages flown. The International Civil Aviation Organization (ICAO), Civil Aviation Statistics of the World and ICAO staff estimates provide the data to construct this indicator.

4. Cost incurred at border crossing clearance (USD) by road – average total cost of moving 20 tonnes of cargo by road across a border from the exit point of one country to the entry point of another; both official and unofficial payments are included.

5. Cost incurred to travel a corridor section (USD per 500 km, per 20-tonne cargo) by road – average total costs incurred for a unit of cargo (a cargo truck with 20 tonnes of goods) travelling along a corridor section within a country or across borders; both official and unofficial payments are included.

6. Speed to travel without delay along CAREC corridors (km/h) by road – travelling speed only, a measure of the condition of the physical infrastructure of roads.

7. Time taken to clear a border crossing point (hours) by road – average length of time (hours) it takes to move 20 tonnes of cargo by road across a border from the exit point of one country to the entry point of another; aims to capture both the complexity and the inefficiencies inherent in the border-crossing process.

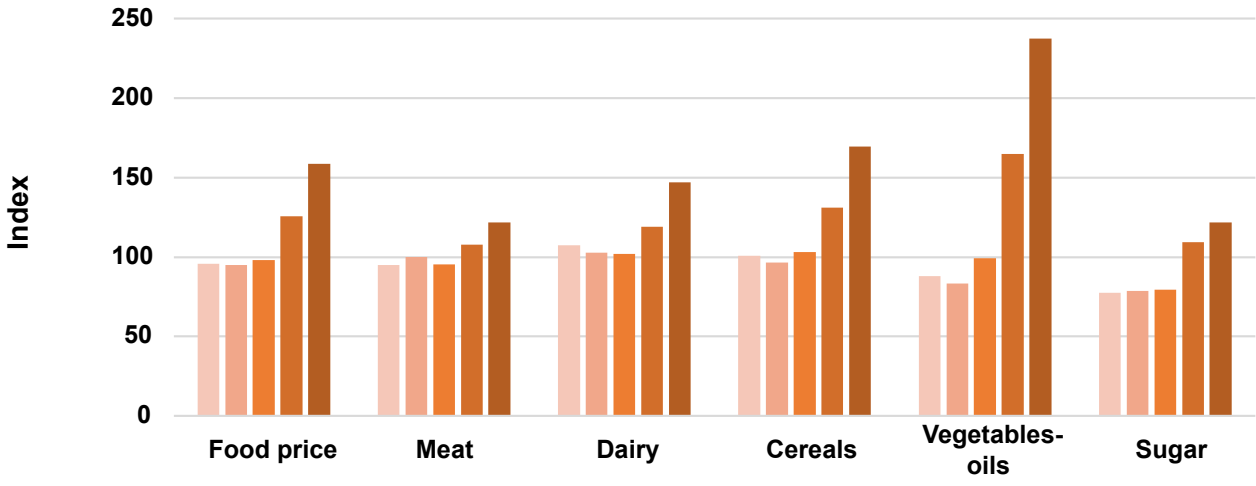
5.6.1. Trends in food prices

The FAO Food Price Index increased by 32 percent – from 95.1 in 2019 to 125.7 in 2021.3 The increase in the vegetable oil price, along with moderate increases in sugar, cereals, dairy, and meat prices, account for a significant part of this jump in food prices. About 86 percent of this increase took place during the second year of the pandemic (2020–2021). During the first year of the pandemic (2019–2020), meat and dairy price indices declined modestly. However, the prices skyrocketed in 2021, with about a 13 percent increase in meat and a 17 percent increase in dairy prices. With a 98 percent increase, the vegetable oil price index increased rapidly from 83.2 in 2019 to 164.9 in 2021. Of this increase, only 20 percent took place in

3 "The FAO Food Price Index (FFPI) is a measure of the monthly change in international prices of a basket of food commodities. It consists of the average of five commodity group price indices weighted by the average export shares of each of the groups over 2014–2016. The FFPI averaged 157.4 points in May 2022, down 0.9 points (0.6 percent) from April, marking the second consecutive monthly decline, though still 29.2 points (22.8 percent) above its value in the corresponding month of the previous year. The drop in May was led by declines in the vegetable oil and dairy price indices, while the sugar price index also fell to a lesser extent. Meanwhile, cereal and meat-price indices increased". A November 2013 article contains technical background on the construction of the FFPI.

2020. This confirms that the speed of price increase gained momentum in 2021. During the first year of the pandemic, the world cereal price was stable. However, in 2021, it jumped by 27 percent, due partly to disruptions in global agrifood value chains and fears that the pandemic would last longer than expected. Likewise, the sugar price jumped by 38 percent in 2021 compared with 2020.

Figure 55. FAO food and commodity price indices



	Food price	Meat	Dairy	Cereals	Vegetables-oils	Sugar
2018	95.9	94.9	107.3	100.8	87.8	77.4
2019	95.1	100	102.8	96.6	83.2	78.6
2020	98.1	95.5	101.8	103.1	99.4	79.5
2021	125.7	107.7	119.1	131.2	164.9	109.3
2022 (April)	158.5	121.9	147.1	169.5	237.5	121.8

Source: **FAO.** 2022c. World Food Situation. In: FAO. Rome. [Cited 24 May 2022]. http://www.fao.org/worldfoodsituation/foodpricesindex/en/

Consistent with the world food-price movements shown in Figure 55, food prices in ECO countries also rose after 2019 (FAO, 2022d). Kazakhstan and Kyrgyzstan witnessed a 17 percent increase in meat prices in April 2020 compared with the same month of 2019. This can be partly attributed to the rising cost of animal feed in the region. Uzbekistan also experienced an increase in meat prices, possibly due to the export bans on cattle from Kazakhstan and Kyrgyzstan. Kazakhstan and Kyrgyzstan witnessed increasing prices of milk and dairy products. Apart from Tajikistan, fruit prices registered large year-on-year monthly deviations in almost all Central Asian countries in 2020. Apart from Kazakhstan, vegetable prices fluctuated wildly in almost all countries of Central Asia and Azerbaijan.

Net food importing countries, including Kazakhstan, Kyrgyzstan, Pakistan, Tajikistan and Türkiye, experienced rising food prices, especially in 2021 (Table 2 and Table 3). Uzbekistan as a net food importer, however, witnessed a decline in food prices in 2021, due partly to the subsidized food prices. Pakistan, a net food importer, shows a distinct price movement, with a declining general price level and an increasing food price level in 2021.

The price trends reported by the Asian Development Bank (ADB, 2021) and summarized in Table3 underline rising food prices during 2020 and 2021. Average inflation in Kazakhstan during the first seven months of 2021 increased from 6.5 percent (for the same period a year

earlier) to 7.5 percent, including a 10.6 percent food-price increase, 6.2 percent for other goods, and 4.6 percent for services. In July 2021, a survey on inflationary expectations reported that 89 percent of respondents expressed their concern over food prices. In Kyrgyzstan, food-price inflation remained high at 11 percent, as supply chains were slow to recover. In Tajikistan, inflation averaged 9 percent in the first half of 2021, unchanged from the first half of 2020. Food prices rose by 10.9 percent. In Turkmenistan, import restrictions and resulting shortages have continued to boost inflation for food and other goods. In the first half of 2021, inflation in Uzbekistan decreased from 13.9 percent the previous year to 10.9 percent. This deceleration was partly due to improved food production, which moderated the rise in food prices from 17.5 percent to 14.5 percent. However, recent trends indicate a resurgence in food inflation. Inflation in Pakistan slowed from 10.7 percent in 2020 to 8.9 percent in 2021. Food price inflation stayed high, with rates of 12.5 percent in urban areas and 13.2 percent in rural areas. In Afghanistan, the exchange rate depreciated significantly, spurring inflation such that the price of flour has risen by an estimated 11 percent since mid-August 2020, and the price of rice by 9 percent. Afghanistan is especially vulnerable to increases in prices, as the country is highly dependent on food purchases by bilateral and multilateral development agencies. Rapidly rising world food prices risk what these agencies can afford (Lang and McKee, 2022).

Table 3. Price movements across ECO countries, 2020–2021

	Consumer price index	Food price index
Afghanistan	+	+
Azerbaijan	+	+
Kazakhstan	+	+
Kyrgyzstan	+	+
Pakistan	-	+
Tajikistan	+	+
Turkmenistan	+	+
Türkiye	+	+
Uzbekistan	-	-

Source: **ADB (Asian Development Bank).** 2021. Asian Development Outlook 2021 Update - Transforming Agriculture in Asia, September 2021.

The signs (+) and (-) in Table 3 denote a price increase and decrease, either within a given year or between the two years (2020 and 2021). Take, for example, Kazakhstan, where consumer price inflation with the (+) sign indicates that price inflation increased from 6.5 percent in the first seven months of 2020 to 7.5 percent for the same period in 2021 (ADB, 2021). In Pakistan, consumer price inflation with the (-) sign shows that inflation slowed from 10.7 percent in 2020 to 8.9 percent in 2021 (ADB, 2021). Food-price inflation with the (+) sign, on the other hand, indicates that, in 2021, food prices increased by 12.5 percent in urban areas and 13.2 percent in rural areas (ADB, 2021). The signs should be considered an indication of the direction of price changes in the period concerned.

6. Potential impact of the war in Ukraine

The war is expected to affect agrifood trade across ECO countries in two ways – first, in relation to the indirect effect of the war on global agrifood trade, and second, the direct effect of the war on agrifood trade in the ECO region.

6.1. Global agrifood trade

In 2020, the Russian Federation and Ukraine together accounted for a substantial part of global food trade – with 53 percent of sunflower oil and seeds, 27 percent of wheat, and 23 percent of barley trade (UNCTAD, 2022). Disruptions in trade and next-season agricultural production plans, together with the sanctions imposed on the Russian Federation, would therefore create difficulties for many economies with strong trade links to these countries. Significant shortfalls are anticipated if Ukrainian farmers are unable to apply fertilizers to their wheat crops, typically planted in spring. The situation could worsen if they are unable to harvest during the summer or if exports are disrupted due to damaged infrastructure (Shehadi, 2022). . Due to the conflict, between 20% and 30% of Ukraine's areas designated for winter cereals, maize, and sunflower seeds will either go unplanted or remain unharvested for the 2022/23 season (FAO, 2022d). In the case of the Russian Federation, disruptions to crops already planted do not appear imminent; however, uncertainties exist concerning the impact of export restrictions.

Supply shortages of fuels, grains, oilseeds, and fertilizers of which the Russian Federation and Ukraine are key global producers would raise commodity prices, which would in turn lead to a contraction in agrifood production in many economies. Constraints on oil and fertilizer imports from the Russian Federation, which is the second-largest oil exporter in the world and a major global supplier of fertilizers, are highly likely to lead to lower use and thus lower agricultural production, possibly leading to changes in crop plans (Berkhout, Bergevoet and van Berkum, 2022; Economics Observatory, 2022; IFPRI, 2022; UNCTAD, 2022). Furthermore, responding to the global trade disruptions and supply shortages of certain commodities, many economies would attempt to meet their input and commodity demands from other producing regions. Since such an adjustment is not imminent, in the medium term, global agrifood production might contract, aggravating already rising global food prices. This is a threat to the livelihoods of the poorest segments of population, as the poor spends a disproportionately higher share of income on food. It is also a threat for governments of food- and fuel-import dependent countries to face a deteriorating balance of payments.

6.2. ECO countries' agrifood trade

6.2.1. From global trade shock to ECO countries

The potential impact of a global trade shock on ECO countries' agrifood trade, including trade in live animals, dairy produce, animal and vegetable fats and oil, edible vegetables and roots, and cereals, is elaborated with reference to the global export and import shares of ECO countries.[4] Regarding exports of live animals, Türkiye had 0.4 percent of world exports

4 The data used in this section are from https://www.trademap.org/Index.aspx and https://comtrade.un.org/labs/data-explorer/

in 2019, which remained unchanged in 2020, despite the COVID-19 pandemic. However, Türkiye's share of world imports declined from 3 percent in 2019 to 2 percent in 2020. Kazakhstan followed Türkiye with a sharp decline in its exports, from a 0.5 percent share of world exports in 2019 to 0.1 percent in 2020, which is a relatively large decline in the export of live animals. A similar reduction took place in Kazakhstan's live-animal imports. The other ECO countries had negligible exports and imports of live animals globally, suggesting that the indirect effects on ECO countries in global terms will be small, but Türkiye's live-animal imports are likely to contract in the near future.

Regarding dairy exports as a proportion of total exports, Türkiye witnessed a decline from 0.8 percent in 2019 to 0.7 percent in 2020; and the Islamic Republic of Iran from 0.7 percent in 2018 to 0.5 percent in 2020. The export shares of Kazakhstan and Kyrgyzstan remained unchanged at 0.1 percent of total exports. Regarding import shares, the Islamic Republic Iran and Türkiye experienced a decline in 2020, while Azerbaijan and Kazakhstan showed a small increase from 2019 to 2020. The impact of the global trade shock on the ECO region is likely to be negligible.

Concerning animal or vegetable fats and oil exports, Türkiye is the only country to see an increase in its share of world exports, from 1 percent in 2019 to 1.4 percent in 2020. Kazakhstan and the Islamic Republic of Iran comprise negligible shares of world exports, while other ECO countries have no exports of this produce. Concerning imports, Türkiye increased its share, while the shares of Pakistan, the Islamic Republic of Iran, Kazakhstan, Uzbekistan and Azerbaijan remained at the same level. Afghanistan is the only country that showed a decline in its imports from 2019 to 2020. The figures suggest that Türkiye could suffer significantly from disruptions in global trade flow.

Regarding edible vegetables and roots exports, Türkiye increased its share from 1.7 percent in 2019 to 1.9 percent in 2020 (of the world's total). Afghanistan also increased its export share, but by a very small amount compared to Türkiye. The Islamic Republic of Iran, Kazakhstan and Uzbekistan showed a declining export share, while exports of Azerbaijan, Kyrgyzsta, and Pakistan remained unchanged during the 2019–2020 period. Regarding imports, Pakistan showed a significant increase, from 0.8 percent in 2019 to 1.2 percent of world imports in 2020, followed by Afghanistan (from 0.1 percent to 0.3 percent) and Türkiye (with an increase from 0.7 percent to 0.8 percent). Pakistan and Türkiye face the danger of disruptions in global trade channels, as they have relatively significant shares of exports and imports.

Regarding cereal exports, Pakistan, Kazakhstan and Türkiye experienced a slight reduction in 2020. As for imports, Türkiye experienced the largest decline in the ECO region. Pakistan and Uzbekistan saw imports rise in 2020. Azerbaijan, Afghanistan and Tajikistan did not see any change in imports of cereals in 2020.

6.2.2. From the Russian Federation and Ukraine to ECO countries

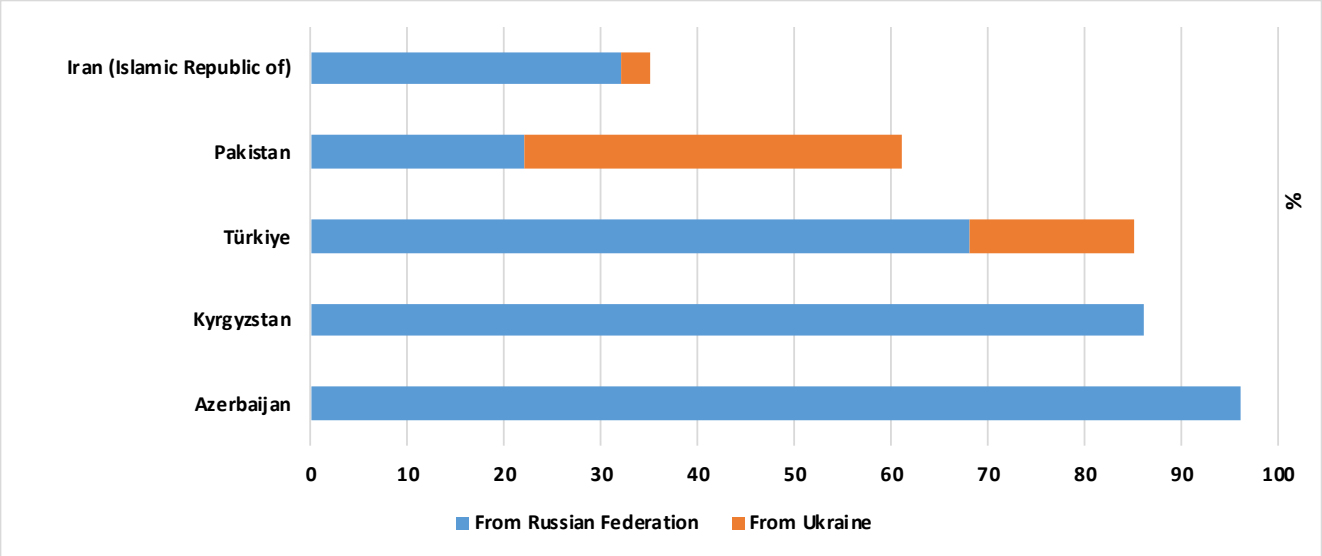
Several ECO countries may suffer from higher food and energy prices, as they have strong trade links with both the Russian Federation and Ukraine. Azerbaijan, Pakistan and Türkiye are highly exposed to the food-supply risks of the war. As of 2020, Türkiye imported 25.9 percent of its total wheat, corn, barley, colza, sunflower oil and seeds imports from the Russian Federation and Ukraine, followed by Pakistan (with 4.5 percent) and Azerbaijan (with 3.2 percent) (UNCTAD, 2022). The war-related import restrictions are expected to worsen food price inflation, diminishing household real incomes and increasing the number of people falling into food insecurity. This effect could be substantial, especially in Azerbaijan, Pakistan and Kazakhstan, where a larger part of people's disposal income is spent on food (Economics Observatory, 2022).

The ongoing fallout from the COVID-19 pandemic has already driven up food prices (IFPRI, 2022). On top of that, the war in Ukraine has disturbed commodity markets with potential food-supply shortages. This could further drive up the already high food price inflation and have severe repercussions for ECO countries that rely on food imports. (Table 2).

Together, the Russian Federation and Ukraine accounted for 27 percent of global wheat exports in 2020, and 30 percent in 2021. In 2020, the Russian Federation was the world's leading wheat exporter, responsible for approximately 18 percent of global exports, and it nearly reached 20 percent in 2021. . Ukraine accounted for a further 9 percent in 2020 and 10 percent in 2021 (World Bank, 2022b). Concerning wheat, five ECO countries (shown in Figure 56) are highly dependent on imported wheat from the Russian Federation and Ukraine (FAO, 2022d). Even prior to the conflict, these countries were already grappling with the negative effects of high international food prices. With 96 percent of its wheat imports from the Russian Federation, Azerbaijan stood as the top importer, followed by Kyrgyzstan (86 percent), and Türkiye (85 percent, of which 68 percent was from the Russian

Federation and 17 percent from Ukraine). Türkiye imports wheat from two countries for re-export purposes, as domestic consumption is largely satisfied by local wheat production. Türkiye's wheat import dependency ratio is unlikely to pose risks to the availability of wheat for domestic human consumption. Pakistan's wheat imports from the Russian Federation and Ukraine together accounted for around 60 percent of total wheat imports; and the Islamic Republic of Iran's imports accounted for 35 percent of total wheat imports. The ECO countries in Figure 56 are highly exposed to the risks of war..

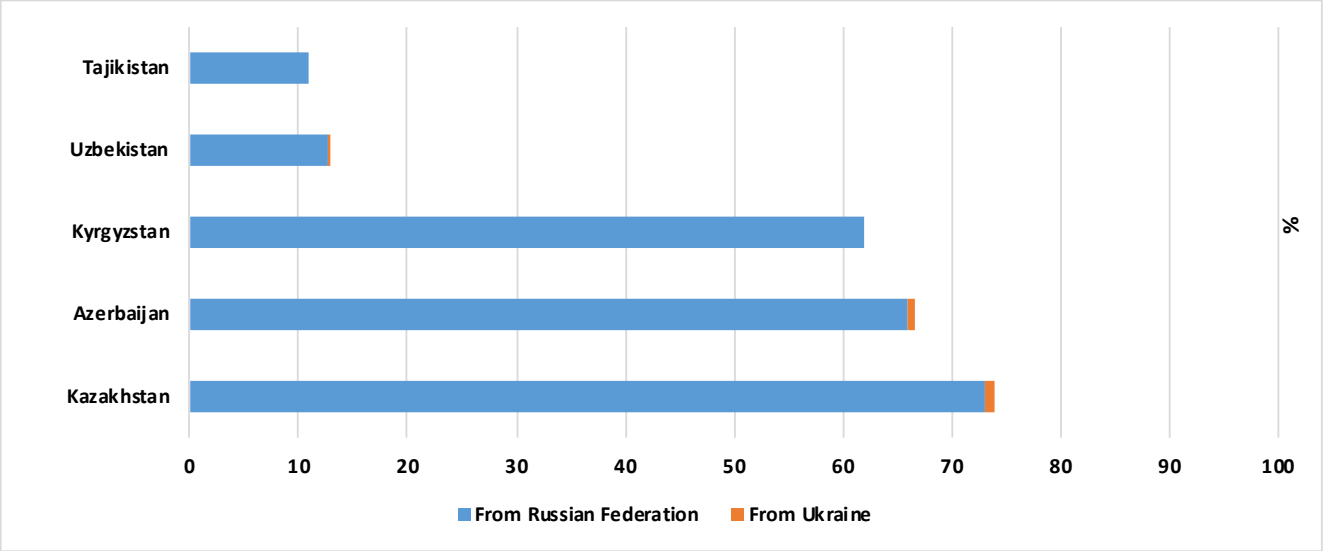
Figure 56. Wheat-import dependency among net importers in ECO countries, 2021 (percent)



Source: Adapted from FAO, 2022d. https://www.fao.org/3/cb9236en/cb9236en.pdf

Concerning fertilizers, three ECO countries are highly dependent on imports from the Russian Federation (Figure 57). Kazakhstan is the top importer, with 73 percent of its fertilizer imports coming from the Russian Federation, followed by Azerbaijan (66 percent), and Kyrgyzstan (62 percent). At 13 percent, Uzbekistan is modestly dependent, followed by Tajikistan with 11 percent (FAO, 2022d). Fertilizer import dependency further exposes agricultural production in these five ECO countries to the risks of the war. Supply shortages and ensuing price increases would lead to a deterioration in the food security situation, as food-price inflation would reduce real incomes and hence access to food.

Figure 57. Fertilizer import dependency, 2021 (percent)



Source: Adapted from FAO, 2022d. https://www.fao.org/3/cb9236en/cb9236en.pdf

Table 4 summarizes the top ten trade links of Ukraine across five groups of agricultural products.5 With respect to trade in cereals, Türkiye, the Islamic Republic of Iran and Pakistan are among Ukraine's top ten export markets. Türkiye was the sixth-largest export market for Ukraine (5 percent of its exports) and the 16th largest import market for Ukraine (1.2 percent of its imports), for cereals in 2020. Pakistan was the 11th largest export market for Ukraine (2.7 percent of its exports) and the ninth-largest import market for Ukraine (3.9 percent of its imports), for cereals in 2020. As of 2021, the top ten import markets of Ukraine for cereals include two ECO countries – Kazakhstan and Pakistan. Uzbekistan, Kazakhstan and Azerbaijan were among Ukraine's top ten export markets for live animals. Concerning Ukrainian meat exports in 2020, Azerbaijan, Kazakhstan and Kyrgyzstan were among the top ten export markets. As of 2020–2021, Kazakhstan and Azerbaijan were among the top ten export markets of Ukraine for dairy products, eggs, honey and edible animal products. As of 2020, none of the ECO countries were among the top ten animal or vegetable fats and oil importers from Ukraine. Türkiye, however, was the 13th largest market for Ukraine's exports of animal or vegetable fats and oils in 2020. Pakistan and Türkiye were among the top ten markets for Ukraine's exports of edible vegetables and roots and tubers. In 2020, Türkiye was the largest exporter of vegetables to Ukraine (33 percent of Ukraine's vegetable imports came from Türkiye), while Uzbekistan was the tenth-largest vegetables exporter to Ukraine (2 percent of Ukraine's vegetable imports).

Table 4 helps to identify those agrifood commodities that account for a significant part of trade between Ukraine and ECO countries during 2020–2021. The focus of the trade between Ukraine and Azerbaijan, for example, was live animals, meat and dairy products; between Ukraine and the Islamic Republic of Iran, the focus was on cereals; between Ukraine and Kazakhstan, the focus was on cereals, live animals, meat and dairy products. It also covers the scope of trade in a group of agrifood products between Ukraine and the ECO region. Concerning cereals, for example, Ukraine had a significant trade with the Islamic Republic of Iran, Kazakhstan, Pakistan, and Türkiye. With respect to live animals and meat, Ukraine had ample trade with Azerbaijan, Kazakhstan, Kyrgyzstan, and Uzbekistan. Table 4 further

5 The data referred to in this paragraph are from World Bank Group (2022).

reveals that Afghanistan's, Tajikistan's and Turkmenistan's trade linkages with Ukraine are not worth considering. The war in Ukraine is highly likely to impact trade of cereals and live animals with the ECO region – four ECO countries have strong trade links with Ukraine.

Table 5 indicates that the Russian Federation occupies a significant place in agrifood trade for the ECO region. Its exports to Kazakhstan and Azerbaijan are especially important, followed by Uzbekistan. Kazakhstan and Türkiye lead in terms of the Russian Federation's import of products from at least three commodity groups, followed by Azerbaijan with imports from two commodity group, and Uzbekistan and Kyrgyzstan with imports from a single commodity group. It also indicates that the Russian Federation has significant agrifood trade linkages, especially with respect to dairy products, and vegetables and roots, as suggested by the number of ECO countries with concurrent exports and imports (denoted by E and I). Azerbaijan, Kazakhstan, and Kyrgyzstan lead in the trade of dairy products with the Russian Federation, while Azerbaijan, Türkiye, and Uzbekistan lead in the trade of vegetables and roots. Kazakhstan and Türkiye are involved concurrently in the trade of cereals with the Russian Federation. The density of agrifood trade linkages (that is, the number of exports [E] and imports [I] placed in Table 4 and Table 5) suggests that ECO countries are involved in more substantial trade with the Russian Federation than with Ukraine. This observation further suggests that the ECO region is moderately exposed to the risks of the war in Ukraine, as the trade channels between the Russian Federation and the ECO region have not seen sudden disruptions.

Table 4. Ukraine's top ten agrifood trade linkages with ECO countries, 2020–2021

	Cereals	Live animals/ meat	Dairy products	Animal fat/ vegetable oils	Vegetables/ roots
Afghanistan					
Azerbaijan		E	E		
Iran (Islamic Republic of)	E				
Kazakhstan	I	E	E		
Kyrgyzstan		E			
Pakistan	(E, I)				E
Tajikistan					
Turkmenistan					
Türkiye	E			E	(E, I)
Uzbekistan		E			I

Notes: E and I denote Ukraine's exports to and imports from an ECO country. For example, in the first column, Pakistan (E, I) stands alone as an ECO country to which Ukraine has significant cereal exports and from which Ukraine imports cereals significantly. For the underlying data in this table, see https://comtrade.un.org/labs/data-explorer/. The standard international trade classification (SITC) codes for these five commodity groups are (041, 042, 043, 044, 045, 046, 047, 048) for cereals; (001, 011, 012, 016, 017) for live animal and meat products; (022, 023, 024, 025) for dairy products; (223, 411, 421, 422, 431) for animal fats and vegetable oils; and (054, 056, 057, 058, 059) for vegetables and roots.

Source: Derived from the United Nations Comtrade Database. 2022. https://comtradeplus.un.org/TradeFlow

Table 5. Russian Federation's top ten agrifood trade linkages with ECO countries, 2020–2021

	Cereals	Live animals/ meat	Dairy products	Animal fat/ vegetable oils	Vegetables/ roots
Afghanistan				E	
Azerbaijan	E	E	(E, I)	E	(E, I)
Iran (Islamic Republic of)					
Kazakhstan	(E, I)	(E, I)	(E, I)	(E, I)	E
Kyrgyzstan		E	(E, I)		E
Pakistan	E				E
Tajikistan		E	E	E	
Turkmenistan			E		E
Türkiye	(E, I)		I	E	(E, I)
Uzbekistan		E	E	E	(E, I)

Note: E and I denote the Russian Federation's exports to and imports from an ECO country.

Source: Derived from the United Nations Comtrade Database. 2022. https://comtradeplus.un.org/TradeFlow

6.2.3. Outlook and policy recommendations

The outlook is gloomy for agrifood trade across the world, but especially so for developing countries that were heavily hit by the COVID-19 pandemic. The war in Ukraine has further aggravated the situation due to potential shortages in global food supply. Together, two subsequent shocks to the world economy make the global agrifood markets more fragile and the ECO countries more exposed to risks from disruptions in two trade channels. The first is the direct agrifood trade channel between ECO countries and the Russian Federation and Ukraine. The composition of agrifood exports and imports between the ECO region and the Russian Federation and Ukraine will determine the extent of the impact on ECO economies. The second is the indirect channel from the Russian Federation and Ukraine to ECO countries via the global agrifood value chains. In this case, the impact on ECO countries will be apparent through the immediate effects of the shocks on the global agrifood supply.

Drawing on recent developments in the world's food and agricultural situation, several policy recommendations can be made to improve agrifood trade across the ECO region. First, digitalization in trade services and logistics promises a wide range of opportunities to enhance the resilience of agrifood value chains. Digital technologies would pave the way for uninterrupted trade. Countries that are advanced in digital access, including mobile and internet connectivity, could quickly resort to alternative arrangements for commerce and businesses, bring operational flexibility along the agrifood value chains, and connect the rural – urban supply chains. To accomplish digitalization in trade, long-term investment in ICT infrastructure is vital, attracting foreign direct investment that promotes technology transfer. Furthermore, national ICT policy and investment frameworks should be in place to establish an enabling infrastructure and digital environment (with skilled labour and technical knowledge).

Second, the war in Ukraine has confirmed the importance of keeping world trade channels open to ensure stability in agrifood chains and hence in the livelihoods of populations, as food prices are triggered in many economies that have strong trade linkages with the Russian Federation and Ukraine. Risk management strategies are critical to respond to supply shortages and price increases, for example, by developing low-risk critical supplies to pass clearance controls quickly. The continuity of agricultural production, diversification of transportation and trade channels, and reaching final consumers, should be the key elements of any risk management strategy. Diversification is especially critical for food import-dependent countries. Given that the Russian Federation was the top global wheat exporter in 2020 and Ukraine ranked fifth, countries heavily dependent on both for their food imports will be particularly vulnerable.

Third, ample scope exists to improve trade capacity and reduce risks from disruptions to trade channels. Long-term investments in safe trade systems offer significant gains in protecting health and market access. Promoting innovative public–private partnerships would pave the way for the establishment and effective implementation of international sanitary and phytosanitary standards. Customs authorities, relevant agencies, and private firms responsible for sanitary and phytosanitary standards should collaborate to establish special procedures for the expedited clearance of essential medical goods, food products, and agricultural inputs. Aid for trade is an instrument to strengthen trade facilitation measures, and to streamline and simplify trade procedures (operational, technical, and legal) for international trade.

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