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AGRIFOOD SUPPLY PATTERNS IN THE WESTERN BALKANS IN THE CONTEXT OF CRISIS

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1. INTRODUCTION

The ongoing challenges, such as the escalated war in Ukraine since February 2022, and other current conflicts, following the Covid-19 pandemics, pose a significant threat to global food security. Agrifood systems remain highly susceptible to disruptions stemming from these events, limiting their ability to provide nutritious, safe, and affordable diets for all, and achieve the targets outlined in Sustainable Development Goal 2 (SDG 2). The 2023 report from the Food and Agriculture Organization (FAO) on the State of Food Security and Nutrition in the World indicates that global hunger remains well above pre-pandemic levels. In 2022, 122 million more people experienced hunger compared to before the COVID-19 pandemic (FAO, 2023).

Inequities arising from high prices, limited access to crucial agricultural inputs, rising production costs, and economic disruptions significantly impact the production and incomes of farmers in Western Balkan countries. Additionally, these challenges affect the availability and affordability of food for consumers. Despite the Western Balkan countries—Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, and Serbia—joining the group of upper-middle-income countries, they remain heavily dependent on agriculture. The sector employs up to one-third of the labour force and is a crucial source of welfare.

Given the high rurality and low farming intensity in this region, the agriculture sector maintains a relatively low carbon footprint. This allows governments to prioritize enhancing competitiveness in their policy agenda. However, efforts to green agriculture remain important to ensure access to the EU market and for the competitiveness of agriculture, rural development, and food and nutrition security (WB, 2023).

This report aims to provide an assessment of the agriculture and rural development situation, focusing on key challenges and necessary coping strategies to overcome food insecurity. The report's findings identify key pillars of resilience that require immediate investment to empower both farmers and consumers to absorb and recover from supply shocks, informing programming decisions and advocacy efforts.

The report utilizes a cross-country analysis spanning from 2010 to 2021 or 2022 depending on data availability (latest available data were utilized). Additional support comes from secondary data and documented studies conducted in the last two years, along with a case study focused on Albania to elucidate the dimensions of the shocks resulting from the war in Ukraine.

The report is organized into six sections. The second section conducts a literature review on the impacts of several shocks namely the war in Ukraine and the effects of Covid-19 pandemics. The third section outlines the methodology employed in the study. Comparative analyses are presented in the fourth section, while the fifth section delves into a case study where various findings from studies are condensed to highlight vulnerabilities in Albania arising from the shocks. Section six provides a summary of the main findings and offers recommendations for programming decisions and advocacy efforts.

2. LITERATURE REVIEW

2.1 FOOD SECTOR AND THE COVID-19 IMPACT

The restrictive measures, aimed at curbing the spread of the virus, have generated extensive disruptions across various sectors of the economy. As a consequence, employment has suffered, demand for goods and services has declined, supply chains have been strained, trade volumes have decreased, and economies have experienced GDP contractions. According to various studies, including one by the International Monetary Fund (IMF) (2020), the world has faced its most severe economic downturn since World War II. Specifically, in the initial months of the pandemic, the global economy experienced a 5.2% reduction in GDP, marking the steepest recession curve, as noted by Canuto (2020).

A critical economic challenge arising from the high degree of globalization is the disruption of global value chains and international trade. This disruption has arisen due to production hindrances and disturbances in demand and investments, as highlighted by Baldwin and Freeman (2020). The United Nations' analysis in 2020 regarding the impact on trade and development pointed out that developing countries bear a severe toll in terms of increased poverty rates and food insecurity (UN, 2020). Moreover, the COVID-19 pandemic, characterized by higher unemployment, reduced income, and increased uncertainty, has had an adverse impact on aggregate demand, subsequently affecting consumption negatively, as noted by Baldwin and Mauro (2020).

Western Balkans Countries (WBCs) were significantly affected by Covid-19, although in a different scale. Various reports (OECD, 2021[1]: WB 2021[2], illustrated the quick effect of the crisis. Economic activity contracted by an estimated 3.4 percent in 2020. The economy began to recover in Q3 2020, supported by a partial easing of stringent lockdowns and the revival of global demand as vaccine development advanced. Countries provided guarantees on loans and/or introduced dedicated working capital credit lines. Measures to subsidize rent payments and employee salaries were also implemented in major part of the countries. In addition, there were introduced measures towards the deferral of various payments, such as income tax, VAT, social security and other utilities that ease SMEs liquidity constraints. Furthermore, most countries introduced a moratorium on debt repayments (OECD, 2021).

Most of the WBCs depend on the import of farm inputs – such as seeds, fertilizer, pesticides, fuel – for agriculture. Access to inputs (at least in terms of quantity) was not deeply affected, due to existing inventories prior to the crisis and to the creation of emergency corridors for the transport of priority goods during the first wave of the pandemic. Arable land use not only was not reduced but even increased in some countries. Favourable weather conditions made possible a normal yield trend in the year 2020. Food sales and price trends varied between periods and countries. In the beginning food sales increased due to panic buying, while green market and vendor sales contracted. Trade activity shifted temporarily, and imports level experienced a decline. Tourism was negatively impacted by market restrictions, which brought negative trends in imports and a part of food processing industry sales.

1 https://www.oecd.org/south-east-europe/COVID-19-Crisis-Response-Western-Balkans.pdf

2 World Bank. 2021. Western Balkans Regular Economic Report, No. 19, Spring 2021: Subdued Recovery. © World Bank, Washington, DC. http://hdl.handle.net/10986/35509 License: CC BY 3.0 IGO."

Summarising, the economic effects of crises upon agriculture can be classified into two categories: i. direct effects for producers; and ii. indirect effects for rural households dependent on remittances. While the effects at the level of agricultural producer might be roughly grouped into demand- and supply-driven, migration-dependent rural households might be affected by labour market disruptions within a certain region, in other regions or in neighbouring countries.

Rural population experienced a shortage of incomes sources due to inability to carry the usual temporary and seasonal migrant labour activities. Farmers communities which usually are included in direct sales and informal activities were affected mostly. However, the largest part of the value chains continues to be functional and enable optimal activities. The reports (FAO, 2022[3]) reveal that no country in the region faced a food crisis while production and market trends remained relatively unchanged.

In the case of Albania, the economy contracted significantly in 2020, largely attributed to decreased consumer spending, as indicated by Harri et al. (2020). The pandemic did not only affect household incomes and informal wages but has also impacted remittances, which constitute a significant portion of household consumption spending in Albania as well as in other WBCs. There was observed a 20% drop in remittances in the wake of the economic crisis caused by COVID-19, further contributing to reduced demand and affecting the well-being of many remittance-dependent households (World Bank's, 2020a,b; FAO, 2020a).

The agriculture sector has not been spared, as outlined by FAO (2020b,c), citing contractions to agricultural markets due to fluctuations in food demand and supply amid the dynamic circumstances of the pandemic. Border restrictions have hindered the movement of migrant workers and disrupted trade transactions, posing a potential threat to food availability. Trade disruptions have left numerous farmers struggling to find export markets, resulting in product wastage, as highlighted by the United Nations (2020). The growing uncertainty surrounding the negative impacts of COVID-19 has also influenced the demand for food products, creating an imbalance in the food market and causing significant losses for farmers, as observed by Elleby et al. (2020). Additionally, the closure of hotels and restaurants, which typically purchase substantial quantities of food from various farmers, has further contributed to the decline in demand for food products.

At the onset of the pandemic, food supply chains suffered disruptions, changing market demands and increasing transaction costs. In Albania, the COVID-19 pandemic has brought about a range of effects across various sectors, as outlined by the DSA (2021). Firstly, disrupted supply chains have been noted in certain sectors, leading to increased food losses and subsequent waste of products. This disruption has been exacerbated by travel restrictions and measures, which have raised costs for wholesalers attempting to access wholesale markets, particularly impacting those engaged in informal activities.

Moreover, the closure of HoReCA (Hotel/Restaurant/Café) establishments has resulted in price shocks for high-value products and significant losses, with industries such as food processing, including wine production, bearing a disproportionate burden. The pandemic's effects on health and the movement of the labor force have also caused delays in critical agricultural processes such as harvesting and planting, as well as routine agricultural services.

Furthermore, small-scale producers selling field vegetables informally have experienced a reduction in sales, while off-farm laborers have faced decreased income, leading to heightened food security concerns, particularly regarding staple foods. These combined effects underscore the multifaceted challenges that Albania has encountered as a result of the COVID-19 pandemic, highlighting the need for comprehensive strategies to address both immediate and long-term impacts on various sectors of the economy and society.

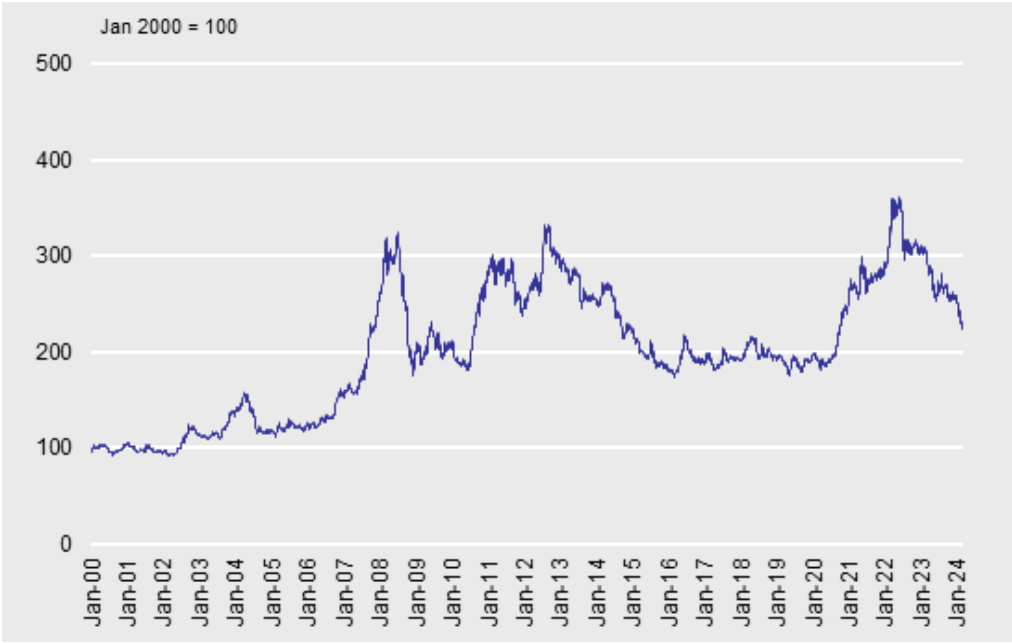
3 https://www.fao.org/3/cb7907en/cb7907en.pdf

2.2 THE EFFECT OF THE UKRAINE WAR

While during 2022, Covid-19 pandemics and its effects were being phased out, another major shocked hit the world. In addition to the Covid-19 pandemic, the war in Ukraine has had serious consequences in every economy regardless of their income level. The economic impact of the crisis in Ukraine and the sanctions to which the Russian Federation is exposed by the EU are negatively affecting the economies of the Western Balkans (WB), and the negative effects were reflected in a much shorter time than during the 2007 Global Economic Crisis and pandemic caused by coronavirus. Like the implemented lockdowns contributed to the slow-down of economic activities, leading to shocks from both supply and demand sides, the war has also been taking its toll on the sector.

Before the war, Ukraine relied on sea transport for 90% of its agricultural exports, but the Russian blockade of Black Sea ports during the conflict halted exports. EU's 'solidarity lanes' and UN-Turkey initiatives eased port blockages, boosting exports and lowering food prices. Russia's withdrawal from the Black Sea Grain Initiative in July 2023 caused export decline and price hikes, destabilizing global food supply. International Grains Council data (Figure 1) shows a significant price surge in March 2022, followed by declines post-solidarity lanes establishment and further falls post-Black Sea Grain Initiative. Prices fluctuated with uncertainty but rose sharply after Russia's withdrawal from the initiative (EC, 2023).

Figure 1: IGC Grains and Oilseeds Index (GOI)



Source: International Grains Council (IGC), 2024

The Ukrainian agriculture is very important due to the huge dimensions of the country and the large agriculture orientation especially in commodity production. According to EC (2023[4]) in 2021 Ukrainian farmers sowed almost 17 million hectares of spring crops. That is more than the combined area of Austria and Czech Republic. However, following the start of the war, in 2022 farmers sowed 22% less. The area not sown – 2.8 million hectares – is almost as large as Belgium. The impact of the war on global food markets is so severe because Ukraine is one of the top agricultural exporters in the world, possessing some of the most fertile land on earth. Ukraine is the world's largest exporter of sunflower oil (50% of world exports), the third largest one of barley (18%), the fourth largest one of maize (16%) and the fifth largest one of wheat (12%). In 2021 Ukraine exported cereals worth almost $12 billion (about €11.5 billion) (ibid).

Apart from the fact that cereals from these countries are imported from the WB, as well as energy from Russia, the extent to which the crisis will affect the economies of the WB will depend on the duration of the crisis, import of energy and further inflationary pressures. According to WB (2023), growth in the Western Balkans decelerated over the course of 2022 and into 2023. Recession in industrial production was mostly evident in Bosnia and Herzegovina, North Macedonia, and Serbia. Demand for services has proved more resilient, in particular for travel, which has benefited Albania, Kosovo, and Montenegro. Inflation pressures in the WBCs are easing, although price pressures persist (ibid).

Agrifood systems and poverty are more vulnerable to rising fuel and fertilizer prices, whereas hunger and diet quality are more affected by higher food prices. High prices of fertilizers also affect the rise of prices of agricultural and food products. Food prices experienced a rapid and substantial increase during the first half of 2022. These price increases were driven by a combination of factors, including the war in Ukraine, sanctions imposed on Russia, fertilizer export bans, and ongoing disruptions in global supply chains caused by the COVID-19 pandemic. Given that Ukraine and Russia are key suppliers of some food products and also inputs, particularly fertilizers, the increase costs/prices of fertilizers were further reflected in higher food costs/prices (Arndt et al, 2023). The consequences of these disruptions disproportionately affect low-income regions that are particularly vulnerable to food supply shortages and price increases. Higher commodity prices can have adverse effects on vulnerable populations in developing or emerging economies, including increased food insecurity and poverty levels. WB economies are among the poorest ones in Europe, and as such where especially exposed, given the high levels of poverty, and also high reliance on imported food and inputs for agriculture sector.

The food-security challenges resulting from the conflict in Ukraine are not solely due to direct agricultural supply disruptions. Instead, they result from a combination of factors operating through various channels. These channels include adverse weather events, distortions in energy and fertilizer markets, and domestic policies adopted by countries globally. These combined factors have also had a significant cumulative effect on global food supply. While direct agricultural supply disruptions in Ukraine are undoubtedly a critical factor, the broader dynamics related to energy, fertilizer, and trade restrictions have made the situation more challenging (Chepeliev et al, 2023).

Previous studies have shown that urban poor are likely to suffer most because of the Russia-Ukraine conflict, especially in those countries where social protection and food subsidies are missing (Abay et al, 2023). Indeed, that is also the case of WBCs, where most farms are (semi)subsistence farms that cover part or most of their food needs from their farms, thereby the exposure of urban residents is higher, thereby also this study is based on a survey targeting urban consumers in respective countries.

4 https://www.consilium.europa.eu/en/infographics/how-the-russian-invasion-of-ukraine-has-further-aggravated-the-global-food-crisis/#:~:text=Lasting%20effects%20of%20the%20war,almost%20as%20large%20as%20Belgium.

3. METHODOLOGY

The study aims to address a series of research objectives and uses a set of datasets, instruments, methods and set of indicators to provide analytical information about the selected value chain trends. Various indicators were used in order to assess vulnerabilities related to food self-reliance which means the ability of a country to ensure food availability through domestic food production and import.

The first component is the socioeconomic analyses. The analyses is carried by focusing first on main economic contribution in terms of GDP and labor. In addition, social variables are scrutinized for capturing inequality and poverty dimensions through secondary data. The main source of data are World Bank, FAOSTAT and EUROSTAT indicators.

The agriculture sector analyses focus on production trends for key categories of agri-food products such as cereals, milk/dairy etc. In addition, since Ukraine war affected mainly costs and prices, producer price indexes and consumer price indexes (in general and for food specifically) are analyzed. The impact of the pandemic is viewed through the vulnerabilities in terms of access to food. A separate subsection is carried in order to analyze self – sufficiency trends (in the context of both shocks) by providing a comparative analysis of the supply per capita. Self-reliance in sector level is calculated by estimating the share of the import to overall supply and production to overall supply. The FAOSTAT database data are used in order to have a common framework for the reported trade and production quantities and values in the recent decade.

Efforts to address the effects of the war in the WBCs internal food markets are identified with focus on agriculture policies and other market interventions remedies. A comparative agriculture policy analysis for the latest available years for the WBCs is presented in Section 4. The overall value of budgetary support policies and EU categories namely direct payments, and/or agriculture and rural development payments and other payments following specific classifications such as OECD ones will be explored. In order to address the differences in size and structure, the comparative analyses of the budgetary support is done using the share of support (as a percentage) to GDP (e.g. GVA), inhabitants and utilized land area.

A case study is used in order to provide a more detailed analyses of the effects of both pandemic and war in Ukraine. For this purpose, extensive databases from other relevant surveys carried out with the involvement of the authors/contributors of this report have been considered. Therefore, the case study section is based on an in-depth specific country (Albania) analysis. The Albanian case is structured using literature research and review of earlier or recent farm surveys related to the impact of Covid and Ukraine war.

The following databases will be used for the case study of Albana:

- Structured survey with 137 MARD (Ministry of Agriculture and Rural Development) agriculture extension services. MARD agriculture extension services specialists are diffused throughout Albania and are well-informed about latest development for all major agri-food value chains. Through the survey was assessed the perceived Covid-19's impact on production, farm sales (quantities), prices access to inputs, advice and investments decisions. The survey was carried out by DSA[5] during 2021.

- Findings from a structured rapid survey with 535 farmers carried out by DSA during 2021. The survey contains data on farmers perception of Covid-19 impact.

5 Note: Authors of this report have contributed to DSA surveys whose data have been used in the analysis of this report.

- Findings from in-depth interviews carried out by the experts who contributed to this report which took place with value chain actors
- A structured farm survey carried out by DSA during 2023 aiming at assessing Ukraine war impact.
- A structured survey carried out during 2023 aiming at determining the factors that influence migration from rural areas in Albania.
- A structured survey carried out with consumers during 2022 in the aftermath of the Ukraine war.

Secondary data from international databases as well as data from the different structured surveys were subject to descriptive statistical analysis – the findings have been processed and presented in way that can be easily understood by the audience, including both policy makers and public at large.

4. WESTERN BALKAN TRENDS

4.1 LIVING CONDITIONS AND FOOD POVERTY IN WBCS

The level of living conditions and inequality in WBCs represents a concern. In the EU, the income of the top population quintile was estimated 5 times the size of the income of the bottom population quintile in 2021. The income of the top population quintile in all WBCs varies from 6 (Albania and North Macedonia) and 14 times (Kosovo) the size of the income of the bottom population quintile in the year for which the latest data is available. This share has been shrinking in the recent 6 years with approximately 1% in average for all the region.

The Gini coefficients for all the WBCs were higher than in the EU, suggesting that income disparities were greater in the WB countries, ranging from 31.4 in North Macedonia (2020 data) to 44.2 in Kosovo (2018 data). The index has been reducing during the recent years with more than 4 percent on average.

The poverty threshold shown as a monthly income, is ranging in 2021 among the WBCs from the equivalent of EUR 103 in Kosovo (2018 data) to EUR 205 in Serbia. No data was available for Bosnia and Herzegovina.

The at-risk-of-poverty rate in 2021 in the WBCs for which data is available, the at-risk-of-poverty rates before transfers disaggregated by gender were in every case higher for women than for men. The highest difference was recorded Serbia and Montenegro (45.1 % for men and 47.7 % for women and 40.1 % for men and 42.7 % for women, respectively) and smaller in Albania (2020 data): (37.0 % for men and 38.7 % for women). The proportion of the population at risk of poverty after social transfers ranged from 21.2 % in Serbia to 27.9 % in Kosovo (2018 data), thus much higher than in the EU, where the proportion in 2021 was estimated at 16.8 %.

Table 1: The state of inequality and poverty in WBCs in 2021

	Inequality of income distribution 2021[6]	Gini Coefficient [7]	At risk of poverty[8]	Proportion of the population at risk of poverty before transfers (%)			Proportion of the population at risk of poverty after transfers (%)[9]			Proportion of persons who are living in households with very low work intensity in2021[10]	
	Income quintile share ratio (times higher of S80/S2)	Ratio	Threshold (monthly income) euro	Total	M	F	Total	M	F	Persons aged 0-17 years	Persons aged 18-59 years
EU	5.0	30.1	:	45.3	42.9	47.6	16.8	16.0	17.4	8.3	9.4
Bosnia.& Herzegovina	8.8	:	:	:	:	:	:	:	:	:	:
Montenegro	6.0	32.9	196	41.4	40.1	42.7	22.6	23.0	22.2	14.8	15.7

North Macedonia	5.9	31.4	149	42.1	41.4	42.8	21.8	21.7	21.9	15.8	14.7
Albania	5.9	33.2	126	37.9	37.0	38.7	21.8	21.4	22.3	11.6	11.6
Serbia	6.0	33.3	205	46.4	45.1	47.7	21.2	20.4	21.9	13.6	16.7
Kosovo*	14.2	44.2	103	39.1	38.4	39.7	27.9	27.2	28.6	35.8	38.6

Source: Eurostat, 2023

Persons living in households with low work intensity is another important indicator. The two indicators presented in the table above concern different subpopulations: people aged 0-17 years, who are considered as dependent children; and those of working age, defined as 18-59 years.

The proportion of persons who were living in households with very low work intensity in the WBCs was the lowest in Albania (2020 data), the shares were 11.6 % for both age categories while the highest in Kosovo (there were 35.8 % of younger people living in households with very low work intensity and 38.6 % of working age people). There is no data available for Bosnia and Herzegovina.

6 The income quintile share ratio, also known as the S80/S20 ratio, is a measure of the inequality of income distribution. It is calculated as the ratio of total income received by the 20 % of the population with the highest income (the top quintile) to that received by the 20 % of the population with the lowest income (the bottom quintile). Incomes are equalized to take account of the varying composition of households.

7 Gini coefficient shows the extent to which all incomes within the population differ from the average income: the closer the coefficient is to 100 the less equal are the incomes, while the closer it is to 0 the more equal are the incomes

8 Poverty threshold is defined at 60 % of the national median equivalised disposable income after social transfers) . The total net income of each household is calculated by adding together the income received by all the members of the household from all sources. For each person, the equivalised total net income is calculated as the household's total net income divided by the equivalised household size.

9 At risk of poverty is the proportion of the population with an equivalised disposable income below the poverty threshold. This indicator can be calculated either before social transfers or after social transfers. The difference between the two reflects the proportion of the population moved above the threshold as a result of receiving social transfers. Social transfers cover the social help given through benefits such as: old-age and survivors' (widows' and widowers') pensions; unemployment, family-related, sickness and invalidity, education-related and other benefits; housing allowances; and social assistance.

10 Persons living in households with low work intensity are those aged 0-59 living in households where the adults aged 18-59, excluding students, have worked 20 % or less of their total work potential during the past year. The work intensity of a household is the ratio of the total number of months that all working-age household members have worked during the income reference year to the total number of months the same household members could theoretically have worked in the same period. The indicator is based on the EU statistics on income and living conditions (EU-SILC)

4.2 FOOD SECURITY IN WBCS

This section presents key indicators related to nutrition and food security across WBCs, focusing on specific aspects such as undernourishment, severe food insecurity, moderate or severe food insecurity, wasting in children under 5 years, stunting in children under 5 years, and anemia in women aged 15-49 years. The data is presented for two time periods, 2012 and 2022, offering insights into changes over the years. Generally, the prevalence of undernourishment appears to have decreased in most countries between 2012 and 2022, with Albania, Montenegro, and North Macedonia exhibiting noticeable reductions.

Severe food insecurity is relatively low across the WBCs, with Bosnia and Herzegovina reporting less than 2.5% in both time periods. The prevalence of moderate or severe food insecurity shows variations, with some countries experiencing an increase (e.g., Bosnia and Herzegovina), while others show a decrease (e.g., Albania). Wasting in children under 5 years is generally low, with Bosnia and Herzegovina having the lowest rates in both time periods. Stunting rates in children under 5 years are relatively high, especially in Albania, where there is a significant increase from 2012 to 2022. Anemia rates in women aged 15-49 years vary across countries and time periods. All countries show an increase. Overall, the following table highlights both positive and concerning trends in nutritional and food security indicators.

Table 2: Prevalence of undernourishment selected forms of malnutrition in WBCs during

Country		Prevalence of undernourishment in the total population (%)		Prevalence of severe food insecurity in the total population (%)		Prevalence of moderate or severe food insecurity in the total population (%)		Prevalence of wasting in children (<5 years) (%)	Prevalence of stunting in children (<5 years) (%)		Prevalence of anemia in women (15–49 years) (%)	
		2004–2006	2020–2022	2014–2016	2020–2022	2014–2016	2020–22	2022	2012	2022	2012	2019
Albania	Albania	8.9	4.1	10	7.5	38.8	30.2	1.6	16.4	8.3	21.6	24.8
Bosnia and Herzegovina	Bosnia and Herzegovina	<2.5	<2.5	1.5	3.1	9.6	13.4	n.a.	9.2	8	23.8	24.4
Montenegro	Montenegro	5.4	<2.5	2.1	3.3	12.6	12.9	2.2	8.4	8.2	16.1	17.2
North Macedonia	North Macedonia	4.9	3.6	3.6	6.9	15.1	24	3.4	5.8	3.7	17.2	19.3
Serbia	Serbia	<2.5	<2.5	1.7	4.1	11.4	14.8	2.6	5.9	4.6	21.8	22.8

Source: FAO, 2023

The economic challenges associated with maintaining a healthy diet in the WBCs is very important for designing targeted policies to address affordability issues and promote nutritional well-being. The following table provides insight into the cost of a healthy diet, measured in Purchasing Power Parity (PPP) dollars per person per day, and the percentage of people unable to afford a healthy diet in various countries over

the years 2017 to 2021. The cost of a healthy diet has generally increased across all countries from 2017 to 2021. Albania and Serbia show a continuous upward trend, indicating a rise in the financial burden of maintaining a healthy diet. Serbia has a higher cost of a healthy diet compared to other countries, while North Macedonia consistently reports a lower percentage of people unable to afford a healthy diet.
The percentage of people unable to afford a healthy diet varies across countries. In 2021, Bosnia and Herzegovina has the lowest percentage, followed by Serbia, Montenegro, North Macedonia and Albania. Generally, there is a decreasing trend in this indicator, suggesting improvements in affordability over time.

Below we provide additional information on the rising cost of a healthy diet and the inability of people to access a healthy diet.

Table 3: The cost and affordability of a healthy diet in the WBCs during 2017–2021

Country	Cost of a healthy diet (PPP dollars per person per day)					People unable to afford a healthy diet (%)				
	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Albania	3.952	4.069	4.262	4.28	4.388	31.3	23	22.2	19.9	15.9
Bosnia and Herzegovina	3.847	3.907	4.043	3.961	4.105	4.7	4	3.9	3	3
Montenegro	3.397	3.428	3.644	3.511	3.673	15.9	17.2	17.4	17.3	14.9
North Macedonia	3.318	3.324	3.464	3.427	3.616	20.1	17.7	16.6	17.5	15.5
Serbia	4.07	4.166	4.334	4.268	4.346	27.2	13.1	16.2	13	10.9

Source: FAO, 2023

4.3 IMPORTANCE OF AGRICULTURE SECTOR IN WBCS

Significant share of the WBCs population (30-50%) lives in rural areas, which is much higher when compared to EU average (less than 25%). The main source of income and employment in WBCs rural areas is agriculture. During the last years there has been a decrease of people who choose to live in rural areas in Western Balkan countries. This has been more emphasised in Albania, which has experienced a decrease by 11% of rural population during the last decade. Meanwhile the countries which have experienced lower rates of rural areas depopulation are North Macedonia and Serbia.

Table 4: Rural population in Western Balkan countries (%)

Country/Year	2010	2013	2016	2017	2018	2019	2020	2021	2022
Albania	47.84	44.61	41.58	40.62	39.68	38.77	37.89	37.03	36.20
Bosnie and Herzegovina	54.44	53.48	52.48	52.12	51.76	51.37	50.98	50.58	50.16
North Macedonia	42.91	42.81	42.44	42.25	42.04	41.79	41.52	41.21	40.88
Montenegro	35.86	34.86	33.86	33.52	33.19	32.85	32.51	32.17	31.84
Serbia	45.01	44.53	44.19	44.06	43.91	43.74	43.55	43.35	43.13
Kosovo	:	:	:	:	:	:	:	:	:
EU	27.03	26.46	25.90	25.69	25.48	25.26	25.04	24.80	24.55

Source: World Bank (2023)

Agriculture sector is one of the main sectors in terms of employment not only for rural areas but the whole economy at large, for most WBCs. The share of men and women employed in agriculture has generally decreased, except in Montenegro where there has been a slight increase.

Table 5: Male employment in agriculture (%)

Country/Year	2010	2013	2016	2017	2018	2019	2020	2021
Albania	34.21	37.43	35.97	34.75	33.43	32.34	31.91	31.01
Bosnia and Herzegovina	17.88	18.66	18.06	18.18	15.52	16.38	10.75	10.07
North Macedonia	17.81	17.70	17.18	16.48	16.34	14.49	12.39	12.41
Montenegro	7.21	6.14	8.01	8.72	8.61	7.55	8.60	8.39
Serbia	23.32	22.37	20.52	19.02	17.72	17.48	16.55	15.84
Kosovo	:	:	:	4.7	4.2	5.9	5.4	3.4
EU	6.55	6.37	5.85	5.69	5.49	5.34	5.37	5.17

Source: World Bank (2023)

Bosnia and Herzegovina is the country with the highest decrease rate of men employed in agriculture (8%) and Albania has the highest decrease rate of women employed in agriculture (14%) since 2010.

Table 6: Women employment in agriculture (%)

Country/Year	2010	2013	2016	2017	2018	2019	2020	2021
Albania	53.06	53.14	45.20	42.42	42.27	41.60	40.17	39.19
Bosnia and Herzegovina	22.76	19.19	17.77	20.00	16.06	20.46	13.96	13.28
North Macedonia	18.64	20.28	15.78	15.88	14.79	13.08	10.34	8.49
Montenegro	5.02	2.58	7.42	6.97	7.29	6.65	6.16	6.10
Serbia	21.07	19.86	16.22	14.97	13.67	13.31	12.12	11.55
Kosovo	:	:	:	3.3	1	2.8	3.1	0.9
EU	4.90	4.30	3.55	3.47	3.33	3.19	3.14	2.92

Source: World Bank (2023)

Value added of agriculture, forestry, and fishing in GDP, in general, in Western Balkan countries has experienced decrease, except to Albania which has experienced an increase with 0.7 % and Serbia which has experienced a slight increase with 0.15% of agriculture, forestry and fishing value added in GDP.

Table 7: Agriculture, forestry, and fishing, value added in WBCs (% of GDP)

Country/Year	2010	2013	2016	2017	2018	2019	2020	2021	2022
Albania	17.96	19.57	19.85	19.02	18.43	18.39	19.23	18.36	18.63
Bosnie and Herzegovina	6.80	6.84	6.17	5.43	5.72	5.45	5.91	5.02	4.71
North Macedonia	10.12	10.03	9.17	7.87	8.47	8.13	8.57	7.25	8.12
Montenegro	7.68	8.03	7.47	6.85	6.73	6.39	7.55	6.46	6.35
Serbia	6.60	7.41	6.81	6.01	6.34	5.95	6.34	6.29	6.75
Kosovo	9.46	8.43	8.17	7.41	6.53	7.24	7.36	6.92	7.39
EU	1.65	1.74	1.59	1.70	1.62	1.59	1.64	1.63	1.73

Source: World Bank (2023)

Crop production index has increased in Albania (32%), Bosnia and Hercegovina (12.2%), Serbia (3.7%) and North Macedonia (0.9%), while there has been a significant decrease of this index in Montenegro with 34.5%.

Table 8: Crop production index in WBCs

Country/Year	2010	2013	2016	2017	2018	2019	2020	2021
Albania	82.74	93.67	104.15	105.84	106.2	107.76	114.12	114.75
Bosnia and Herzegovina	95.42	105.87	118.05	95.06	127.66	115.28	129.59	107.68
North Macedonia	95.33	94.88	104.22	79.24	101.34	94.74	102.86	96.24
Montenegro	122.73	94.16	111.05	100.94	104.27	92.82	94.21	88.22
Serbia	99.66	98.25	109.16	86.02	107.24	108.25	113.05	103.35
Kosovo	:	:	:	:	:	:	:	:
EU	:	:	:	:	:	:	:	:

Source: World Bank (2023)

4.4 PRODUCTION TRENDS IN WBCS

In this subsection we provide production trends since for the main agrifood products categories, namely cereals, fruit, vegetables, beef, eggs, poultry meat and milk. Timespan, category of products and county specific data analysis has been conditioned by the availability of data (in this case at FAOSTAT). For most categories of products, a growth has been observed since 2010 for most WBCs. However, there are strong differences from country to country and year to year, particularly during the past few years for various products categories, as shown in more details below.

In overall Albania has experienced an increase of agricultural production during the last decade. There has been a significant increase in fruits, (36.9%), vegetables (66.6%) and eggs (80%) production. While there has been a decrease in the production of cereals, meat and milk during 2021 compared to 2010.

Table 9: Agricultural production in Albania (000 tons)

Product/Year	2010	2013	2016	2017	2018	2019	2020	2021
Cereals	693.8	702.9	698.4	701.7	678.2	666.1	684.0	691.1
Fruit	634.4	692.1	810.5	806.1	787.0	811.4	819.3	868.4
Vegetables	604.6	686.3	833.0	856.5	880.7	951.4	988.6	1,007.3
Beef	40.8	41.8	38.9	39.0	38.5	36.7	32.9	31.7
Eggs	31.5	47.5	53.2	51.3	52.3	54.7	54.4	56.8
Poultry meat	17.0	17.0	14.3	14.4	17.1	13.1	13.8	14.5
Milk	1,070.0	1,131.3	1,146.1	1,156.3	1,144.4	1,112.2	1,052.2	1,013.0

Source: FAOSTAT (2023)

Bosnia and Herzegovina has experienced a noticeable increase in cereal production from 2010 to 2016, followed by a decline in 2017. The production rebounded in 2018 and then decreased in 2021. Both fruit and vegetable production show some variability over the years, but there is no clear trend. Beef, Eggs, Poultry Meat, and Milk generally show a stable or slightly decreasing trend in production.

Table 10: Agricultural production in Bosnia and Herzegovina (000 tons)

Product/Year	2010	2013	2016	2017	2018	2019	2020	2021
Cereals	1,104.9	1,222.5	1,657.6	1,167.0	1,743.8	1,666.1	1,944.2	1,400.7
Fruit	332.4	443.3	345.7	248.8	473.2	364.5	432.3	358.0
Vegetables	735.9	752.0	826.5	769.2	781.3	787.6	811.8	780.3
Beef	23.4	16.4	16.0	15.5	11.5	11.8	14.5	12.4
Eggs	20.8	21.1	23.0	22.2	22.0	24.1	24.8	19.5
Poultry meat	37.6	41.5	57.5	61.0	62.1	67.2	66.0	63.9
Milk	734.5	704.0	715.7	696.3	692.4	656.1	645.0	545.9

Source: FAOSTAT (2023)

Egg production has shown a general increasing trend over the years in Montenegro. The production of cereals has remained relatively stable over the years. Fruit production shows some fluctuations, with a decreasing trend over the years. Vegetable production experienced an increase from 2010 to 2016, followed by a relatively stable trend from 2017 to 2021. Poultry meat production has varied with a notable decrease from 2018 to 2020, followed by a significant increase in 2021. Beef and milk production in Montenegro have been relatively stable over the years.

Table 11: Agricultural production in Montenegro (000 tons)

Product/Year	2010	2013	2016	2017	2018	2019	2020	2021
Cereals	3.8	7.6	7.0	7.2	7.3	6.9	6.7	7.0
Fruit	82.5	64.2	72.7	65.4	69.0	63.4	62.2	59.1
Vegetables	22.9	17.9	26.6	27.1	27.3	19.5	19.9	20.6
Beef	4.7	4.2	5.4	3.9	3.7	5.4	6.0	3.7
Eggs	3.2	4.5	5.9	6.1	6.4	5.5	5.9	5.9
Poultry meat	2.9	3.6	4.5	3.4	2.7	1.7	1.3	3.6
Milk	142.8	178.4	176.3	177.6	181.5	178.0	180.5	173.4

Source: FAOSTAT (2023)

Cereal, fruit, and poultry meat production in North Macedonia have shown some variability over the years. Cereal production levels remained relatively stable from 2018 to 2021. Vegetable production has shown an increasing trend until 2018, followed by a sharp decline in 2019 to 2021. Beef production has been relatively stable with minor fluctuations over the years. Egg production has experienced a decline over the years, particularly from 2010 to 2013, followed by relatively stable levels from 2013 to 2021. Milk production has shown a fluctuating pattern, with a decrease in production levels from 2019 to 2021.

Table 12: Agricultural production in North Macedonia (000 tons)

Product/Year	2010	2013	2016	2017	2018	2019	2020	2021
Cereals	541.6	561.9	641.0	447.8	598.4	563.1	578.8	562.2
Fruit	588.4	617.9	654.0	401.9	657.4	557.4	636.0	555.9
Vegetables	632.8	580.3	699.0	675.0	686.9	6.9	9.0	6.4
Beef	7.1	5.5	4.0	4.6	4.4	4.1	3.9	4.2
Eggs	18.8	12.0	8.7	11.0	8.9	6.9	9.0	6.4
Poultry meat	3.2	1.8	1.5	1.7	1.5	1.5	1.5	1.7
Milk	405.8	429.4	463.4	448.7	463.6	442.9	447.7	377.9

Source: FAOSTAT (2023)

Cereal, fruit, vegetables and milk production in Serbia have shown fluctuations over the years. Beef production in Serbia has been relatively stable, with minor fluctuations over the years. Poultry meat and egg production in Serbia has generally increased over the years, with noticeable growth in poultry meat from 2017 to 2021.

Table 13: Agricultural production in Serbia (000 tons)

Product/Year	2010	2013	2016	2017	2018	2019	2020	2021
Cereals	9,295.2	9,123.5	10,893.4	6,817.9	10,553.4	10,460.8	11,472.2	10,261.2
Fruit	1,552.6	1,963.5	1,698.1	1,604.4	1,745.2	1,857.5	1,909.7	1,724.8
Vegetables	1,165.2	871.3	999.9	918.4	714.7	669.9	670.6	741.8
Beef	95.6	68.5	71.0	62.0	71.2	65.0	66.9	69.8
Eggs	69.5	87.8	92.6	87.9	89.8	88.7	85.3	85.5
Poultry meat	83.8	84.2	79.0	85.4	107.5	115.1	115.3	111.2
Milk	1,522.0	1,505.0	1,559.0	1,554.6	1,545.6	1,552.2	1,539.3	1,518.8

Source: FAOSTAT (2023)

Milk production in Serbia has shown minor fluctuations, with a peak in 2016 and relatively stable levels from 2016 to 2021.

Kosovo has experienced diverse agricultural production trends. Cereal production has experienced a steady growth during the last years. Fruit production has experienced consistent increase during the last five years. Meanwhile vegetables production has experienced fluctuations, with decrease between 2019 and 2020 followed by a recovery. While milk production remained stable, interestingly egg production saw a temporary increase in 2019-2020.

Table 14: Agricultural production in Kosovo (000 tons)

Product/Year	2017	2018	2019	2020	2021	2022
Cereals	477,880	441,757	459,404	529,112	504,371	518,724
Fruit	34,207	53,606	67,294	72,265	67,533	75,713
Vegetables	358,394	265,420	300,559	290,555	282,734	295,802
Beef and Buffalo Meat	19.8	19.5	19.5	19.7	19.8	19.7
Eggs	348,998	315,097	366,447	365,554	423,640	363,031
Meat	:	:	:	:	:	:
Milk	277,976	277,599	277,138	281,960	278,746	276,058

Source: MAFRD (2023)

Cereal production in the European Union has shown some fluctuations, with a slight increase in 2020 and 2021. Fruit, vegetable, and beef production have shown a relatively stable trend, with minor fluctuations from 2010 to 2021. Poultry meat production has increased steadily from 2010 to 2021, while eggs and milk production has shown a general increasing trend, with minor fluctuations from 2010 to 2021.

Table 15: Agricultural production in European Union (000 tons)

Product/Year	2010	2013	2016	2017	2018	2019	2020	2021
Cereals	263,420	289,480	280,778	288,817	273,885	299,235	285,300	297,366
Fruit	64,274	66,331	67,643	62,240	71,291	64,974	67,352	65,943
Vegetables	59,089	57,101	62,355	62,154	53,163	54,996	55,500	57,340
Beef	7,248	6,564	6,989	6,983	7,090	6,986	6,925	6,904
Eggs	6,125	6,140	6,163	6,231	6,342	6,475	6,537	6,468
Poultry meat	10,518	11,251	12,359	12,306	13,063	13,278	13,426	12,999
Milk	138,869	143,354	152,922	154,082	156,755	158,297	160,296	159,872

Source: FAOSTAT (2023)

Table 16: Agricultural production in WBCs and EU in 2021 (000 tons)

Product/Year	Albania	B&H	Monte-negro	North Macedo-nia	Kosovo	Serbia	EU
Cereals	691.1	1,400.7	7.0	562.2	NA	10,261.2	297,366
Fruit	868.4	358.0	59.1	555.9	NA	1,724.8	65,943
Vegetables	1,007.3	780.3	20.6	6.4	NA	741.8	57,340
Beef	31.7	12.4	3.7	4.2	NA	69.8	6,904
Eggs	56.8	19.5	5.9	6.4	NA	85.5	6,468
Poultry meat	14.5	63.9	3.6	1.7	NA	111.2	12,999
Milk	1,013.0	545.9	173.4	377.9	NA	1,518.8	159,872

Source: FAOSTAT (2023)

4.5 PRICE TRENDS IN WBCS

4.5.1 PRODUCER PRICE TRENDS

In this subsection we analyze the Producer Price Index (PPI) across WBCs for key products categories (which also represent an important part of household consumer basket and thereby influence also their wellbeing too). As expected, a strong increase has been observed for PPI for main agrifood products categories across WBCs, during 2021 and 2022 – while in the case of 2021, prices have been driven by reviving demand (following 2020 Covid-19 shock), price increase during 2022 also reflect the pressure of substantially increase price of inputs and energy (given that Ukraine and Russia are key suppliers of agriculture inputs, particularly fertilizers). Below we provide more detailed overview and country-specific level.

The overall trend for these agricultural products in Albania, as indicated by the Producer Price Index (PPI), shows an increase in prices for cereals, fruits, vegetables, eggs, and total milk from 2019 to 2022.

Table 17: Producer Price Index in Albania

Product/Year	2019	2020	2021	2022
Cereals	83.8	84.7	98.0	91.0
Fruit	94.1	96.0	104.0	109.4
Vegetables	105.4	106.4	117.4	121.5
Eggs	105.6	105.7	108.0	110.3
Milk	94.3	102.3	104.8	108.4

Source: FAOSTAT (2023)

The PPI trends in Bosnia and Herzegovina suggest varying dynamics for different agricultural products. The notable rise in cereals and some fluctuation in fruit, vegetables, eggs, and milk prices may be influenced by factors such as market demand, supply chain dynamics, and economic conditions.

Table 18: Producer Price Index in Bosnia and Herzegovina (percentage)

Product/Year	2019	2020	2021	2022
Cereals	95.8	99.9	106.4	112.4
Fruit	86.4	106.7	102.2	106.0
Vegetables	108.2	98.9	99.0	103.0
Eggs	113.6	110.7	107.9	105.1
Milk	101.5	102.2	95.1	95.1

Source: FAOSTAT (2023)

The PPI trends in Serbia from 2019 to 2022 reveal diverse dynamics across agricultural products. The substantial increase in cereals, along with fluctuations in fruit, vegetables, eggs, and milk prices, indicates influences from factors like market demand, supply chain dynamics, and broader economic conditions.

Table 19: Producer Price Index in Serbia (percentage)

Product/Year	2019	2020	2021	2022
Cereals	99.6	108.3	147.9	183.0
Fruit	97.8	111.7	125.3	124.9
Vegetables	116.0	110.7	127.7	124.6
Eggs	101.7	101.1	104.0	106.5
Milk	100.0	100.7	102.4	103.8

Source: FAOSTAT (2023)

The PPI trends in North Macedonia reveal specific dynamics for different agricultural products. Cereals, fruit prices fluctuated, vegetables experienced a notable increase, eggs consistently decreased, and milk prices showed a modest rise.

Table 20: Producer Price Index in North Macedonia (percentage)

Product/Year	2019	2020	2021	2022
Cereals	92.3	106.0	110.7	109.4
Fruit	121.6	115.0	117.7	119.5
Vegetables	110.5	98.9	122.9	130.7
Eggs	98.8	90.8	87.8	84.6
Milk	103.3	105.2	105.7	106.3

Source: FAOSTAT (2023)

Almost all product categories in Kosovo experienced price increases between 2021 and 2022. The largest increase was for cereals, primary (49.7%), followed by eggs, primary (30.3%) and milk, total (19.7%). These increases could be partly attributed to the disruption caused by war.

Table 21: Producer Price Index in Kosovo (percentage)

Product/Year	2019	2020	2021	2022
Cereals	105.7	99.9	109.1	163.3
Fruit	113	132.1	142.2	139.8
Vegetables	104.7	108.3	120.9	139.4
Eggs	105.3	109.9	114.1	148.7
Milk	105.4	110.7	105.2	125.9

Source: Institute of Statistics Kosovo (2023)

Table below presents the Producer Price Index (PPI) for various agricultural products most of WBCs for the year 2022. In summary, North Macedonia generally exhibits increases in PPI for most agricultural products, with vegetables experiencing the highest rise. Serbia tends to have higher PPI values across multiple categories, especially for cereals and eggs. Albania also shows increases but often at a slightly lower magnitude compared to North Macedonia and Serbia.

The PPI measures the average changes over time in the selling prices received by producers for their goods and services. On cereals Serbia has the highest PPI at 183.0, signifying a significant increase in prices. North Macedonia has the highest PPI for vegetables at 130.7, indicating a substantial increase in prices compared to other countries. Serbia has the highest PPI for fruits at 124.9, whereas Albania has the highest PPI for milk at 108.4 and eggs at 110.3.

Table 22: Producer Price Index in WBCs in 2022 (percentage)

Product/Year	Albania	BH	N. Macedonia	Serbia	Kosovo
Cereals	91.0	112.4	109.4	183.0	163.3
Fruit	109.4	106.0	119.5	124.9	139.8
Vegetables	121.5	103.0	130.7	124.6	139.4
Eggs	110.3	105.1	84.6	106.5	148.7
Milk	108.4	95.1	106.3	103.8	125.9

Source: FAOSTAT (2023)

4.5.2 CONSUMER PRICES

4.5.2.1. General Indices CPI

The Consumer Prices (General) Indices (CPI) for Albania show a general upward trend from 2019 to 2022. The indices started at 107.5 in January 2019 and increased to 120.5 by December 2022.

Table 23: Consumer prices, general indices in Albania (percentage)

Month/ Year	Jan.	Feb.	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2019	107.5	108.2	107.9	107.6	106.5	106.2	106.1	106.5	106.5	106.3	106.2	107.1
2020	109.1	109.5	110.1	109.7	108.7	108.1	107.5	107.8	108.2	108.5	107.9	108.2
2021	109.6	110.7	111.5	111.8	110.7	109.8	110.0	110.4	110.9	111.1	111.3	112.2
2022	113.6	115.1	117.8	118.7	118.1	118.0	118.2	119.2	119.9	120.3	120	120.5

Source: FAOSTAT (2023)

The general indices in Bosnia and Herzegovina indicate fluctuations over the years. The indices started at 101.2 in January 2019 and increased to 121.7 by December 2022.

Table 24: Consumer prices, general indices in Bosnia and Herzegovina (percentage)

Month/ Year	Jan.	Feb.	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2019	101.2	101.6	101.7	101.4	101.6	101.1	100.5	100.2	100.7	101.4	101.5	101.4
2020	101.9	101.9	101.8	100.2	99.4	99.5	99.2	99.0	99.1	99.8	99.9	99.7
2021	100.1	100.6	101.4	101.1	101.1	101.2	101.1	101.3	102.1	104.1	105.3	106.0
2022	107.1	108.7	111.7	114.4	115.6	117.2	118.0	118.3	119.7	122.2	122.5	121.7

Source: FAOSTAT (2023)

Consumer Prices, General Indices in Montenegro show a general upward trend from 2019 to 2022. The indices started at 104.2 in January 2019 and increased to 128.4 by December 2022.

Table 25: Consumer prices, general indices in Montenegro (percentage)

Month/Year	Jan.	Feb.	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2019	104.2	104.6	105.3	105.4	105.6	104.9	104.8	104.9	105.0	105.6	105.7	105.7
2020	105.8	105.6	105.3	104.5	104.6	104.7	104.3	104.4	105.1	105.0	104.7	104.7
2021	105.0	105.5	106.1	106.8	107.1	107.2	107.6	107.6	108.2	108.9	109.3	109.6
2022	111.0	112.6	116.5	118.7	119.6	121.7	123.6	123.8	125.5	127.3	128.4	128.4

Source: FAOSTAT (2023)

The general indices for North Macedonia indicate a continuous upward trend from 2019 to 2022. The indices started at 102.8 in January 2019 and increased to 131.5 by December 2022.

Table 26: Consumer prices, general indices in North Macedonia (percentage)

Month/Year	Jan.	Feb.	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2019	102.8	102.8	103.2	104.0	104.5	103.3	103.5	103.8	103.2	103.1	103.0	103.3
2020	103.4	103.5	103.7	103.9	104.3	105.1	104.8	105.4	105.1	105.2	105.2	105.6
2021	105.4	105.5	106.0	106.7	107.4	107.9	108.4	109.1	109.0	109.5	110.3	110.8
2022	112.4	113.5	115.3	117.9	120.2	123.5	125.8	127.4	129.4	131.2	131.9	131.5

Source: FAOSTAT (2023)

Consumer Prices, General Indices in Serbia show a consistent upward trend from 2019 to 2022. The indices started at 107.1 in January 2019 and increased to 136.7 by December 2022.

Table 27: Consumer prices, general indices in Serbia (percentage)

Month/Year	Jan.	Feb.	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2019	107.1	107.9	108.4	109.2	108.9	108.6	108.3	108.3	107.9	108.0	108.2	108.7
2020	109.3	110.0	109.9	109.9	109.7	110.3	110.5	110.4	109.9	110.0	110.0	110.1
2021	110.6	111.3	111.9	113.0	113.6	113.9	114.2	115.2	116.1	117.2	118.3	118.7
2022	119.7	121.0	122.0	123.9	125.4	127.5	128.8	130.4	132.3	134.8	136.1	136.7

Source: FAOSTAT (2023)

In general, all Western Balkan countries have experienced an overall increase in consumer prices from 2019 to 2022. The magnitude of the increase varied among the countries, with Montenegro and North Macedonia showing particularly notable upward trends in general indices during this period. The pandemic likely led to disruptions in economic activities and supply chains, affecting consumer prices in various ways across the region. Additionally, the ongoing Russia-Ukraine war introduced geopolitical uncertainties that may influence economic stability and commodity prices, contributing to the observed trends. While each country has its unique economic characteristics, the overall increase in consumer prices suggests potential inflationary pressures.

Table 28: Consumer prices, general indices in WBCs in 2022 (percentage)

Month/Year	Jan.	Feb.	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Albania	113.6	115.1	117.8	118.7	118.1	118.0	118.2	119.2	119.9	120.3	120	120.5
B&H	107.1	108.7	111.7	114.4	115.6	117.2	118.0	118.3	119.7	122.2	122.5	121.7
Montenegro	111.0	112.6	116.5	118.7	119.6	121.7	123.6	123.8	125.5	127.3	128.4	128.4
North M	112.4	113.5	115.3	117.9	120.2	123.5	125.8	127.4	129.4	131.2	131.9	131.5
Serbia	119.7	121.0	122.0	123.9	125.4	127.5	128.8	130.4	132.3	134.8	136.1	136.7

Source: FAOSTAT (2023)

4.5.2.2. Food price trends

The trend shows some fluctuations, with periods of increase and decrease. The increasing values over the years may suggest inflation or a rise in the cost of food items in Albania during this period. The consumer prices started at 115.6 in January 2019 and fluctuated throughout years, reaching 141.3 by December 2022.

Table 29: Consumer Prices, food indices in Albania (percentage)

M o n t h / Year	Jan.	Feb.	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2019	115.6	117.3	116.5	115.5	112.6	111.8	111.3	111.8	112.2	111.7	111.2	113.4
2020	118.4	119.6	121.7	120.5	118.1	116.3	114.7	115.2	116.5	117.2	115.5	116.3
2021	119.8	123.4	125.4	126.0	122.4	119.5	119.5	120.4	121.7	121.6	121.3	123.8
2022	127.9	131.9	137.0	138.5	136.3	134.5	135.2	137.3	138.8	139.3	139.2	141.3

Source: FAOSTAT (2023)

Trends highlight a notable change in the cost of food items in Bosnia and Herzegovina over the specified period, with a particularly significant increase in 2022, where the consumer prices reached 138.6 in December 2022.

Table 30: Consumer Prices, food indices in Bosnia and Herzegovina (percentage)

Month/ Year	Jan.	Feb.	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2019	101.1	102.5	102.7	103.2	103.7	102.5	101.1	100.2	100.6	100.7	100.6	101.1
2020	102.7	103.3	103.8	104.5	104.0	103.6	102.6	101.7	101.5	101.5	101.6	101.7
2021	102.8	103.8	105.0	105.5	105.6	105.5	104.9	105.4	106.7	108.3	110.2	112.5
2022	115.0	117.6	120.5	127.3	129.6	130.2	130.8	132.4	134.6	136.3	137.3	138.6

Source: FAOSTAT (2023)

The Consumer Prices trends in Montenegro show a steady increase over the years, with a particularly notable rise in 2022, indicating potential inflationary pressures on the cost of food items.

Table 31: Consumer Prices, food indices in Montenegro (percentage)

Month/Year	Jan.	Feb.	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2019	102.3	103.2	104.5	105.0	105.4	104.9	104.9	104.9	104.7	104.4	104.7	104.9
2020	105.1	105.4	106.0	106.4	106.8	106.9	106.4	106.4	106.5	106.3	106.0	105.9
2021	106.2	107.0	107.8	109.5	109.9	109.9	109.9	110.6	111.6	111.4	111.9	113.5
2022	118.2	121.0	127.0	130.6	132.6	134.7	137.0	138.8	141.6	144.2	145.6	146.3

Source: FAOSTAT (2023)

In Serbia's Consumer Prices for Food Indices indicate a general upward trajectory over the years, with notable increases in 2021 and 2022.

Table 32: Consumer Prices, food indices in Serbia (percentage)

Month/ Year	Jan.	Feb.	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2019	106.4	108.5	109.7	111.1	109.5	108.3	106.9	106.3	105.7	105.7	106	107.1
2020	108.8	110.1	110.2	111.4	111.8	113.1	111.5	109.9	109.4	109.3	109.3	109.1
2021	109.3	109.7	110.4	113.3	114.4	114.4	113.4	115.6	118.40	119.90	121.80	122.20
2022	123.9	126.4	127.8	131.1	132.8	135.9	135.7	139.2	142.5	147.4	149.2	150.8

Source: FAOSTAT (2023)

The same situation is noticed in North Macedonia reaching 141.5 by December 2022 compared to 104.1 in December 2019.

Table 33: Consumer Prices, food indices in North Macedonia (percentage)

Month/ Year	Jan.	Feb.	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2019	100.8	101.4	102.1	102.9	103.5	100.7	100.4	101.2	100.9	100.7	101.0	101.0
2020	101.1	101.8	102.7	104.2	105.0	106.3	104.0	103.7	104.0	104.2	104.6	104.1
2021	103.4	103.8	104.4	105.7	107.0	107.3	106.3	107.9	108.1	109.0	110.6	111.3
2022	113.0	113.8	116.3	121.3	125.2	129.8	131.4	135.0	139.2	143	143.6	141.5

Source: FAOSTAT (2023)

Table 34: Consumer Prices, food indices in WBCs in 2022 (percentage)

Month/Year	Jan.	Feb.	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Albania	127.9	131.9	137.0	138.5	136.3	134.5	135.2	137.3	138.8	139.3	139.2	141.3
B&H	115.0	117.6	120.5	127.3	129.6	130.2	130.8	132.4	134.6	136.3	137.3	138.6
Montenegro	118.2	121.0	127.0	130.6	132.6	134.7	137.0	138.8	141.6	144.2	145.6	146.3
North M	113.0	113.8	116.3	121.3	125.2	129.8	131.4	135.0	139.2	143	143.6	141.5
Serbia	123.9	126.4	127.8	131.1	132.8	135.9	135.7	139.2	142.5	147.4	149.2	150.8

Source: FAOSTAT (2023)

4.6 FOOD SUPPLY IN WBCS

4.6.1 SELF-SUFFICIENCY DYNAMICS BY COUNTRY

In times of shocks, such as Covid-19 and Ukraine war, there is a growing attention to self-sufficiency of agrifood sectors. In this context, the higher is the share of the demand that is met by local products, the more "immune" is the economy from external shocks. For example, substantial increase of imported food products can have a lower impact on households' well-being if a larger share of demand is met by local produce, but that would also depend on the type of food category. Therefore, we provide an analysis of the self-sufficiency situation and trends for WBCs in this subsection.

4.6.1.1 Self-sufficiency Albania

During the last years there has been a decline in the domestic production of wheat in Albania. Albania has maintained a consistent, but small level of wheat exports representing 3% to 4% of domestic production. Import of wheat has fluctuated, reaching its lowest point in 2021. Despite the decline in production, the import/supply ratio has slightly decreased from 64% in 2019 to 63% in 2021, indicating that a significant portion of the wheat supply is still met through imports.

Table 35: Wheat self-sufficiency in Albania (000 ton)

Country	2010	2015	2018	2019	2020	2021
Production	295	275	240	233	233	225
Import	448	438	380	399	398	372
Export	1	11	4	9	6	9
Supply	742	702	616	623	625	588
Import/supply	60%	62%	62%	64%	64%	63%
Export/production	0%	4%	2%	4%	3%	4%

Source: FAOSTAT (2023)

During the last years Albania has maintained stable cereal production. Cereal imports have also been stable, with a slight decline from 628,000 tons in 2019 to 571,000 tons in 2021. Cereal exports from Albania have in low levels. The overall supply of cereals in the country has slightly decreased from 1,285,000 tons in 2019 to 1,253,000 tons in 2021. The import/supply ratio has fluctuated around 46% to 49%, indicating a consistent reliance on cereal imports.

Table 36: Cereals self-sufficiency in Albania (000 ton)

Category	2010	2015	2018	2019	2020	2021
Production	694	695	678	666	684	691
Import	613	613	575	628	606	571
Export	1	11	4	9	6	9
Supply	1306	1297	1249	1285	1284	1253
Import/supply	47%	47%	46%	49%	47%	46%
Export/production	0%	2%	1%	1%	1%	1%

Source: FAOSTAT (2023)

Albania has experienced a consistent growth in fruit production during the last years. Fruit imports have fluctuated, with a notable increase in 2021. Fruit exports also increased in 2021, reaching 20,000 tons. The overall supply of fruits in the country has risen. The import/supply ratio has varied but generally remained between 12% and 17%, indicating a moderate reliance on fruit imports.

Table 37: Fruits self-sufficiency in Albania (000 ton)

Country	2010	2015	2018	2019	2020	2021
Production	371	484	507	513	522	550
Import	100	73	69	96	80	111
Export	2	17	13	16	13	20
Supply	469	540	563	593	589	641
Import/supply	21%	14%	12%	16%	14%	17%
Export/production	1%	4%	3%	3%	2%	4%

Source: FAOSTAT (2023)

Egg production in Albania has steadily increased from during the last years, demonstrating a self-sufficient production. Albania did not import or export eggs during the specified period, with both import/supply and export/production ratios consistently at 0%, indicating a reliance on domestically produced eggs.

Table 38: Eggs self-sufficiency in Albania (000 ton)

Country	2010	2015	2018	2019	2020	2021
Production	32	52	52	55	54	57
Import	0	0	0	0	0	0
Export	4	1	0	1	1	0
Supply	28	51	52	54	53	57
Import/supply	0%	0%	0%	0%	0%	0%
Export/production	13%	2%	0%	2%	2%	0%

Source: FAOSTAT (2023)

Total meat production in Albania has slightly decreased during the last years. In contrast, meat imports have significantly increased during those years, leading to an escalating import/supply ratio from 34% in 2010 to 47% in 2021. Albania has maintained a self-sufficiency regarding the meat.

Table 39: Meat self-sufficiency in Albania (000 ton)

Country	2010	2015	2018	2019	2020	2021
Production	91	89	96	85	79	79
Import	46	32	19	37	35	70
Export	0	0		0		0
Supply	137	121	115	122	114	149
Import/supply	34%	26%	17%	30%	31%	47%
Export/production	0%	0%	0%	0%	0%	0%

Source: FAOSTAT (2023)

4.6.1.2 Self-self-sufficiency in Bosnia and Herzegovina

Bosnia and Herzegovina's wheat production has shown fluctuations during the last years. Despite import levels decreasing during this period, Bosnia and Herzegovina remains heavily reliant on imports. Wheat exports, accounting for 43% of production in 2021, contribute to the international market.

Table 40: Wheat self-sufficiency in Bosnia and Herzegovina (000 ton)

Country	2010	2015	2018	2019	2020	2021
Production	145	213	296	265	322	314
Import	903	861	729	661	668	612
Export	74	98	151	111	148	134
Supply	974	976	874	815	842	792
Import/supply	93%	88%	83%	81%	79%	77%
Export/production	51%	46%	51%	42%	46%	43%

Source: FAOSTAT (2023)

Cereal production in Bosnia and Herzegovina reached 1,401,000 tons in 2021, showing a decline from the peak in 2020. Despite fluctuations, the country has maintained a high level of self-sufficiency, with import/supply ratios ranging from 36% to 56%.

Table 41: Cereals self-sufficiency in Bosnia and Herzegovina (000 ton)

Category	2010	2015	2018	2019	2020	2021
Production	1105	1137	1744	1666	1944	1401
Import	1285	1256	1107	1028	1008	866
Export	99	148	169	120	156	143
Supply	2291	2245	2682	2574	2796	2124
Import/supply	56%	56%	41%	40%	36%	41%
Export/production	9%	13%	10%	7%	8%	10%

Source: FAOSTAT (2023)

Fruit production in Bosnia and Herzegovina reached 338,000 tons in 2021, while imports remained relatively stable. The import/supply ratio fluctuated between 34% and 44%. Fruit exports ranged from 14% to 20% of production, with the overall fruit supply decreasing to 493,000 tons in 2021.

Table 42: Fruits self-sufficiency in Bosnia and Herzegovina (000 ton)

Country	2010	2015	2018	2019	2020	2021
Production	324	325	456	348	412	338
Import	162	181	202	217	205	204
Export	37	55	71	71	57	49
Supply	449	451	587	494	560	493
Import/supply	36%	40%	34%	44%	37%	41%
Export/production	11%	17%	16%	20%	14%	14%

Source: FAOSTAT (2023)

Egg production in Bosnia and Herzegovina decreased to 19,000 tons in 2021. Bosnia and Herzegovina shows self-sufficiency, with import/supply ratios ranging from 4% to 10%. Egg exports remain in low levels, representing 5% of production in 2021.

Table 43: Eggs self-sufficiency in Bosnia and Herzegovina (000 ton)

Country	2010	2015	2018	2019	2020	2021
Production	21	22	22	24	25	19
Import	1	1	1	1	1	2
Export	4	2	2	2	2	1
Supply	18	21	21	23	24	20
Import/supply	6%	5%	5%	4%	4%	10%
Export/production	19%	9%	9%	8%	8%	5%

Source: FAOSTAT (2023)

Total meat production in Bosnia and Herzegovina has increased during the last years, while import/supply ratios have increased reaching 56% in 2021. Meat exports represented 21% of production in 2021. The overall meat supply increased to 154,000 tons in 2021.

Table 44: Meat self-sufficiency in Bosnia and Herzegovina (000 ton)

Country	2010	2015	2018	2019	2020	2021
Production	76	81	82	88	89	86
Import	46	76	80	80	75	86
Export	11	21	17	12	18	18
Supply	111	136	145	156	146	154
Import/supply	41%	56%	55%	51%	51%	56%
Export/production	14%	26%	21%	14%	20%	21%

Source: FAOSTAT (2023)

4.6.1.3 Self-self-sufficiency in Montenegro

Montenegro's wheat production has remained low, reaching 2,000 tons annually from 2018 to 2021. The import/supply ratio goes around 99-100%, indicating that the wheat supply is almost entirely reliant on imports. Wheat exports, though low in absolute quantities, represent a significant proportion of production, with an export/production ratio consistently at 50%.

Table 45: Wheat self-sufficiency in Montenegro (000 ton)

Country	2010	2015	2018	2019	2020	2021
Production	1	2	2	2	2	2
Import	177	187	190	203	178	192
Export	12	18	1	1	1	1
Supply	166	171	191	204	179	193
Import/supply	107%	109%	99%	100%	99%	99%
Export/production	1200%	900%	50%	50%	50%	50%

Source: FAOSTAT (2023)

Montenegro's cereal production has remained stable during the last years. The import/supply ratio is consistently high, ranging from 98% to 104%, indicating a significant reliance on cereal imports. While imports remained relatively stable during the last years and export remain in low levels.

Table 46: Cereals self-sufficiency in Montenegro (000 ton)

Category	2010	2015	2018	2019	2020	2021
Production	4	7	7	7	7	7
Import	275	292	308	307	298	305
Export	12	18	1	1	2	1
Supply	267	281	314	313	303	311
Import/supply	103%	104%	98%	98%	98%	98%
Export/production	300%	257%	14%	14%	29%	14%

Source: FAOSTAT (2023)

Montenegro's fruit production has experienced fluctuations during the last years. The country demonstrates moderate self-sufficiency in fruits, with import/supply ratios ranging from 48% to 59%.

Table 47: Fruits self-sufficiency in Montenegro (000 ton)

Country	2010	2015	2018	2019	2020	2021
Production	74	59	67	61	46	42
Import	76	54	59	56	53	57
Export	9	3	4	2	2	2
Supply	141	110	122	115	97	97
Import/supply	54%	49%	48%	49%	55%	59%
Export/production	12%	5%	6%	3%	4%	5%

Source: FAOSTAT (2023)

Montenegro's egg production has remained stable, reaching 6,000 tons in 2021. The country shows self-sufficiency in eggs, with import/supply ratios ranging from 14% to 29%. Egg exports have been negligible, maintaining a consistent export/production ratio of 0%.

Table 48: Eggs self-sufficiency in Montenegro (000 ton)

Country	2010	2015	2018	2019	2020	2021
Production	3	6	5	6	6	6
Import	1	2	2	2	1	1
Export	0	0	0	:	0	0
Supply	4	8	7	:	7	7
Import/supply	25%	25%	29%	:	14%	14%
Export/production	0%	0%	0%	:	0%	0%

Source: FAOSTAT (2023)

Montenegro's total meat production has shown stability, reaching 13,000 tons in 2021. The country demonstrates a varying level of self-sufficiency with import/supply ratios ranging from 79% to 84%. Meat exports, while small in absolute quantities, show fluctuations, resulting in export/production ratios varying from 14% to 31%.

Table 49: Meat self-sufficiency in Montenegro (000 ton)

Country	2010	2015	2018	2019	2020	2021
Production	11	11	12	14	12	13
Import	37	43	51	44	42	49
Export	1	3	2	2	3	4
Supply	47	51	61	56	51	58
Import/supply	79%	84%	84%	79%	82%	84%
Export/production	9%	27%	17%	14%	25%	31%

Source: FAOSTAT (2023)

4.6.1.4 Self-sufficiency in North Macedonia

North Macedonia has a consistent level of wheat production, reaching 244,000 tons in 2021. During the last years there has been an increase of wheat import/supply. Import and export have experienced a significant increase during 2010-2015, while during the last years there have been slight fluctuations.

Table 50: Wheat self-sufficiency in North Macedonia (000 ton)

Country	2010	2015	2018	2019	2020	2021
Production	244	203	243	241	247	244
Import	153	210	202	221	197	177
Export	26	54	58	45	45	55
Supply	371	359	387	417	399	366
Import/supply	41%	58%	52%	53%	49%	48%
Export/production	11%	27%	24%	19%	18%	23%

Source: FAOSTAT (2023)

North Macedonia's cereal production has been stable, reaching 563,000 tons in 2021. North Macedonia maintains a relatively high level of self-sufficiency, with import/supply ratios ranging from 37% to 42%. Cereal exports contribute a modest proportion to the overall production.

Table 51: Cereals self-sufficiency in North Macedonia (000 ton)

Category	2010	2015	2018	2019	2020	2021
Production	542	485	600	565	579	563
Import	229	307	306	320	307	284
Export	36	64	90	80	78	87
Supply	735	728	816	805	808	760
Import/supply	31%	42%	38%	40%	38%	37%
Export/production	7%	13%	15%	14%	13%	15%

Source: FAOSTAT (2023)

North Macedonia's fruit production has shown fluctuations during the last years. Import/supply ratios ranging from 18% to 27% indicate a low reliance in imports.

Table 52: Fruits self-sufficiency in North Macedonia (000 ton)

Country	2010	2015	2018	2019	2020	2021
Production	455	557	531	440	526	444
Import	76	83	94	93	100	105
Export	169	168	112	157	144	154
Supply	362	472	513	376	482	395
Import/supply	21%	18%	18%	25%	21%	27%
Export/production	37%	30%	21%	36%	27%	35%

Source: FAOSTAT (2023)

North Macedonia demonstrates self-sufficiency in eggs, with import/supply ratios ranging from 97% to 100%. Egg exports are limited, contributing to a stable domestic egg market.

Table 53: Eggs self-sufficiency in North Macedonia (000 ton)

Country	2010	2015	2018	2019	2020	2021
Production	3	2	1	1	1	2
Import	33	38	41	41	41	34
Export	0	1	1	1	1	1
Supply	36	39	41	41	41	35
Import/supply	92%	97%	100%	100%	100%	97%
Export/production	0%	50%	100%	100%	100%	50%

Source: FAOSTAT (2023)

North Macedonia meat production has shown fluctuations during the last years. North Macedonia maintains a moderate level of self-sufficiency, with import/supply ratios ranging from 81% to 86%.

Table 54: Meat self-sufficiency in North Macedonia (000 ton)

Country	2010	2015	2018	2019	2020	2021
Production	23	21	22	22	23	25
Import	62	70	78	78	74	71
Export	9	8	9	8	7	8
Supply	76	83	91	92	90	88
Import/supply	82%	84%	86%	85%	82%	81%
Export/production	39%	38%	41%	36%	30%	32%

Source: FAOSTAT (2023)

4.6.1.5 Self-self-sufficiency in Serbia

Serbia has shown consistent growth in wheat production, reaching 3,442,000 tons in 2021. Serbia maintains a low import/supply ratio, hovering around 6%.

Table 55: Wheat self-sufficiency in Serbia (000 ton)

Country	2010	2015	2018	2019	2020	2021
Production	1630	2428	2942	2535	2874	3442
Import	33	49	74	90	104	131
Export	682	735	1432	610	785	1346
Supply	981	1742	1584	2015	2193	2227
Import/supply	3%	3%	5%	4%	5%	6%
Export/production	42%	30%	49%	24%	27%	39%

Source: FAOSTAT (2023)

Serbia's cereal production has been stable, reaching 10,283,000 tons in 2021. Serbia has a high level of self-sufficiency, with import/supply ratios ranging from 1% to 3%. Cereal exports contribute significantly to the global market, with export/production ratios ranging from 26% to 40%.

Table 56: Cereals self-sufficiency in Serbia (000 ton)

Category	2010	2015	2018	2019	2020	2021
Production	9302	8476	10564	10477	11493	10283
Import	60	93	106	136	158	189
Export	2408	2988	2948	3918	4595	3906
Supply	6954	5581	7722	6695	7056	6566
Import/supply	1%	2%	1%	2%	2%	3%
Export/production	26%	35%	28%	37%	40%	38%

Source: FAOSTAT (2023)

Serbia's fruit production has shown fluctuations. Serbia shows a moderate level of self-sufficiency in fruits, with import/supply ratios ranging from 25% to 28%.

Table 57: Fruits self-sufficiency in Serbia (000 ton)

Country	2010	2015	2018	2019	2020	2021
Production	1393	1533	1608	1740	1815	1683
Import	245	311	357	352	389	397
Export	444	605	653	794	712	670
Supply	1194	1239	1312	1298	1492	1410
Import/supply	21%	25%	27%	27%	26%	28%
Export/production	32%	39%	41%	46%	39%	40%

Source: FAOSTAT (2023)

Serbia's egg production shows fluctuation, reaching 86,000 tons in 2021. The country demonstrates self-sufficiency in eggs, with import/supply ratios ranging from 3% to 11%.

Table 58: Eggs self-sufficiency in Serbia (000 ton)

Country	2010	2015	2018	2019	2020	2021
Production	69	103	90	89	85	86
Import	2	5	5	5	7	10
Export	0	3	4	4	3	3
Supply	71	105	91	90	89	93
Import/supply	3%	5%	5%	6%	8%	11%
Export/production	0%	3%	4%	4%	4%	3%

Source: FAOSTAT (2023)

Serbia's total meat production has increased during last years. Serbia maintains a moderate level of self-sufficiency, with import/supply ratios ranging from 10% to 14%.

Table 59: Meat self-sufficiency in Serbia (000 ton)

Country	2010	2015	2018	2019	2020	2021
Production	474	463	515	516	518	524
Import	16	47	68	65	70	78
Export	15	35	44	38	38	36
Supply	475	475	539	543	550	566
Import/supply	3%	10%	13%	12%	13%	14%
Export/production	3%	8%	9%	7%	7%	7%

Source: FAOSTAT (2023)

4.6.1.6. Dependency by imports in various WBCs

The table provides information on the dependency of Western Balkan countries on imports for various main goods. In general, wheat and products have high import dependencies across most countries, indicating a reliance on external sources for this essential food item. Bovine meat also shows significant dependencies in several countries, suggesting potential challenges in domestic production.

The data suggests diverse levels of self-sufficiency in different food categories across the Western Balkan countries. Albania is highly dependent in wheat and meat, while is self-reliant in eggs, fruits, and vegetables. Bosnia & Herzegovina and Montenegro are very dependent on import of bovine meat and wheat, while less dependent to eggs. Serbia remains dependent on cereals, while is entirely self-reliant in bovine meat, wheat, apple, and eggs. North Macedonia is highly dependent in wheat, meat, bovine meat and eggs, while less dependent to fruts and vegetables.

Table 60: Dependency by imports in main goods in Western Balkan Countries (import/supply)

Country	Cereals	Wheat and products	Tomatoe	Apple	Fruits	Meat	Bovine meat	Eggs
Albania	63%	46%	8%	10%	17%	47%	20%	0%
B & H	41%	77%	58%	28%	41%	56%	78%	10%
Montenegro	98%	99%	91%	85%	59%	84%	56%	14%
N Macedonia	37%	48%	8%	10%	27%	81%	78%	97%
Kosovo	NA	NA	NA	NA	NA	NA	NA	NA
Serbia	38%	6%	44%	10%	28%	14%	4%	11%

Source: FAOSTAT (2023)

4.7 AGRICULTURE AND RURAL DEVELOPMENTS POLICIES IN WBCS

4.7.1 AGRICULTURAL POLICY SUPPORT

The agricultural policy framework in the pre-accession countries is being supported by relevant legislative and regulations on agriculture and rural development. All countries have adopted national strategies for agriculture and rural development, as long-term documents defining the future development of the sector.

On an evaluation of Martinovska et al (2022) it is found that the strategic objectives that the most common objectives that WBCs have set for the agriculture and rural development ns are competitiveness, environmental protection and development of rural areas. In a study supported by FAO (2023) it is found that in Western Balkans, the share of Green Box measures was the highest in Albania and Montenegro in both years, North Macedonia and Bosnia and Herzegovina used the highest share of trade distorting subsidies among CEFTA Parties.

Box 2. Type of support measures according to WTO principles

There are three type of support categories using WTO classification namely i. Green box if the subsidy paid directly for farmers (slightly similar with direct payments) and, ii. Amber Box which considers non-product-specific trade distorting subsidies and product-specific trade distorting subsidies. Green box support: This category includes support measures that are minimally or non-distorting to trade and production. Examples include research and extension services, infrastructure development, and direct payments decoupled from production. Green box measures are not subject to reduction commitments under WTO agreements.

Non-product specific support: This category typically includes general services and infrastructure that benefit agriculture as a whole rather than specific products. Examples include pest control, training programs, and market information services. Non-product specific support can fall under the green box category if it meets the criteria of being minimally or non-distorting to trade and production.

Product-specific support: This category includes measures that support specific agricultural products or sectors, such as price supports, input subsidies, and payments based on production quantities. Product-specific support can be more trade-distorting and is subject to reduction commitments under WTO agreements, especially if it exceeds certain limits.

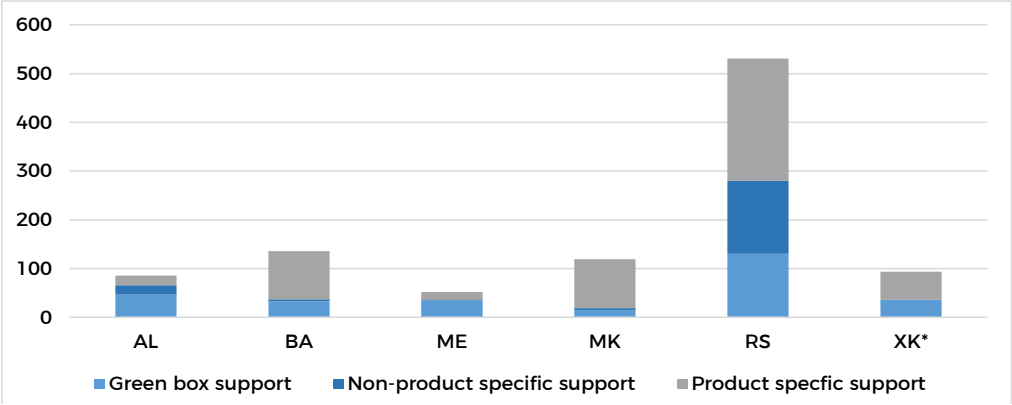
Green box support is generally considered in line with WTO principles as it is intended to be minimally trade-distorting. Non-product specific support can also align with WTO principles if it is not trade-distorting and benefits the agriculture sector as a whole. Product-specific support may raise concerns if it exceeds WTO limits or is considered trade-distorting, depending on the specific nature of the support measures.

Source: WTO, 2023[11]

11 More information on WTO terminology is found in the following webside: https://www.wto.org/english/tratop_e/agric_e/agboxes_e.htm#:~:text=Domestic%20support%20in%20agriculture%3A%20The,)%2C%20red%20(forbidden).

Comparing the countries based on support in agriculture using WTO principles in million Euro it was found that the Green support varied from 14 Million EUR in North Macedonia to 130 Mln Euro in Serbia. Product specific support was also the highest in Serbia. Overall, Serbia stands out for having the highest total support in agriculture, driven by significant support in all categories. Montenegro, on the other hand, has the lowest total support, primarily due to lower levels of support in all categories.

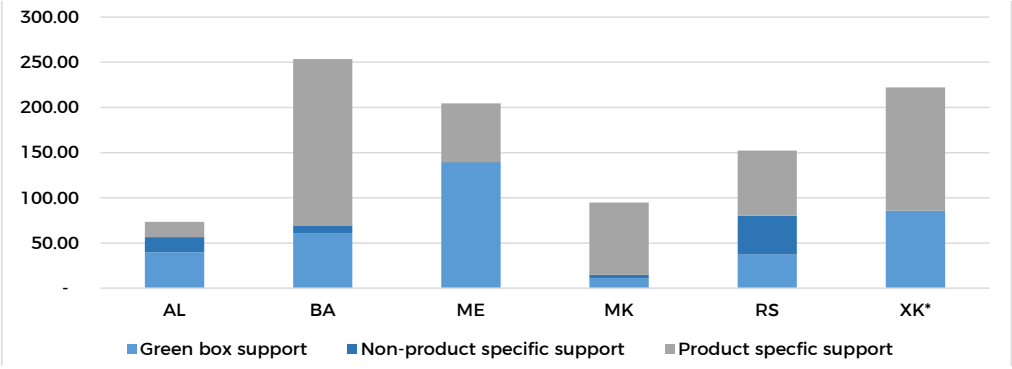
Figure 2: Budgetary support in WBCs according to WTO classification (in Mln Euro)



Source: FAO, 2023[12]

Comparing the countries based on support for agriculture using WTO principles in Euro per hectare of agriculture utilized land we find that Bosnia and Herzegovina stands out for having the highest product-specific support per hectare, while Montenegro has the highest green box support. Serbia has the highest non-product specific support. North Macedonia generally has lower levels of support compared to the other countries in all categories. Kosovo's data is not available for non-product specific support.

Figure 3: Budgetary support in WBCs according to WTO classification (in Euro per Ha of Utilised land)

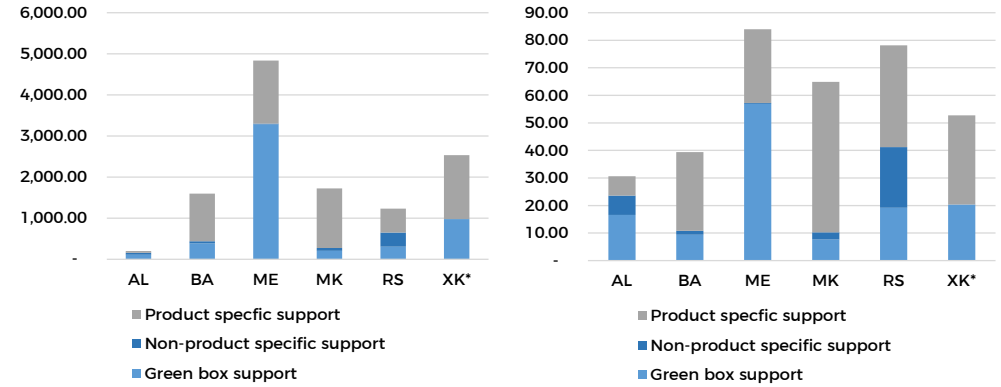


Source: FAO, 2023

12 Source: original data provided by the project "Comparative analysis of agricultural sectors and rural areas in the pre-accession countries: agricultural policy developments, situation of the agri-food sector and economic context" financed by the European Commission, DG AGRI (2022). Additional data collection and update supported by the collaboration between CEFTA Secretariat and FAO Regional Office for Europe and Central Asia on enhancing the transparency between the Parties for subsidies reporting (2023).

If we compare the support using the number of inhabitants we find that support in Euro per inhabitant vary significantly across countries, with Montenegro and Serbia showing a notably high level of support. Another approach is to compare countries by dividing the support per agriculture worker. Again, Montenegro stands out with a relatively high level of support per employee. Bosnia and Herzegovina and North Macedonia show particularly high levels of product-specific support per employee which is also the most concerning category of support.

Figure 4: Budgetary support in WBCs according to WTO classification (in Euro per inhabitant in the left side and worker in agriculture in the right side)



Source: FAO, 2023

4.7.2 THE EU INSTRUMENT FOR PRE-ACCESSION ASSISTANCE IN RURAL DEVELOPMENT (IPARD)

The EU Instrument for Pre-Accession Assistance in Rural Development (IPARD) has increased its contribution to the total agricultural support in WBs.

IPARD II program covered the period 2014-2020. However, the application of these funds was prolonged for two additional years, allowing the countries to maximize their utilization. The countries have used from EUR 29 million in Montenegro to 88 million in Serbia (Table 61). The rate of approved applications varies significantly, from 33% in Serbia to 56% in North Macedonia. The three most frequently used measures in all countries are M1 (Investments in physical assets of agricultural holdings), M3 (Investments in physical assets concerning processing and marketing of agricultural and fishery products) and M7 (Farm diversification and business development, not implemented only in Montenegro) In the future IPARD programme (IPARD III) the planned budget is expected to increase in all countries. It will nearly double in Montenegro, while is expected to increase three times in Serbia. New measures are planned to be implemented in the recently adopted IPARD III 2021-2027 in the pre-accession countries, such as: agri-environment, climate and organic farming (M4), implementation of local development strategies – LEADER approach (M5), investments in rural public infrastructure (M6), improvement of skills and competences (M8), advisory services (M10), and establishment and protection of forests (M11). The type of measures will be influenced by the institutional capacity of the governments of the country.

Table 61: Comparison of the IPARD absorption in Western Balkans

		Albania	Montenegro	North Macedonia	Serbia
IPARD II	Funds used in Mln Euro	70.9	29.3	79.1	88.1
	Rate of aproved application	39%	52%	56%	33%
	Number of measures	4	3	4	4
IPARD III	Planned budget for IPARD II	112	63	97	288
	Number of measures	9	7	8	7

Source: Kotevska et al, 2023

4.7.3 COUNTRIES MEASURES TO TACKLE CRISIS EFFECTS

The Covid-19 pandemic has led to strong disruptions in all Western Balkan economies, being even more pronounced when the restriction measures were introduced since March 2020. As a result of the declined economic activity at the beginning of the Covid-19 outbreak, the unemployment increased but also the fiscal deficit and the accumulation of debts in most of the Western Balkan countries/territories (Bogdanov et al., 2022) the agriculture has been also affected. However, overall growth and international trade in some countries which indicated positive growth.

Almost all countries have introduced a set of economic measures to support citizens, companies, as the following:

1. to maintain the liquidity of the companies, as in the case of North Macedonia, Bosnia and Hercegovina, Kosovo and Montenegro,

2. to reduce the unemployment i.e. to stimulate job creation (Albania, North Macedonia, Kosovo, Montenegro),

3. to the postponement and releasing of debts and introduction of new credit lines (North Macedonia, Montenegro, Serbia.

On regards to agricultural sector specific measures countries copied different strategies. Countries, like North Macedonia and Serbia carried exceptional market measures respectively temporary exemption from customs duties and export ban. In these countries as well as in Bosnia and Hercegovina price control measures were adapted in raw materials and fuel. In addition, quantitative restrictions on the purchase of foods (Bosnia and Herzegovina), and support for private storage and public procurement (North Macedonia, Montenegro, Serbia, and partially in Bosnia and Herzegovina) (Bogdanov, 2023).

On regards to the Ukrainian war the countries are still in their early phase of developing long term measures. Food security and sovereignty become an imminent priority Ukraine crisis, requiring for supply of enough, nutritious, and affordable food. Countries designed additional measures to support the increase of production in cereals. As presented in the section 4.7.2. besides the competitiveness component that needs to be enhanced, food sovereignty is becoming an issue of importance. It is not known how far this change will be reflected in the long-term developments plans in the agriculture sector and if associated measures will create structural changes.

Table 62: Comparison of the Covid 19 and war in Ukraine key policy measures in WBCs.

Country	Introduced support measures
Albania	No sector specific measures, except the support of employees' wages, which in the case of agriculture mostly referred to the agri-food processing companies (1.5% of the farms). In the context of Ukraine war effect, support for cereals plantation increase of budgetary support for providing fuel for agriculture Eur 19 Mln.
Bosnia and Hercegovina	In the Federation of BiH, a significant part of the funds has been directed to support the purchase of raw materials for spring and autumn sowing in the amount of EUR 3.65 million. An additional EUR 4.2 million has also been allocated as financial support to export-oriented economic entities from the agri-food sector in order to alleviate disturbances in the international market from the budget of the Federation of BiH. Regarding RS, extraordinary allocations also sought to mitigate the negative consequences of COVID-19, and this has been done through the so-called compensation funds (7.3 Mln euro during 2020-2021). No additional budget allocations for the mentioned intentions in the Brcko District of BiH.
Montenegro	Euro 4 Mln in 2020-2021 in supporting dairy, meat, potato, cereals, fishery sector.
North Macedonia	Exemption of customs duties on staple food, extra support for wineries and farmers producing spring cabbage. EUR 4.6 million spent for subsidizing 50% of the green oil for farmers, EUR 5 million support provided through the Development Bank, and EUR 7.7 million were spent to support the purchase of grape from 2020 harvest.
Serbia	Financial support to vegetable production, a special credit line was provided and additional financial support has been provided for livestock producers engaged in cattle breeding.

Source: Martinovska et al, 2022.

5. THE ALBANIAN CASE

5.1 UKRAINE WAR IMPACT ON AGRICULTURE PRODUCTION AND COSTS

Ukraine war affected farmers in two directions. On one hand, substantial inputs prices (given that Ukraine and Russia are key global suppliers of agriculture inputs, particularly fertilizers as highlighted above) were reflected in higher production costs, and in some cases, farmers could not afford to by sufficiently inputs, thereby resulting in lower production performance. On the other hand, increased food products prices, implied higher income for farmers and thereby was reflected in increased production (for short term crops most notably cereals). Therefore, based on several data sources, we show in this subsection production trends and cost trends for key agrifood products categories which have been more affected by Ukraine war by default.

Overall, the data suggests that there has been a modest increase in the average values for most indicators related to livestock farming between 2019 and 2022.

Table 63: Production capacity of the surveyed farms

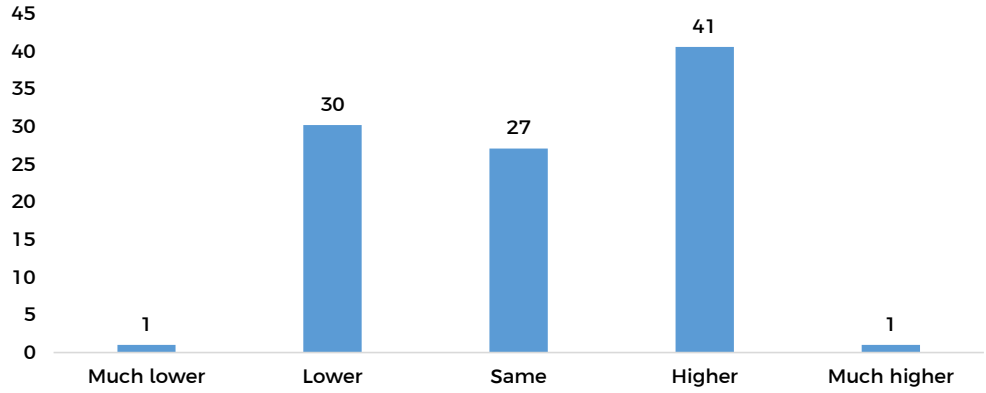
Indicator	Average
Number of livestock	
2019	14.12
2022	15.65
Area cultivated with wheat	
2019	7.4
2022	7.778
Area cultivated with barley	
2019	8.37
2022	7.778
Area cultivated with maize	
2019	13.71
2022	13.346
Area cultivated with alfalfa	
2019	22.08
2022	23.475
Area cultivated with other fodder	
2019	7.812
2022	9.893

Source: DSA (2023) Livestock Survey

The number of livestock has increased from 14.1 to 15.7 (heads per farm), the area cultivated with wheat has increased from 7.4 to 7.8 hectares, the area cultivated with alfalfa has increased from 22.1 to 23.5 hectares, and the area cultivated with other fodder has increased from 7.8 to 9.9 hectares. The strong impact of growing prices for cereals and livestock products (largely caused by the Ukraine war) increased farmers interest to intensify their engagement and increase production.

However, there are a few exceptions to this trend. The area cultivated with barley has decreased from 8.4 to 7.8 hectares, and the area cultivated with maize has decreased from 13.7 to 13.3 hectares.

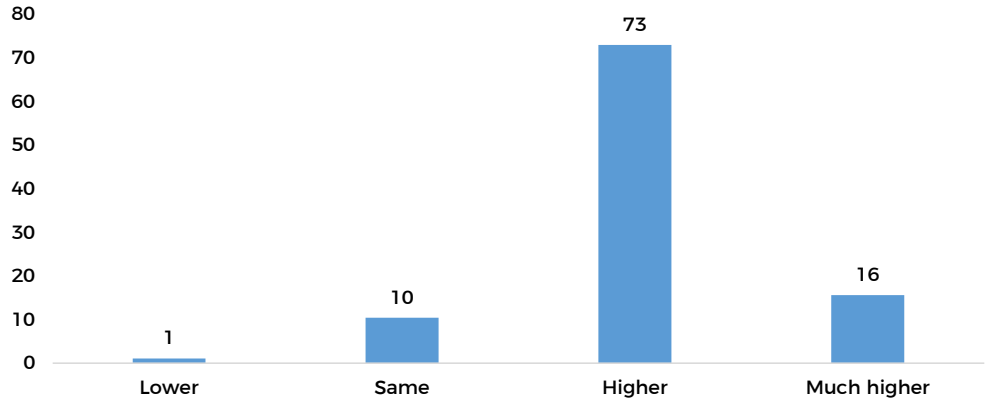
Figure 5: Change in prices during 2022 compared to 2021



Source: DSA (2023) Migration survey

From the Figure 5, it can be observed that in general, prices have increased for most interviewed farmers – some farmers tend to produce part of inputs on farm and thereby are less exposed to inputs market trends. Nonetheless, there is a notable proportion of farmers that stated that prices have experienced decrease.

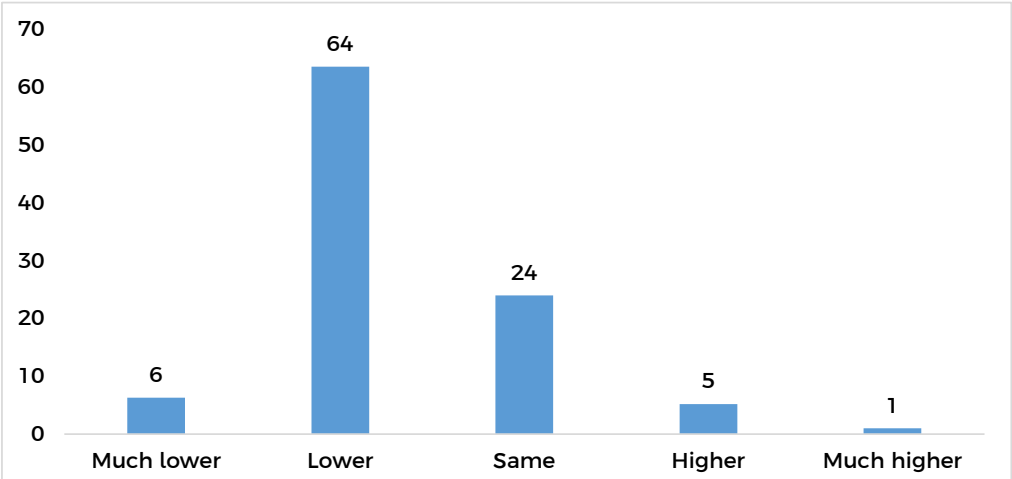
Figure 6: Changes in production costs during 2022 compared to 2021



Source: DSA (2023) Migration survey

According to Figure 6, 70% of the companies have reported higher production costs in comparison to the previous year, while 10% reported same production and 15% reported much higher production compared to 2021.

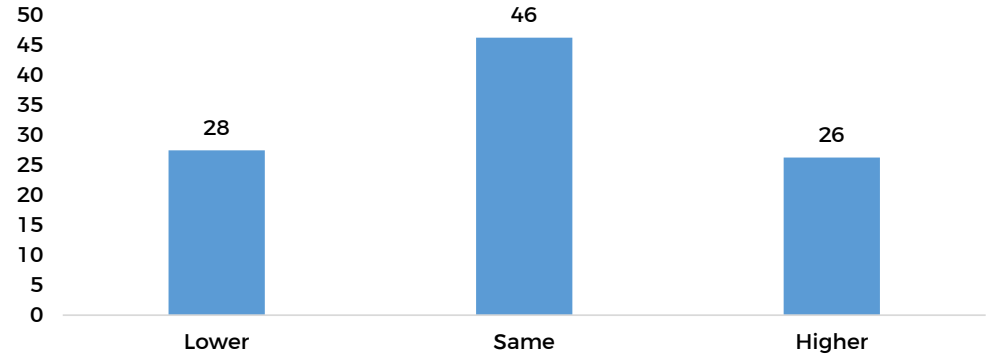
Figure 7: Changes in profit during 2022 compared to 2021



Source: DSA (2023) Migration survey

The Figure 7, shows that 61% of farmers reported lower profits, while 30% reported same and higher profits.

Figure 8: Changes in on farm employment during 2022 compared to 2021



Source: DSA (2023) Migration survey

Most of the interviewed farmers stated that they had the same number of employees compared to 2021 (37%) and 22% of them said that they had a lower number of employees. 21% of the interviewees farmers said that they had a higher number of employees.

Almost half of the interviewed wheat farmers reported higher production costs, while 48 % of them reported lower production costs.

Table 64: Changes in wheat production costs

	Frequency	Percent
Higher	99	49.3
Lower	96	47.8
Same	2	1
Total	201	100

Source: DSA (2023) Cereals survey

Similarly, almost half of the maize farmers reported higher production costs, while 41% of them reported lower production cost.

Table 65: Changes in maize production costs

	Frequency	Percent
Higher	98	48.8
Lower	82	40.8
Same	2	1
Total	201	100

Source: DSA (2023) Cereals survey

5.2 COVID-19 IMPACT ON AGRICULTURE

5.2.1 GENERAL SECTOR IMPACT

As highlighted in the introduction, the analysis of the impact of Covid-19 on agriculture sector in Albania is based on the analysis of two structured surveys carried out with farmers and extension experts/staff – both surveys were carried out by DSA also involving the authors of this report. The pandemic has highlighted the main difficulties inherited from the past. During the Covid-19 pandemic there was a slight change in terms of access to services (Table 66). According to the survey with farmers only one in five respondents agreed that the pandemic has reduced their access to extension services. The figures are similar for services provided by local government. However, the overall business environment, mostly related to other institutions and services, has been impacted according to more than 40 percent of the respondents.

Table 66: Covid-19 impact on the enabling environment / services

Measurement scale	No problem	Minor problem	Moderate problem	Serious problem
Impact on day-to-day business (frequency)	57	150	104	207
Impact on day-to-day business (percentage)	11	29	20	40
Impact on access to extension services (frequency)	141	166	129	82
Impact on access to extension services (percentage)	27	32	25	16
Impact on access to local admin. services (frequency)	153	171	128	66
Impact on access to local admin. services (percentage)	30	33	25	13

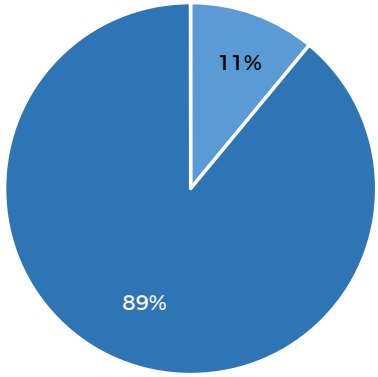
Source: DSA (2021) Structured farm survey

5.2.2 THE CASE OF GREENHOUSE VEGETABLE

Greenhouse vegetable are the leading agrifood export items – the main crops are tomatoes and cucumbers, which are analyzed in more details below.

MARD extension experts perceived that greenhouses vegetable production was not greatly impacted by the pandemic in 2020 (Figure 9). Specifically, only a small number (11%) of extension service officials perceived a large, negative impact upon production trends of greenhouse vegetables. In-depth interviews identified isolated cases of the impact of Covid-19 upon production where farmers could not carry out services due to restrictions, especially during the initial months. These results are consistent with the structured survey results, which did not show significant differences in production.

Figure 9: Impact of Covid-19 upon production of greenhouse vegetables



Source: DSA (2021) Extension survey

As highlighted above, the quantities sold were reduced in 2020, whereby post-harvest losses were larger, due to a difficulty to sell. The farm survey results show that 31.4 percent of farmers found it more difficult to sell during 2020 than in the previous three years, and 25.6 percent, much more difficult (Table 67).

Table 67: Perception of Covid-19 impact on tomato sales

Measurement scale	1	2	3	4	5
product sales in 2020 vs last 3 years	8	39	26	13	0
Percentage	9.3	45.3	30.2	15.1	0
number of buyers in 2020 vs last 3 years	3	21	51	11	0
Percentage	3.5	24.4	59.3	12.8	0
selling difficulty in 2020 vs last 3 years	0	6	31	27	22
Percentage	0	7	36	31.4	25.6

Source: DSA (2021) Structured farm survey; Note: Likert scale for product sales and no. of buyers: 1, much lower; 2, lower; 3, same; 4, higher; 5, much higher; Likert scale for selling difficulty: 1, much easier; 2, easier; 3, same; 4, more difficult; 5, much more difficult

According to the in-depth interviews, during the first months, no lack of demand was observed, as highlighted above. However, during autumn, sales decreased and apparently demand decreased, too. For example, recently one interviewed large exporter claimed that they lost five trucks of greenhouse vegetables because they could not sell them.

The farmers producing cucumbers highlighted, as with tomatoes, the difficulty in selling during 2020 compared to previous years. However, the situation was not as problematic, with only 2.9 percent stating that it was much more difficult (Table 68), compared to 25.6 percent in the case of tomatoes.

Table 68: Perception of Covid-19 impact on cucumber sales

Measurement scale	1	2	3	4	5
product sales in 2020 vs. previous 3 years	0	10	22	3	0
%	0	28.6	62.9	8.6	0
number of buyers in 2020 vs. previous 3 years	5	29	1	0	0
%	14.3	82.9	2.9	0	0
selling difficulty in 2020 vs. previous 3 years	0	0	25	9	1
%	0	0	71.4	25.7	2.9

DSA (2021) Structured farm survey Note: See Table 19 for Likert scale for product sales and number of buyers

Farmers highlighted that the selling price of cucumbers, influenced by farmers, was 45.7% the same as in previous years and 48.6% higher compared to previous years. While the influence of buyers on the selling price according to farmers was 74.3% the same and 22.9% higher compared to previous years.

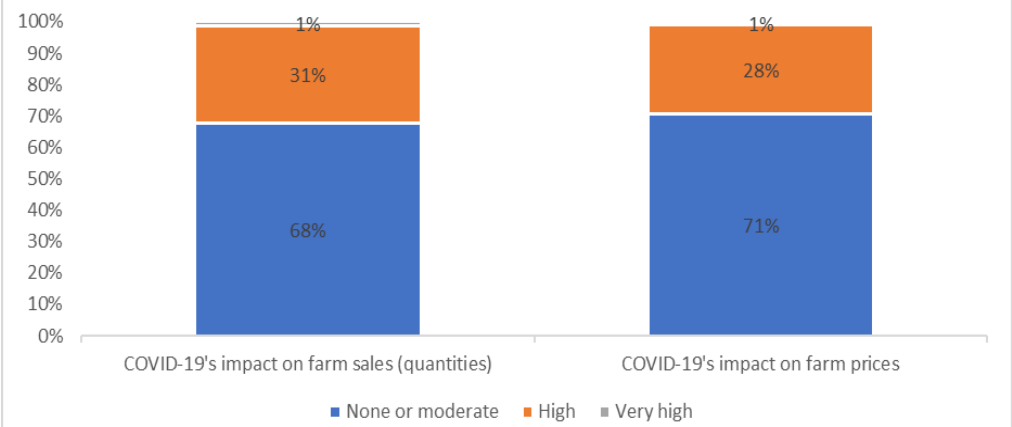
Table 69: Covid-19 impact on cucumber prices

Measurement scale	1	2	3	4	5
selling prices in 2020 vs. previous 3 years	2	9	22	2	0
Percentage	5.7	25.7	62.9	5.7	0
farmer's influence in setting selling price in 2020 vs. previous 3 years	1	16	17	1	0
Percentage	2.9	45.7	48.6	2.9	0
buyer's influence in setting selling price in 2020 vs. previous 3 years	0	0	26	8	1
Percentage	0	0	74.3	22.9	2.9

DSA (2021) Structured farm survey Note: Likert scale for selling price, farmer's influence and buyer's influence: 1, much lower; 2, lower; 3, same; 4, higher; 5, much higher

Almost one in three extension officials of MARD viewed that the impact of Covid-19 upon farm sales (quantities) and prices of greenhouse vegetables was great (Figure 10).

Figure 10: Impact of Covid-19 on farm sales (quantities) and prices of greenhouse vegetables



Source: DSA (2021) Extension survey

Costs, income and profits

Although most farmers stated that production costs remained unaffected or unchanged in 2020 compared to previous years, more than one-third stated that such costs had increased in the case of tomatoes (Tables 70 and 71). There are several explanations for the difference. First, in the in-depth interviews, some farmers stated that the prices of inputs had increased in some cases. Second, the high levels of (post-harvest) losses are transferred to increased costs when expressed per kg of sold product. Third, limitations or constraints to carry out some services have resulted in a lower yield for some farmers, implying a further increased cost per kg.

Table 70: Covid-19 impact on profitability of tomatoes

Measurement scale	1	2	3	4	5
production costs in 2020 vs. previous 3 years	0	1	52	33	0
Percentage	0	1.2	60.5	38.4	0
profits per kg in 2020 vs. previous 3 years	11	46	18	11	0
Percentage	12.8	53.5	20.9	12.8	0
farmer's income in 2020, vs. previous 3 years	13	41	20	12	0
Percentage	15.1	47.7	23.3	14.0	0

DSA (2021) Structured farm survey Note: Likert scale for production costs, profit per kg and farmer's income: 1, much lower; 2, lower; 3, same; 4, higher; 5, much higher

Table 71: Covid-19 impact on profitability of cucumbers

Measurement scale	1	2	3	4	5
production costs in 2020 vs. previous 3 years	0	0	30	5	0
%	0	0	85.7	14.3	0
profits per kg in 2020 vs. previous 3 years	2	15	17	1	0
%	5.7	42.9	48.6	2.9	0
farmer's income in 2020, vs. previous 3 years	1	15	16	3	0
%	2.9	42.9	45.7	8.6	0

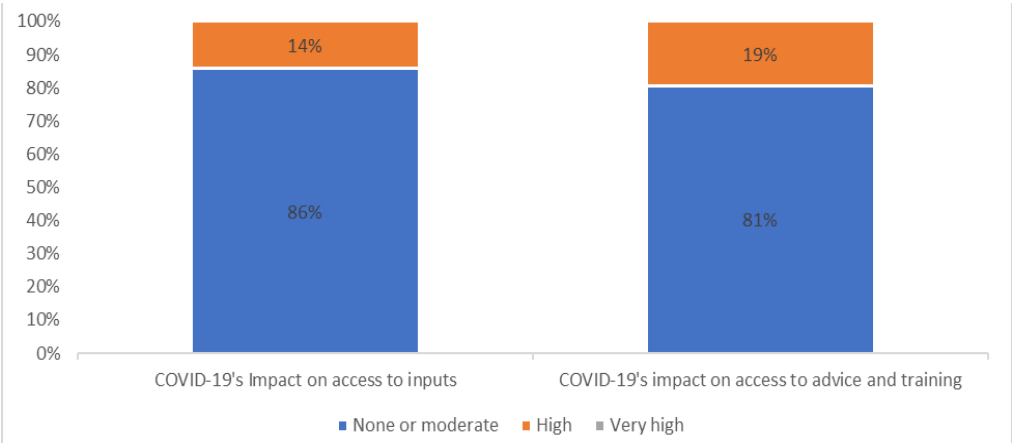
DSA (2021) Structured farm survey Note: Likert scale for production costs, profit per kg and farmer's income: 1, much lower; 2, lower; 3, same; 4, higher; 5, much higher

Access to inputs and advisory services

The pandemic impact on access to inputs and advice and training of greenhouse vegetable farmers was moderate. Almost 20 percent of extension officials of MARD perceived that the impact upon access to services for greenhouse vegetable producers had been high, while only fourteen percent perceived it to be high on access to inputs (Figure 11).

Input suppliers and larger producers complained that the seedling quality produced in spring 2020 was poor.

Figure 11: Covid-19 impact on access to inputs, advice and training of greenhouse vegetable farmers



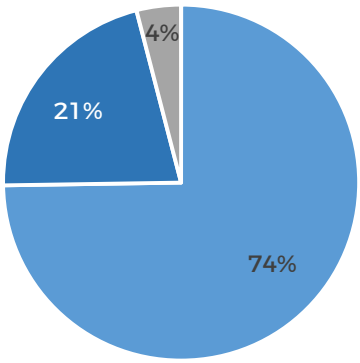
Source: DSA (2021) Extension survey

Investment

Greenhouse expansion stagnated in 2020 due to supply chain problems and the pandemic situation, which, according to interviews, hampered the willingness of operators to invest. In all, 25 percent of extension officials (Figure 12) perceived a high or very high impact of the pandemic within the sector (greenhouse vegetables). On the other hand, most officials (74%) declared no or a moderate impact on investments.

Almost all greenhouse farmers interviewed (semi-structured interviews) stated that they had no intention of investing in new greenhouses or carrying out any type of investment in the near future following the market experience of the latest production cycle.

Figure 12: Covid-19 impact on investments for greenhouse vegetables during 2020

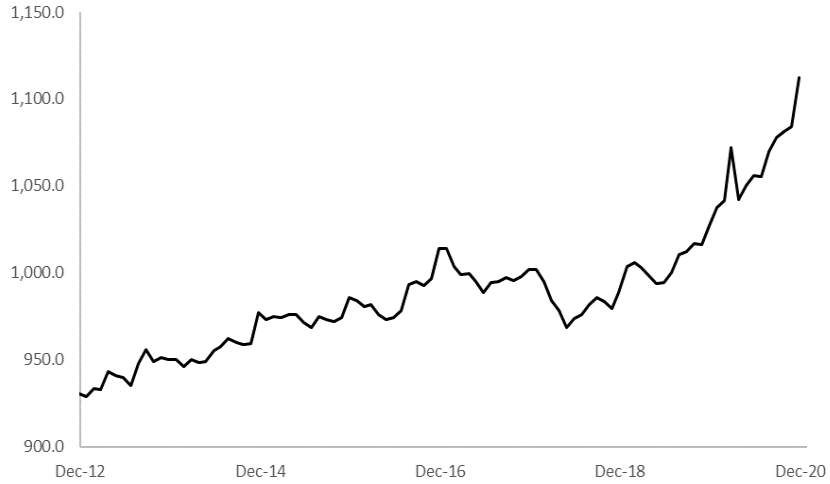


Source: DSA (2021) Extension survey

5.3 CONSUMER BEHAVIOUR

In response to negative economic and employment trends, Albanian households have expressed substantial concerns. A 2020 World Vision survey indicated that approximately 68% of surveyed households in Albania expected adverse effects on their employment due to the pandemic, with individuals aged 30 to 60 being the most affected demographic. The pessimistic outlook on employment and income prospects led to a reduction in household consumption, coupled with an increase in savings as a precaution against potential future unemployment. Recent data underscore a significant rise in savings deposits in Albania throughout 2020, notably in the local currency (Albanian lek), marking a departure from previous years when foreign currency deposits dominated. Domestic currency deposits experienced an 11% increase in 2020, indicating a shift toward increased domestic savings (Monitor 2021).

Figure 13: Savings in billion Albanian Lek for the period December 2012 – December 2020.



Source: Bank of Albania (2021)

Harri et al (2022) examined household consumption and saving behaviour in the context of a post-communist economy, particularly considering the impact of COVID-19. Utilizing models and intervention analysis, it aims to identify the consequences of catastrophic events, such as the pandemic, on key macroeconomic indicators for the Albanian economy. The study reveals a significant contraction in consumer spending and a notable increase in savings during the pandemic period, with heightened uncertainty identified as a primary driver of this household behaviour. The lasting impact on savings is anticipated, while a recovery in retail trade was foreseen.

The Ukraine war has had a comparable adverse effect, introduced perceived uncertainty and contributed to an upsurge in prices, thereby affecting the cost of living. The conflict in Ukraine is likely to have heightened global economic uncertainty due to its geopolitical implications and the potential for disruptions in commodity markets. The surge in prices, particularly in energy and food, can be ascribed to concerns regarding supply chain disruptions, increased production costs, and market speculation. Also, the COVID-19 pandemic, marked by elevated unemployment, diminished income, and heightened uncertainty, has significantly deleteriously impacted aggregate demand, consequently exerting a negative influence on aggregate consumption. The escalating uncertainty surrounding the adverse effects of COVID-19 has also influenced the demand for food products.

Below there are the findings of a recent consumer survey in urban Albania (carried out during 2022). Most respondents confirm that the pandemics had affected them at personal level.

Table 72: I feel the corona virus (Covid-19) pandemic has affected me personally.

Category	Frequency	Valid Percent
Strongly disagree	16	3.4
Disagree	65	13.7
Somewhat disagree	26	5.5
Neither agree or disagree	19	4
Somewhat agree	53	11.2
Agree	212	44.8
Strongly agree	82	17.3
Total	473	100

Source: Authors based on Meixner, O., Haas, R., Imami, D., Miftari, (2022). Consumer Survey

Furthermore, most respondents state that they are worried about their financial situation and future.

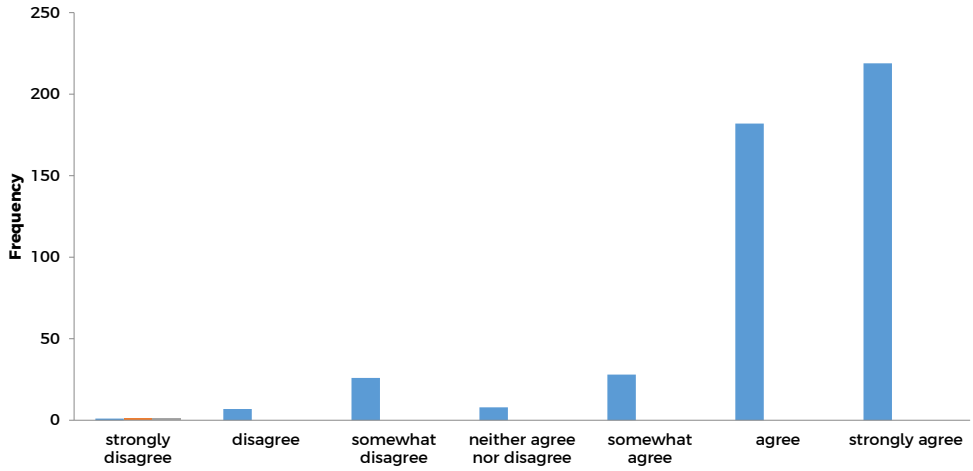
Table 73: I am worried about my financial future.

Category	Frequency	Valid Percent
Strongly disagree	5	1.1
Disagree	40	8.5
Somewhat disagree	36	7.6
Neither agree or disagree	49	10.4
Somewhat agree	62	13.1
Agree	150	31.8
Strongly agree	130	27.5
Total	472	100

Source: Authors based on Meixner, O., Haas, R., Imami, D., Miftari, (2022). Consumer Survey

Food supply chain disruptions like the Covid-19 pandemic and Ukraine war driven inflaction led to variations in prices and created an increase in the cost of living including food prices. The majority of interviewed respondents feel that food has become very expensive.

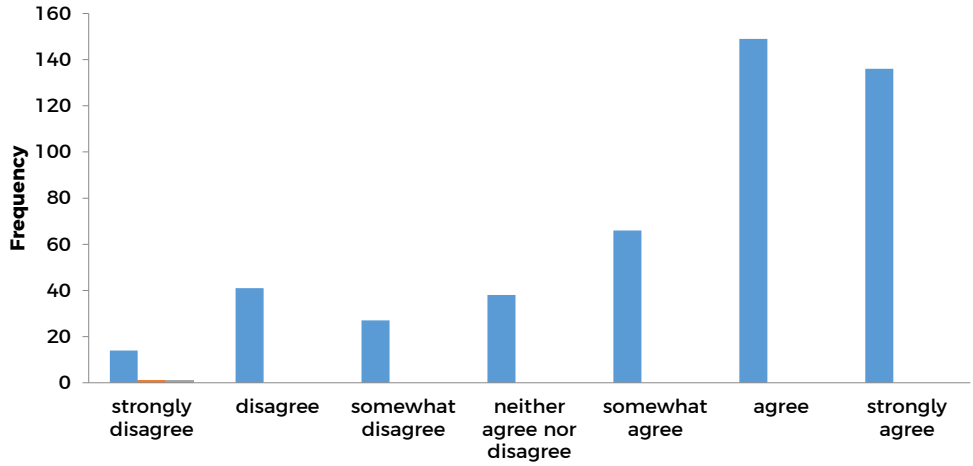
Figure 14: Distribution of frequencies about consumers' statement on ‚I feel food is too expensive'.



Source: Authors based on Meixner, O., Haas, R., Imami, D., Miftari, (2022). Consumer Survey

Most respondents (61%) stated that their current financial situation forced them to change their food habits.

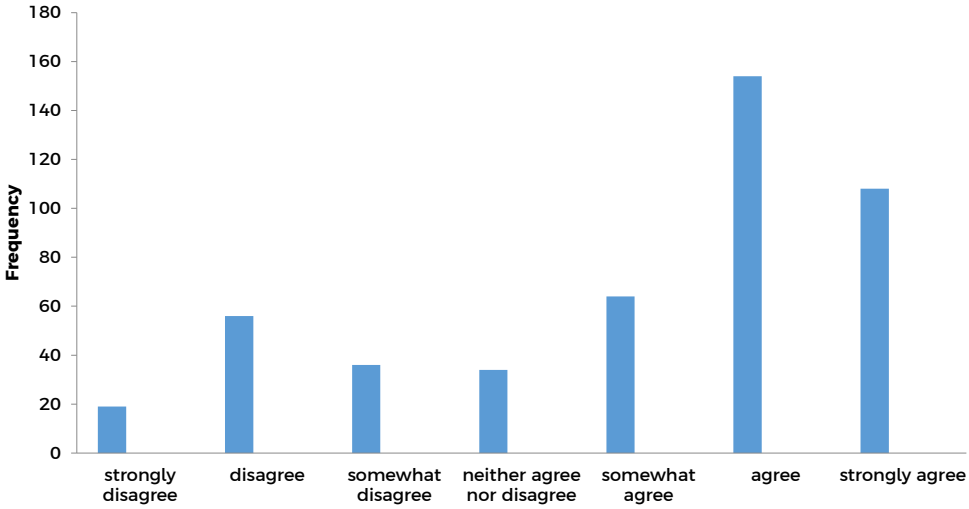
Figure 15: Frequency distribution of the consumers' statement on 'my current financial situation forced me to change food habits'.



Source: Authors based on Meixner, O., Haas, R., Imami, D., Miftari, (2022). Consumer Survey

A similar pattern follows the statement on worries about buying enough food, where the majority (56%) of Albanian consumers indicated that they are worried about buying enough food.

Figure 16: Frequency distribution of the statement 'I am worried about buying enough food'.



Source: Authors based on Meixner, O., Haas, R., Imami, D., Miftari, (2022). Consumer Survey

6. CONCLUSIONS

Ukraine war and the Covid-19 pandemic crises have posed new challenges for the agriculture sector and underscored historical institutional constraints. Addressing these issues requires systemic actions, including modernizing policies, enhancing government capacities, and implementing gender-responsive and evidence-based policies. Specific interventions are proposed to tackle emerging problems, emphasizing vertical coordination through contract farming to reduce negative effects. Contract farming is highlighted as a tool to address market failures, benefiting both producers and buyers by lowering transaction costs.

The document suggests designing clusters as an alternative to vertical coordination for enhancing competitiveness. It advocates for the creation of business associations, operational bodies, and cluster development strategies to improve collective action and business climate. Addressing informality, promoting downstream integration, and short chains as a marketing strategy are recommended to create preconditions for fair competition and mitigate risks in sales channels affected by the pandemic.

Improving safety and quality standards for export markets is emphasized, with interventions targeting soil analysis, plant protection, and certification. The importance of Global G.A.P. certification is highlighted to enhance export market positioning. The document also addresses the impact of climate change, suggesting interventions like digital agriculture, investments in climate change adaptation, and cooperative systems for knowledge and innovation in agriculture.

Collective action based on trust is identified as a critical determinant of competitiveness, with recommendations for supporting producer groups, inter-branch organizations, and local collective actions for cluster development. The document concludes that collective action can serve as a mechanism to mitigate pandemic effects and enhance overall agricultural system competitiveness.

More specifically, it is important to support enhancing value chain organization through collective actions and contract farming which can improve efficiency and resilience. Diversification at the farm level, coupled with vertical integration like direct sales, mitigates risks to sales channels, ensuring stability. Climate change resilience demands a systemic approach, integrating advisory services, digital agriculture, and cooperative systems to empower farmers.

Initiatives such as farm-to-school schemes and market stabilization mechanisms can contribute to stabilizing markets and enhancing food security. Strengthened advisory services, facilitated by private operators, can support specific production groups, fostering informed decision-making. Market information accessibility, facilitated by a Market Information System, and ICT utilization can empower stakeholders.

Access to capital is critical for addressing liquidity issues along the value chain, particularly for downstream businesses. Lastly, targeted safety nets at the municipal level address emerging food insecurity exacerbated by the pandemic's impact on vulnerable households.

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