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Food Self-Sufficiency in the Western Balkans

Executive Summary

- The Western Balkan region as a whole is well supplied with food. Shortages in certain food products may be addressed through trade within the region, where Serbia, the region's only food self-sufficient country, plays the role of the key supplier. In other words, in a theoretical situation of economic autarky, the region's food security would depend on Serbia.
- The Western Balkan governments vary considerably concerning the instruments used to counteract potential food shortages and rising prices. Self-sufficient Serbia applied the most comprehensive measures, while governments with the lowest self-sufficiency ratio (SSR), which depend on food imports (Montenegro and Kosovo*) applied only minor measures.
- The entity of Bosnia and Herzegovina – Republika Srpska (RS) applied measures that brought the most benefits to small farmers. These include input subsidies, subsidies for capital investments, direct payments, credit-guarantees for bank loans, one-time payments, etc. The above signals the entity's aspiration for food sovereignty. The Federation of Bosnia and Herzegovina increased all types of incentives by 20–40%.
- Albania introduced a social resistance package that includes farmers, while North Macedonia applied measures similar to Serbia, but on a smaller scale.
- Although small farms dominate the Western Balkans's agricultural landscape, agricultural policy measures implemented in response to the COVID-19 crisis have bypassed rural areas. The same applies to the current crisis. As a whole, the interests of small farmers are oftentimes neglected.

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Introduction

After years of institutional and economic reforms that caused an initial decline in agricultural productivity, linked to the privatization of production capacity, land reforms, farm restructuring, budget constraints, lack of incentives and disorganized food supply chains, the countries of the Western Balkans are still stuck in a low-productivity agriculture and lag behind the European Union.[1]

In 2021, agriculture, forestry, and fishing contributed considerably more to gross value added (GVA) in the Western Balkans than in the EU. Albania recorded the highest share with 20.3%, while the lowest share was recorded in Bosnia and Herzegovina (6.6%). The workforce employed in agriculture, forestry, and fishing activities represented between 4.8% (Kosovo*[2]) and 36.1% (Albania) of total employment, which is also significantly higher than in the EU. Relative to the total area, the utilised agricultural area (UAA) in the Western Balkans is bigger than in the EU. The EU uses 38.4% of its territory for agriculture, and the region almost half. The highest proportions utilised for agricultural purposes, is recorded in North Macedonia (50%), followed by Serbia (45.2 %), and the lowest in Montenegro (18.6 %).[3]

The region faces not only a stagnation in agricultural production, but is currently experiencing rising food and energy prices that hit the poorest households hardest. The cost of food increased significantly in all economies of the region. In May 2022, it increased over the same month in the previous year for 22.7% in Bosnia and Herzegovina, 20.6% in Montenegro, 17.1% in Kosovo*, 17.07% in North Macedonia, 16% in Serbia, and 11.9% in Albania.[4] Although domestic production and applied measures in Serbia should have had an anti-inflationary effect, the rise in food prices is almost as high as in the other countries. Apart from spillover of inflation growth in the euro area through import prices, bottlenecks in the supply of semi-finished products and raw materials, as well as rising prices of inputs on world markets, the key drivers of the monthly inflation in Serbia are, most probably, speculations on food prices. The crisis found Serbia with disordered market structures, under the strong influence of import-export lobbies that defined high trade margins.[5]

Taking into account the aforementioned problems as well as implications of the Ukrainian crisis on the EU market, possible supply chain disruptions and the related impossibility of importing food, expansion of the conflict, and other undesirable circumstances, the question is to what extent, in case of need, the countries of the Western Balkans are able to feed their populations.

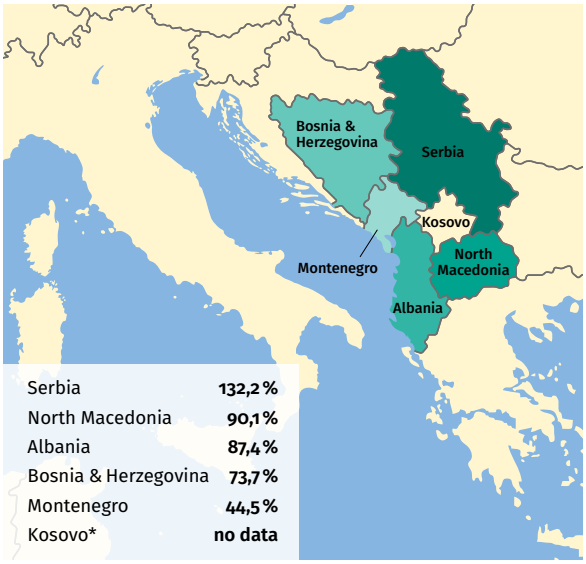
This article first outlines the region's ability to meet its own needs through domestic production, through self-sufficiency ratio (SSR), for the period 2006–2019, based on FAO data.[6] Second, the article presents the key facts about bilateral trade within the region. Third, it spells out the policy responses of national governments to the crisis. Finally, the author puts forward some recommendations.

Do the Western Balkans have the capacity to produce food in sufficient quantities to meet domestic needs?

A calculation of the overall average food SSR that included the following aggregated food items:7 cereals total, meat total, milk total excluding butter, total eggs, total pulses, starchy roots total, fish-seafood total, fruits total, vegetables total, sugarcrops total, and oilcrops total, showed that among the Western Balkan economies, there was just one (Serbia) that had an overall SSR rate above 100%, while Albania, Bosnia and Herzegovina, North Macedonia, and Montenegro showed an SSR below the line of 100% (Figure 1).

1 Lovre, K. (2016, August). Technical change in agricultural development of the Western Balkan countries. In Emerging Technologies and the Development of Agriculture. Novi Sad: Proceeding of Serbian Association of Agricultural Economists 152 Seminar, Belgrade: Serbia (pp. 1–14).
2 *This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.
3 Eurostat (2022): Enlargement countries - agriculture, forestry and fishing statistics. Available at: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Enlargement_countries_-_agriculture,_forestry_and_fishing_statistics#Gross_value_added_and_employment
4 Source: Bosnia and Herzegovina Agency for Statistics, Statistical Office of Montenegro, Kosovo Agency of Statistics, State Statistical Office of the Republic of North Macedonia, Statistical Office of the Republic of Serbia, Instituti i Statistikave.
5 Lovre, K., & Brankov, T. P. (2015). The Supermarket Revolution in the Balkan Countries: The Case of Serbia. Agroeconomia Croatica, 5(1), 1–10. Available at: https://hrcak.srce.hr/file/211957.
6 Data about Kosovo* is missing and is very different. Source used here: Green Report (2019). Ministry of Agriculture, Forestry and Rural Development, Prishtina. Available at: https://www.mbpzhr-ks.net/repository/docs/ENG_Raporti_i_Gjelber_2019.pdf.

Figure 1. Overall food SSR, Western Balkan countries (2006–2019, average).



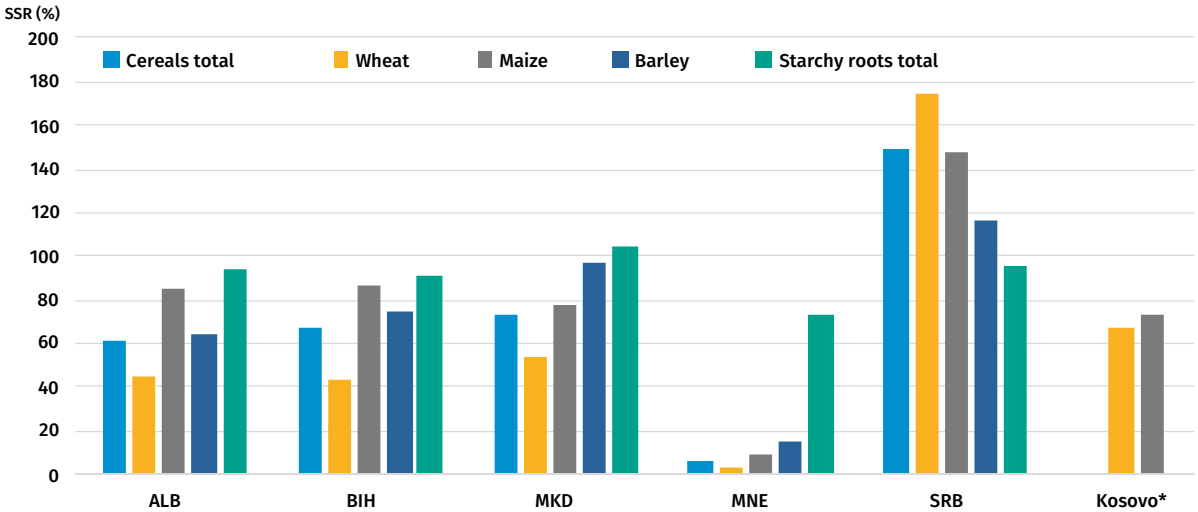
Source: Author's calculation based on FAOSTAT (Food Balance)

However, the calculation of this indicator by product groups and key products gives a different view, which is in accordance with the FAO recommendation – the general indicator should be interpreted carefully because a country can produce an abundance of one type of food, but it can lack staple crops.[7] The complexity of this issue is especially evident in crisis situations. For example, the ongoing Ukrainian crisis is threatening the availability of cereals and edible oil in countries that heavily rely on imports.

As can be seen from Figures 2–5, the highest SSR is recorded in Serbia for all food groups (cereals, meat, fruits, oilcrops, and sugarcrops – total), except for vegetables total. The average SSR of total vegetables is higher in North Macedonia by about 10% than in Serbia. Serbia is self-sufficient in most agricultural products, aggregated as well as individually: in cereals, corn, wheat, barley, bovine meat, mutton and goats meat, milk, eggs, fruits, apples, vegetables, onions, sugar crops, and sunflower oil. The second ranked country according to the overall SSR, North Macedonia, is self-sufficient in all observed fruits and vegetables (total and individual) – apples, grapes, tomatoes, and onions – as well as starchy roots total and mutton and goat meat. Third-placed Albania is self-sufficient in mutton and goat meat, eggs, vegetables, and tomatoes. Bosnia and Herzegovina ranks fourth – it is self-sufficient only in mutton and goat meat and eggs. The worst-positioned Montenegro produces only sufficient quantities of mutton and goat meat for its needs. High dependence on fish imports is a common characteristic of all countries in the region, even those that have a considerable coastline, such as Albania and Montenegro. Data about Kosovo* is missing, but research shows that it is self-sufficient in potatoes and plums.[8]

Except for Serbia, all other Western Balkan countries are net importers of agricultural goods (Figure 6). This is not surprising, taking into account the level of self-sufficiency of the countries.

Figure 2. Self-sufficiency ratio, cereals total, and starchy roots total.

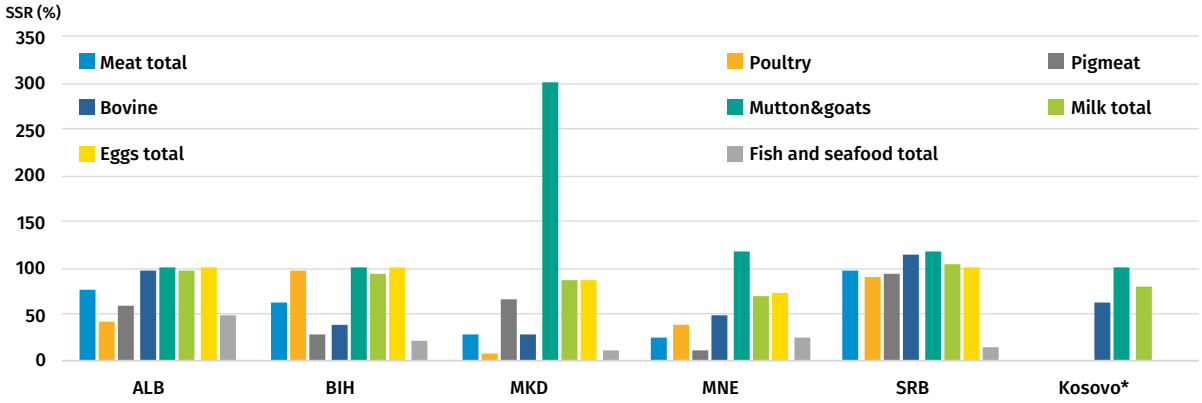


Source: Author's calculation based on FAOSTAT (Food Balance)

7 FAO, (2012). FAO Statistical Yearbook 2012 – World Food and Agriculture. Available at: http://www.fao.org/docrep/015/i2490e/i2490e00.htm.

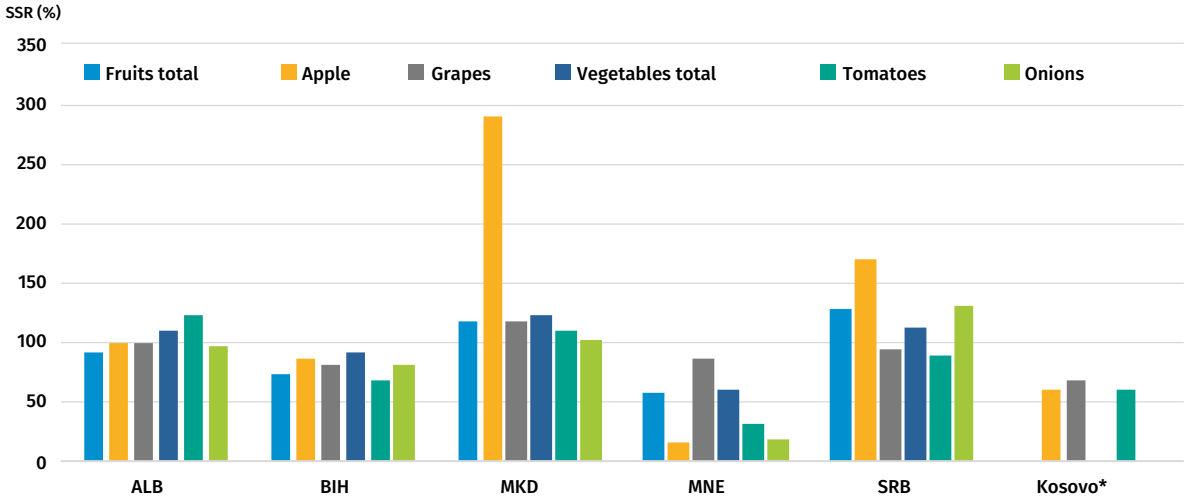
8 Green Report (2019). Ministry of Agriculture, Forestry and Rural Development, Prishtina. Available at: https://www.mbpzhr-ks.net/repository/docs/ENG_Raporti_i_Gjelber_2019.pdf; Bogdanov, N., Vaško, Ž., Arias, P. and Pavloska Gjorgjieska, D (2022). Assessment of the impact of COVID-19 on agrifood systems in the Western Balkans – Regional Synthesis Report. Budapest, FAO. https://doi.org/10.4060/cb7907en.

Figure 3. Self-sufficiency ratio of the meat total, eggs total, milk total, and fish total.



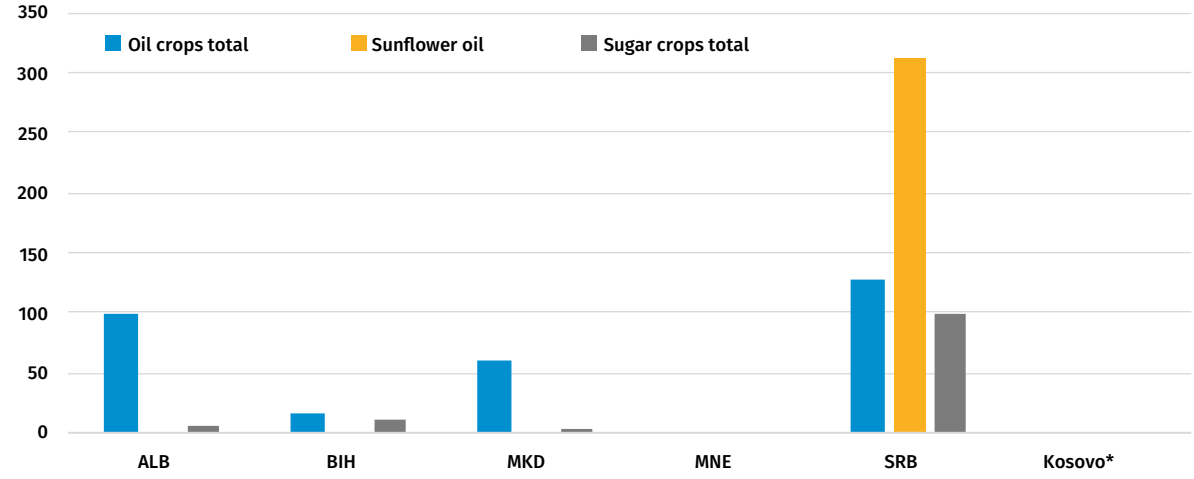
Source: Author's calculation based on FAOSTAT (Food Balance)

Figure 4. Self-suffciency ratio, total fruits and total vegetables.



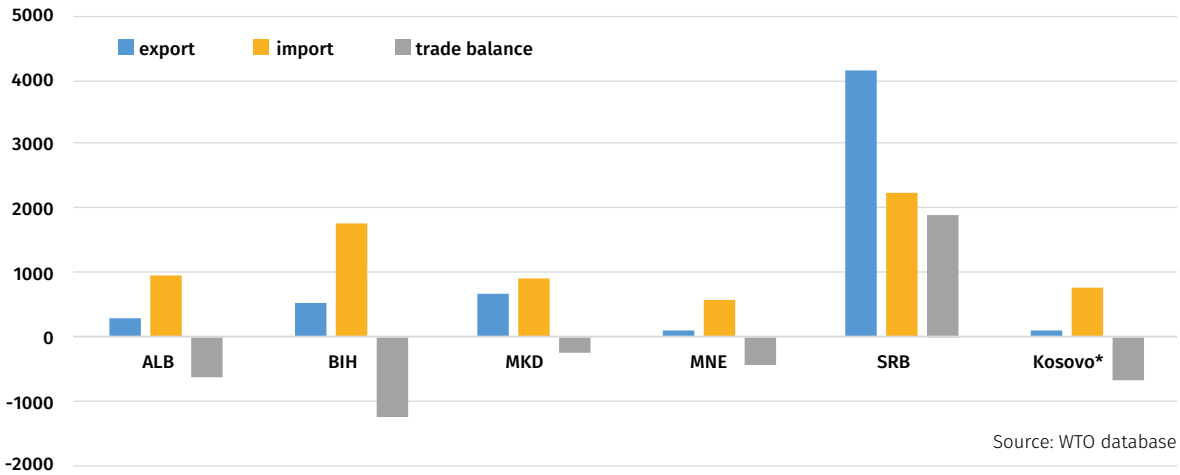
Source: Author's calculation based on FAOSTAT (Food Balance)

Figure 5. Self-sufficiency ratio, sugar crops total, and oil crops total.



Source: Author's calculation based on FAOSTAT (Food Balance)

Figure 6. Agricultural trade of the Western Balkan countries, 2020 (million current USD).



Source: WTO database

Although strengthening regional economic integration has been set as a priority by Western Balkans leaders, intra-regional trade is underperforming, but stable and concentrated on goods with low value added.[9] According to International Trade Centre (ITC) calculations, Albania exports to the region's countries (Bosnia and Herzegovina, Serbia and Montenegro) edible vegetables and certain roots and tubers (see Table 1 in the annex). The share of the region's countries in Albania's export of this product was 43.3% in 2021. North Macedonia exports edible vegetables (to Serbia, Bosnia and Herzegovina, Montenegro) as well as edible fruit and nuts to the region (Serbia, Bosnia and Herzegovina, Montenegro). Approximately 21% of its vegetables were placed on the region's market and about 22% of its fruit. Serbia, among others, exports to the region cereals, products of the milling industry, oil seeds and oleaginous fruits, and live animals. 14.7% of Serbian grain exports,[10] 56.5% of milling products, 22.2% of oil seeds, and 89.1% of live animals exports were absorbed by the region's countries in 2021. Top traded products within the region that participate with more than 50% in the total export are: live poultry, live bovine, live sheep and goats, wheat flour, sunflower seed (Serbia), tomatoes (North Macedonia and Albania), grapes and onions (North Macedonia). However, there is a lot of space for boostening intra-regional exports. To reach this goal, the main obstacles, including low trade openness (exceptions are North Macedonia and Serbia), trade-decisions driven by political rather than economic factors, non-tariff barriers, and regional transport problems need to be removed.

Disregarding the advantages of trade openness, and focusing only on the conditions of economic autarky - complete isolation of the region - it can be stated that the region is well provided with food, and that with the appropriate measures of agricultural policy, it can be independent in almost all foods (Table 2).

It has a surplus of corn, soybeans, oil crops, and different kinds of fruit. The region would have no problems with wheat, sugar, tomatoes, grapes, mutton and goat meat supply. To meet the needs of their own population, the sectors of eggs, milk, and some kinds of vegetables should be improved. The weakest items of the region in this regard are fish and meat. In the case of a theoretical autarky the region would be in shortage of fish for 70–80%, and for poultry, pigment, and bovine meat for 20–25%.

Table 2. Self-sufficiency in the Western Balkan in case of autarky

EXCELLENT (SSR>140%)	GOOD (SSR => 100)	FAIR (>90% SSR <100%)	POOR (>50% SSR <80%)	VERY POOR (>20% SSR <30%)
Corn and products	Mutton and goats	Onions	Beans	Fish, seafood
Oilcrops	Wheat and products	Potatoes	Poltry	
Soybeans	Tomatoes	Eggs	Pig meat	
Sunflower oil	Grapes	Milk	Bovine meat	
Apples		Sugar crops		

9 Kaloyanchev, P., Kusen, I., & Mouzakitis, A. (2018). Untapped potential: intra-regional trade in the Western Balkans (No. 080). Directorate General Economic and Financial Affairs (DG ECFIN), European Commission.
10 Data is without Kosovo*.

However, the countries of the Western Balkans, like many countries of the world, now face an especially uncertain outlook. In addition to the COVID-19-induced recession, a resurgence in inflation, and a pressing energy transition cause a particularly big problem for the poorest households that often lack the coping mechanisms to absorb a higher cost of living.

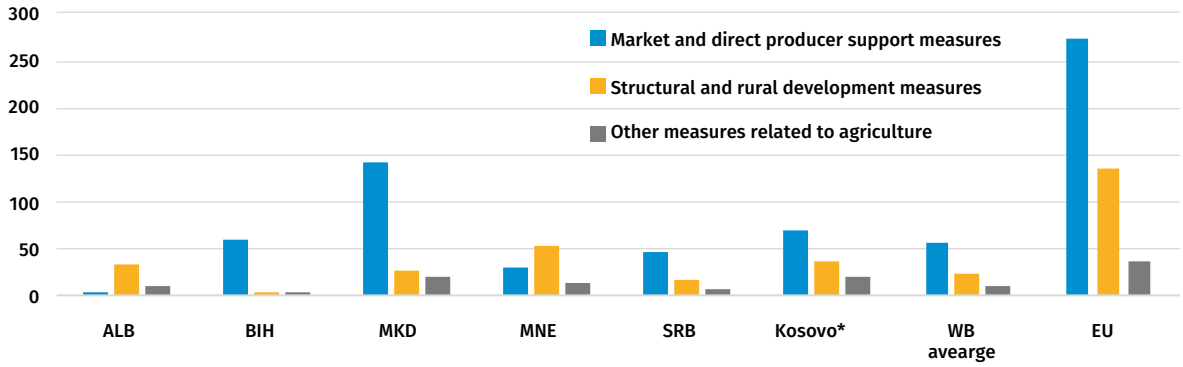
Small farms dominate the Western Balkan's agricultural landscape. The average farm size ranges from 1.2 ha in Albania to 4.5 ha in Montenegro.[11] Almost half of the region's population lives in rural areas. The share is the lowest in Montenegro (32%) and the highest in Bosnia and Herzegovina (51%).[12] Thus, it is desirable to generate policies better tailored to small farms' situations. Such measures would contribute not only to slowing down the growth of poverty, but also the maintenance of the existing food and nutrition security and sustainability.

Although small farms dominate the Western Balkans, they benefit less than larger farms from public support. Transfers per hectare of utilized agricultural area (UAA) are several times lower than in the EU (Figure 7). Albanian farmers receive the lowest government subsidies in the region (44 EUR), while farmers in North Macedonia receive the highest (188 EUR), which is respectively 10 and 2.5 times less than EU farmers (466 EUR), in real numbers.

According to a recent report agricultural policy measures implemented in response to the COVID-19 crisis have bypassed rural areas, despite the high importance of agriculture in national economies and a large share of the rural population in the total population.[13] Albania has not applied any specific measures for the agricultural sector. Serbia and North Macedonia implemented customs regimes (export ban and exemption from customs duties, respectively), price control of basic foods, different forms of market interventions, and extra direct payment (top-ups) for certain groups of farmers. The types of policy interventions chosen by Montenegro were market intervention and advance payment of the premium. Kosovo* increased direct payments, while Bosnia and Herzegovina applied certain forms of market interventions and price controls. Only the entity of Bosnia and Herzegovina – Republika Srpska – applied measures that directly benefit small farmers. Within the framework of agricultural input subsidies,[14] the sowing packages of seed, fertilizer and pesticides were allocated to small vegetable farms (0.5 ha). In addition, Republika Srpska subsidizes 50% of the cost of purchased seeds (soybeans, corn, and oat) of domestic origin, and gives incentives (20,000 EUR) for self-employment of agricultural engineers who, after completing their studies, decide to stay on the farm and invest their knowledge in the development of agricultural production. They should be holders of non-commercial agricultural holdings, under 40 years of age. However, the intended funds have not been fully utilized, due to insufficient number of interested users.

After the March 2022 protest of citizens against the increase of fuel and food prices, Albania introduced a

Figure 7. **Composition of budgetary support to agriculture in the Western Balkans and the EU (EUR per ha UAA), 2017.**



Source: FAO (2022). Analysis of Agriculture and Rural Development Policy in Albania. Budapest. Available at: https://doi.org/10.4060/cb7682en.

11 Lovre, K. (2016, August). Technical change in agricultural development of the Western Balkan countries. In Emerging Technologies and the Development of Agriculture. Novi Sad: Proceeding of Serbian Association of Agricultural Economists 152 Seminar, Belgrade: Serbia (pp. 1–14).
12 World Bank (2021). Rural population. Available at: https://data.worldbank.org/indicator/SP.RUR.TOTL.ZS.
13 Bogdanov, N., Vaško, Ž., Arias, P. and Pavloska Gjorgjieska, D (2022). Assessment of the impact of COVID-19 on agrifood systems in the Western Balkans – Regional Synthesis Report. Budapest, FAO. Available at: https://doi.org/10.4060/cb7907en.
14 'Agricultural input subsidies' were defined as grants (or loans, if repaid at below the market price) given to a farmer as a means of reducing the market price of a specific input used in agricultural production or providing it free of charge. https://onlinelibrary.wiley.com/doi/full/10.4073/csr.2018.4.

Social Resistance Package that included farmers regarding support under a tax-free oil scheme. Under this scheme the government provides 100 lek in subsidies for each litre of fuel used by public transportation buses, and four million liters of tax-free oil have been disbursed to farmers. Private car owners are excluded from this kind of support.[15] The government set up a "price transparency board" for basket products to determine the formula for traders' margins. After months of political tension, during which rising prices were ignored, Montenegro in May adopted the amendments to the Law on the Value Added Tax (VAT) and the Law on Excise Taxes regarding tax reductions. The same was undertaken by North Macedonia, two months earlier. At the time of writing, these laws are in the process of being amended in Bosnia and Herzegovina, too. With the aim of mitigating the situation caused by the global crisis, the Federal Ministry of Agriculture (Bosnia and Herzegovina) allocated 50 liters of fuel per hectare of planted area to farmers, and increased all types of incentives by 20–40%. The entity Republika Srpska went a step further by providing subsidies for 100 liters of diesel fuel per hectare and payment for wheat of 200 EUR per hectare. Kosovo* temporarily banned the export and re-export of essential basket items. Serbia adopted several temporary regulations and decisions, focused primarily on capping the rise or completely freezing the prices of energy products and certain food products, limiting the export of basic agri-food products, exemption from customs duties, etc (March-April 2022). On April 20, the government lifted its prohibition on the export of wheat, corn, flour, and refined sunflower oil, and in its place introduced monthly export quotas. On May 15, it allowed the free export of wheat flour. However, the export of cereals from Serbia under the Open Balkan initiative flowed without major problems, they are being exported to Albania and North Macedonia. Export restriction measures, excise duties on euro diesel, and low subsidies per hectare (68 EUR in 2022) are the drivers of frequent Serbian farmers' protests in the last few months.

Conclusions

In the face of multiple crises, the Western Balkans should deploy appropriate responses to boost food and nutrition security, reduce risks, and strengthen food systems. Recognizing the contribution of small farms to maintaining the food security of the region, governments should take steps that will stop the devastation of villages. Otherwise, the tendency of closing down livestock farms in the region will continue, and producers of all categories will give up or reduce creating surpluses for the market. Researchers can greatly contribute to more inclusive policy processes and an improvement of the position of small farms in the region by providing evidence on their situations, needs, and potentials.[16]

In order to insulate the region's countries from international supply disruptions that, most probably, will increase due to conflicts, rises in food prices, and production shortfalls in other countries, the governments should prioritize self-sufficiency as a key means of safeguarding national security. Thanks to a sufficient natural resource base and human capital, all the region's countries could increase their reliance on domestic food production by applying appropriate measures. Such kind of measures should include investments in public goods such as agricultural research and extension, rural roads and irrigation, preferential fuel prices for farmers, stimulation of farmers who use autochthonous varieties and breeds, regulation of green markets in order to know the origin of goods, increase of all kind of incentives, encouraging association of farmers, introducing measures that reduce the gap between production cost and producer prices, increase of transparency in information sharing (e.g. daily movements in food prices), supporting the sustainable production of specific food crops that have comparative trade advantages, developing systems to monitor the needs of vulnerable groups in rural areas, etc. In addition, intra-regional trade improvement could also help to increase the region's food security.

Most of all, the countries of the Western Balkan have to enter into a serious fight against corruption and crime in the food sector. In this sense, the introduction of the institution of Food Supply Chain Relationships Ombudsman (such as in Slovenia) would be of great benefit. Among other things, the ombudsman would advocate for fair relations between producers, processors, and traders.

15 MIA (2022). Farmers included in government's recent Social Resistance Package regarding support under tax-free oil scheme. Available at: https://mia.gov.al/en/farmers-included-in-governments-recent-social-resistance-package-regarding-support-under-tax-free-oil-scheme/.

16 Šūmane, S., Miranda, D. O., Pinto-Correia, T., Czekaj, M., Duckett, D., Galli, F. & Tsiligiridis, T. (2021). Supporting the role of small farms in the European regional food systems: What role for the science-policy interface?. Global Food Security, 28, 100433.

ANNEX

Table 1. Intra-trade in Western Balkans (2021).

Exporting country	Product	Importing countries in the WB region	Share in total export (%)
ALB (code 07)	Tomatoes (0702)	SRB, BIH, MNE	58
	Cucumbers (0707)		39
	Cabbages (0704)		27
	Onion (0702)		35
	ALL EDIBLE VEGETABLES		**43.3**
MKD (code 07)	Tomatoes (0702)	SRB, BIH, MNE	61
	Cucumbers (0707)		9
	Cabbages (0704)		2
	Onion (0702)		56
	ALL EDIBLE VEGETABLES		**21.4**
MKD (code 08)	Grapes (0806)	SRB, BIH, MNE	59
	Apples (0808)		10
	Melons (0807)		35
	Apricots...(0809)		5
	ALL FRUITS		**22.2**
SRB (code 10)	Maize (1005)	ALB, BIH, MAC, MNE	13
	Wheat (1001)		19
	Barley (1003)		14
	Oats (1004)		40
	ALL CEREALS		**14.7**
SRB (code 11)	Wheat flour (1101)	ALB, BIH, MAC, MNE	95
	ALL MILLING PRODUCTS		**56.5**
SRB (code 12)	Sunflower seeds (1206)	ALB, BIH, MAC, MNE	70
	ALL OILSEEDS		**22.2**
SRB (01)	Bovine (0102)	BIH, MAC, MNE	99
	Sheep and goats (0104)		71
	Poultry (0105)		100
	ALL LIVE ANIMALS		**89.1**

*Note: Code 07: Edible vegetables and certain roots and tubers (ITC data); 08: edible fruit and nuts: 10: cereals; 11: products of the milling industry; 12:Oil seeds and oleaginous fruits; 01: live animals

Source: ITC data