

17 Agriculture policy (Dimension 14)

Agriculture is a key pillar of the Western Balkan economies, providing a significant share of total employment, and is one of the three most important sectors in terms of contribution to GDP. With this in mind, this chapter assesses the performance of agriculture policies in the six Western Balkan economies (WB6), looking at four sub-dimensions. The first, agro-food system capacity focuses on rural infrastructure capacity (particularly irrigation) and the role of skills and education in productive, sustainable and competitive agriculture. The second sub-dimension looks at the effectiveness of agro-food system regulations in safeguarding public safety and the environment in two areas: inputs and crop products, and natural resources such as land and water. The third, agricultural support systems, covers the policy, governance and instruments in the agricultural sector. Finally, the agricultural innovation system sub-dimension considers innovation and extension services – key tools in an economy’s path towards productive and sustainable agriculture. Each sub-dimension provides recommendations for the way forward.

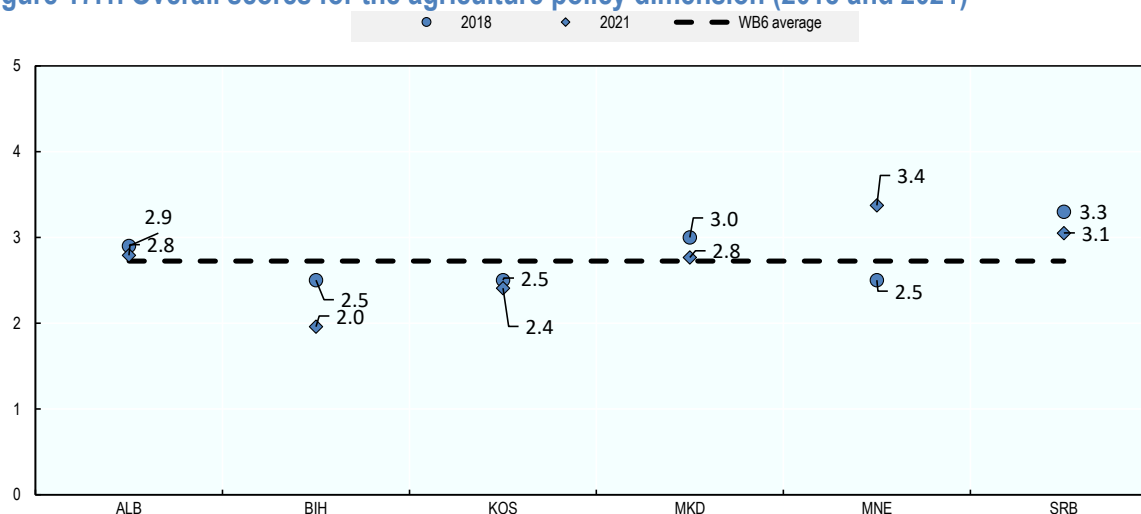
Key findings

- **All the WB6 economies have undertaken sizeable investments in road infrastructure over the last decade.** They continue to support rural infrastructure projects such as sewage systems, electricity and gas supply, and broadband Internet, which are some of the key preconditions for a competitive agriculture sector.
- **Investment in irrigation systems is increasing,** but limited progress has been made to improve irrigation efficiency and sustainability, or to monitor soil erosion, drainage, and soil moisture.
- **Implementation of the Instrument for Pre-Accession Assistance for Rural Development (IPARD) programme continues to improve** among the accredited economies (Albania, Montenegro, North Macedonia and Serbia), and IPARD disbursement authorities are increasing their administrative capacity. However, the criteria for IPARD funding and national budget subsidies are not fully harmonised.
- **Bosnia and Herzegovina and Kosovo continue to prepare for full accreditation of their IPARD payment agency and appropriate reforms.** More effort is needed to finalise land parcel identification systems (LPIS) and other relevant criteria for IPARD accreditation in these two economies.
- **Common market organisation (CMO) legislation and reforms should be further enhanced** by all six economies.
- **Agricultural education and training are still underfinanced** and the number of agriculture students continues to fall. Domestic strategies either fail to address agricultural education or, if they do address it, measures are not yet implemented.
- **Weak inter-sectoral co-operation between agricultural and other relevant institutions (environment, education)** is holding back the performance of the sector and slowing down reforms.
- **Capacity for monitoring and evaluation is limited.** All six economies have made some effort to improve and create a system of evidence-based policies, but their efforts need to be increased significantly.
- **Investment in agricultural research projects remains poor** and agriculture extension services are patchy in both scope and quality.

Comparison with the 2018 assessment

The WB6 have continued with the reforms to their agriculture policies and increased the investments and efforts in this respect. They have slightly improved their scores since 2018. Montenegro and North Macedonia have made the most progress (Figure 17.1).

Figure 17.1. Overall scores for the agriculture policy dimension (2018 and 2021)



Note: Scores for 2021 are not directly comparable to the 2018 scores due to the addition/removal of relevant qualitative indicators. Therefore, changes in the scores may reflect the change in methodology more than actual changes to policy. The reader should focus on the narrative parts of the report to compare performance over time. See the Methodology and assessment process chapter for information on the assessment methodology.

Implementation of the Competitiveness Outlook 2018 recommendations

Implementation of the 2018 recommendations has been limited overall (Table 17.1), especially defining clear roles and responsibilities at local levels, strengthening natural asset management and institutionalising the collection of key environmental data.

Table 17.1. Implementation of the CO 2018 policy recommendations: Agriculture policy

Competitiveness Outlook 2021		
CO 2018 policy recommendations	Main developments during the assessment period	Regional progress status
Strengthen inter-sectorial co-operation	<ul style="list-style-type: none"> Limited efforts have been made overall and formal mechanisms for inter-sectorial co-operation are still missing. 	Limited
Reorient agricultural producer support towards better productivity and sustainability objectives	<ul style="list-style-type: none"> The IPARD-accredited economies have implemented the decoupling of measures. As of 2021, domestic agriculture and rural development strategies have increased and diversified the economic support measures oriented towards competitiveness and productivity. 	Moderate
Fully implement farmland consolidation plans	<ul style="list-style-type: none"> Farmland consolidation plans have been partially implemented but full consolidation is still a long way off. Progress has been made in Albania, Montenegro, North Macedonia and Serbia, but farmland consolidation is still an open issue in Bosnia and Herzegovina and Kosovo. 	Moderate
Enhance the quality and impact of the agricultural innovation system	<ul style="list-style-type: none"> In Albania, Kosovo, Montenegro and Serbia, investment in research and development (R&D) in agriculture have increased. Bosnia and Herzegovina and North Macedonia still have very limited support for innovation in agriculture. 	Limited
Enhance environmental objectives across agricultural policy frameworks	<ul style="list-style-type: none"> Environmental objectives have been widely introduced into agriculture policy frameworks. A few of the WB6 economies have introduced agri-environment measures but implementation is still limited. 	Limited
Strengthen policy analysis to better inform policy development	<ul style="list-style-type: none"> Moderate efforts to improve policy analysis and establish efficient monitoring systems have been made. Awareness of the importance of evidence-based policies has increased. 	Moderate

Introduction

Agriculture is a significant pillar of the Western Balkan economies. It provides an important share of total employment, and is one of the few sectors with the potential for competitiveness on the global market. Agriculture is a heavily subsidised economic activity, and is the main source of income for almost 40% of the total population in the WB6 economies.

Further analysis of this dimension reveals important links to other policy areas; thus, an inter-sectoral approach and good co-ordination will be crucial for creating sustainable policy mechanisms that boost the productivity and competitiveness of the agriculture sector. These include the following challenges within the specific policy areas:

- **Chapter 5. Trade policy.** Agriculture and trade are highly interdependent. Over the past decade, international agro-food markets have undergone some significant changes, which have brought them closer together. Since 2000, agri-food trade has grown strongly as world markets have responded to a more rules-based trading environment, lower tariffs and reduced trade-distorting producer support (OECD, 2019^[1]). But agri-food trade is not only growing, it is also becoming global. A growing share of agri-food trade takes place in global value chains (GVCs) that link agri-food sectors with other sectors of the economy around the world (OECD, 2020^[2]). Since agri-food products in GVCs may cross borders several times before reaching final consumers, their costs can be increased by uncontrolled non-tariff measures such as those related to laws or requirements such as sanitary and phytosanitary measures (SPS), technical barriers to trade and customs procedures (OECD, 2019^[1]).
- **Chapter 10. Education policy.** Education policy in all six Western Balkan economies is the responsibility of the relevant education ministries while the agriculture education framework is based on national agriculture and rural development strategies. The strategies foresee a number of measures that address barriers to agriculture development, but no specific measures have been dedicated to improving agricultural education and training. Meanwhile the number of agriculture students is falling across the region while the labour market lacks a skilled and trained workforce.
- **Chapter 11. Employment policy.** Agriculture students have very limited contact with the real labour market during their studies. There are no mechanisms to support part-time employment while studying; such mechanisms could potentially overcome the supply-demand imbalance in the market. The seasonal agricultural workforce faces a number of difficulties registering their part-time employment and receiving social benefits due to inappropriate legal frameworks.
- **Chapter 12. Science, technology and innovation.** Agriculture is not a dynamic field for applied science and research in WB6 economies. Research is largely dependent on donor-funded projects, while national funding for research is extremely limited, meaning projects tend to be *ad hoc*. Over the past two decades, all six economies have seriously neglected the need to secure permanent funding to maintain existing research infrastructure and facilities, as well as to develop and adopt new methodologies.
- **Chapter 16. Environment policy.** Efforts to regulate natural resources have been limited, especially effective measures to stop the loss of agricultural land and more efficient inspection and control mechanisms. Agri-environment measures are to be implemented through agriculture support mechanisms. However, inter-sectoral co-operation with environment ministries will need to be a priority to ensure the sustainable use of natural resources.

Assessment framework

Structure

This chapter assesses agricultural policies in the WB6 economies by assessing four broad sub-dimensions:

1. **Sub-dimension 14.1: Agro-food system capacity** focuses on the role of rural infrastructure, irrigation and education. It describes the policy reforms undertaken and achievements in facilitating productive, sustainable and competitive agriculture.
2. **Sub-dimension 14.2: Agro-food system regulation** assesses how effectively regulations safeguard public safety and how burdensome they are for farmers and agri-businesses to comply with in two areas: products, such as inputs (fertiliser and pesticides) and crops; and natural resources, such as land and water.
3. **Sub-dimension 14.3: Agricultural support system.** This focuses on the policy, governance and instruments supporting the agricultural sector. The various ways this support is delivered has different implications for agricultural production, trade and incomes.
4. **Sub-dimension 14.4: Agricultural innovation system** considers the agricultural research and innovation system as a key tool in the path towards productive and sustainable agriculture, improving the economic, environmental and social performance of the agri-food sector.

Figure 17.2 shows how the sub-dimensions and their indicators make up the agricultural policy dimension assessment framework.

Figure 17.2. Agriculture policy dimension assessment framework

Agriculture policy dimension			
Sub-dimension 14.1 Agro-food system capacity	Sub-dimension 14.2 Agro-food system regulation	Sub-dimension 14.3 Agricultural support system	Sub-dimension 14.4 Agricultural innovation system
Qualitative indicators <ol style="list-style-type: none"> 1. Rural infrastructure policy framework 2. Irrigation policy framework 3. Agricultural education system 	Qualitative indicators <ol style="list-style-type: none"> 4. Regulations on natural resources 5. Regulations on products 	Qualitative indicators <ol style="list-style-type: none"> 6. Agricultural policy framework 7. Domestic producer support instruments 8. Agricultural trade policy 9. Agricultural tax regime 10. Sanitary and phytosanitary (SPS) measures 	Qualitative indicators <ol style="list-style-type: none"> 11. Agricultural research and development framework 12. Agricultural extension services framework
Quantitative indicators <ol style="list-style-type: none"> 1. World Economic Forum (WEF) electricity and telephony index 2. Share of agricultural area equipped for irrigation 3. Mechanisation 4. Higher education graduates in agriculture 5. Farmer demographics 	Quantitative indicators <ol style="list-style-type: none"> 6. Agricultural land 7. Arable land per capita 8. Agricultural freshwater withdrawals 9. Livestock density 10. Fertiliser use 11. Pesticide use 12. Agricultural greenhouse gas emissions 	Quantitative indicators <ol style="list-style-type: none"> 13. Budgeted outlays to implement agriculture strategy by component 14. Producer Support Estimate 15. Import tariffs on capital goods, intermediate and agricultural goods by commodity 16. Export subsidies, export credit support, export duties and/or export 	Quantitative indicators <ol style="list-style-type: none"> 18. Public expenditure on agricultural R&D, level, structure (institution vs project) and source 19. Share of farms using extension services 20. Share of producers and agri-business adopting an innovation

		prohibitions by commodity 17. Tax rates in agriculture which differ from standard tax rates	
--	--	--	--

The assessment was carried out by collecting qualitative data with the help of questionnaires filled out by governments, as well as face-to-face interviews with relevant non-government stakeholders. Alongside these qualitative inputs, quantitative data on certain indicators – provided by the economies’ statistical offices, relevant ministries and agencies, and other databases – formed an integral part of this assessment. For more information, see the Methodology and assessment process chapter.

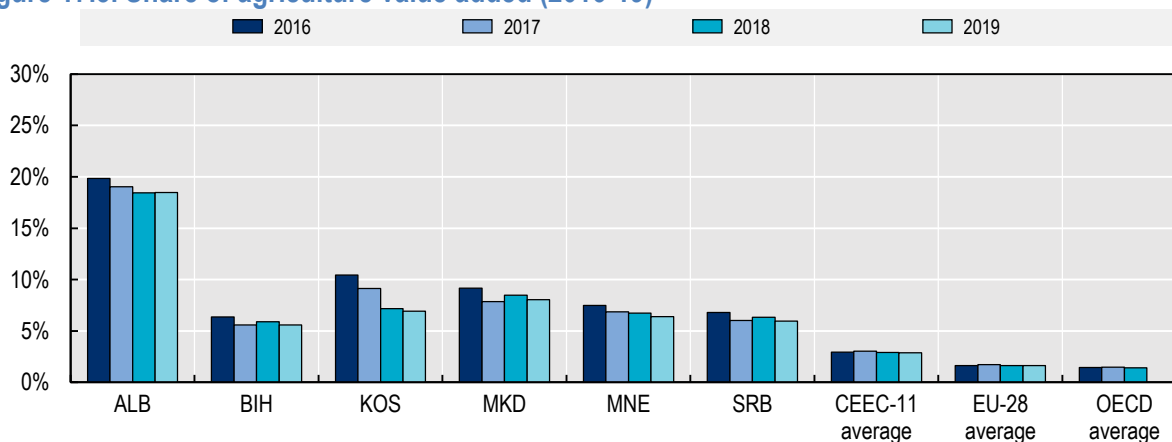
Key methodological changes to the assessment framework

There have been no significant methodological changes to the agricultural policy assessment framework since the 2018 Competitiveness Outlook. Few changes have been made to either the quantitative or qualitative questionnaires. The qualitative questionnaire has adopted more specific questions in each of the sub-dimensions about the process of developing, implementing and monitoring agriculture policies, as well as the impact of domestic and IPARD agriculture support measures.

Agricultural policy performance and context in the WB6

Agriculture traditionally plays an essential employment role, being the prevalent activity of the WB6 economies’ rural population. The sector’s contribution to gross domestic product (GDP) is much higher than in the OECD, EU and Central and Eastern European economies (CEEC-11)¹ (Figure 17.3). However, its contribution fell during 2016-19 in all of the assessed economies, by an average of 2.46%. The greatest decline was in Kosovo, where agriculture’s share of total GDP fell by 3.53% (from 10.45% in 2016 to 6.91% in 2019). The smallest declines were in Bosnia and Herzegovina and Serbia, both around 0.7% over the three years.

Figure 17.3. Share of agriculture value added (2016-19)



Note: The CEEC-11 countries are Bulgaria, Croatia, the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, the Slovak Republic and Slovenia.

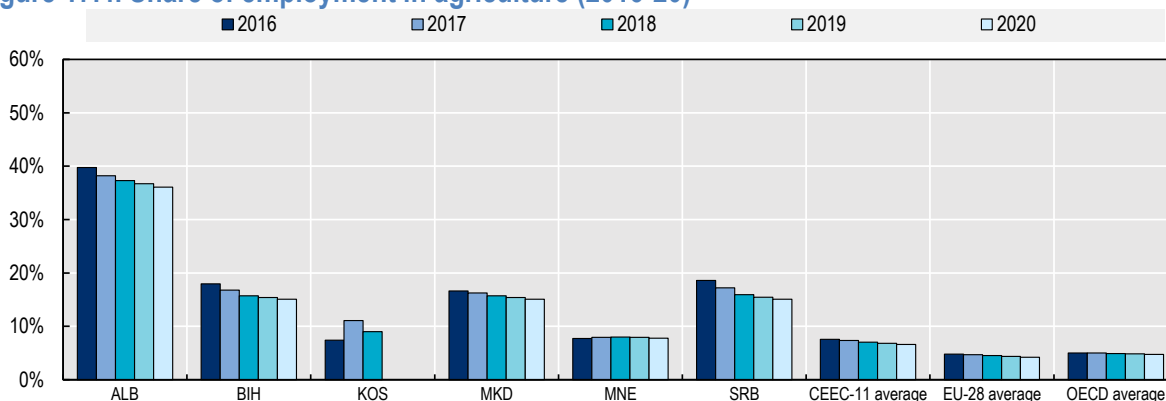
Source: World Bank national accounts data, and OECD national accounts data files, retrieved from: <https://data.worldbank.org/>.

StatLink  <https://doi.org/10.1787/888934255019>

Agriculture’s share of employment varies across the region (Figure 17.4). It is very significant in Albania, where it is the largest employer and accounted for 36% of jobs in 2019, but relatively moderate in Kosovo

and Montenegro, where its share was around 7%. In Bosnia and Herzegovina, North Macedonia, and Serbia agriculture accounts for around 15% of employment. In comparison, the share is 9% across the CEEC-11, while in the OECD and EU economies it is 4% on average.

Figure 17.4. Share of employment in agriculture (2016-20)



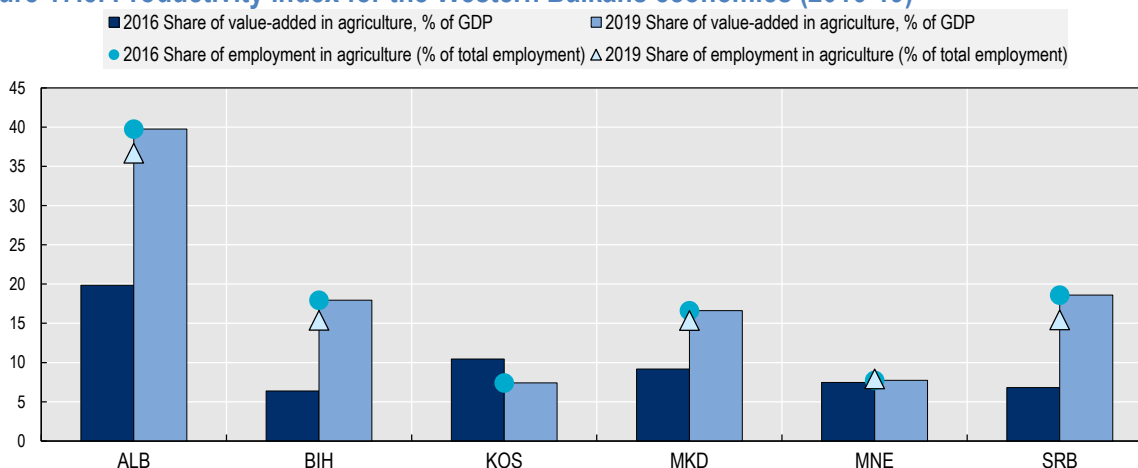
Note: The CEEC-11 are Bulgaria, Croatia, the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, the Slovak Republic and Slovenia.

Source: World Bank national accounts data, and OECD National Accounts data files, retrieved from: <https://data.worldbank.org>.

StatLink  <https://doi.org/10.1787/888934255038>

As illustrated in Figure 17.5, agricultural productivity has increased between 2016 and 2019 in all WB6 economies. Montenegro had the highest relative agricultural labour productivity of the WB6 economies in 2019: its ratio of total agricultural employment to share of GDP was 1.22. In comparison, the figure was 3.40 on average for OECD countries, 2.60 for the EU and 3.33 for the CEEC.

Figure 17.5. Productivity index for the Western Balkans economies (2016-19)



Source: World Bank national accounts data, and OECD national accounts data files, retrieved from: <https://data.worldbank.org/>.

StatLink  <https://doi.org/10.1787/888934255057>

Agro-food system capacity (Sub-dimension 14.1)

The agro-food system capacity sub-dimension focuses on 1) the role of rural infrastructure capacity; 2) irrigation policy framework; and 3) skills and education in facilitating productive, sustainable and competitive agriculture.

As Table 17.2 shows, the average score across all six economies is 2.8 with Bosnia and Herzegovina having made the least progress while Albania, Montenegro and North Macedonia have performed most strongly. All of the economies have prioritised irrigation and education, two areas critical to the competitiveness of the agriculture sector.

Table 17.2. Scores for Sub-dimension 14.1: Agro-food system capacity

Sub-dimension	Qualitative indicator	ALB	BIH	KOS	MKD	MNE	SRB	WB6 average
Sub-dimension 14.1	Rural infrastructure policy	3.5	1.0	3.5	4.0	3.5	2.0	2.9
Agro-food system capacity	Irrigation policy framework	3.0	2.0	2.0	2.8	3.5	3.0	2.7
	Agricultural education system	3.0	1.5	3.3	2.5	3.0	2.5	2.6
Sub-dimension average score		3.2	1.5	2.9	3.1	3.3	2.5	2.8

A rural infrastructure policy framework is in place in all six economies

As infrastructure connects the economic system which allows factors of production, goods and information to move across people and markets, it plays an important role in decisions about investment in economic activity.

The economies' agriculture and rural development strategies have been updated, setting comprehensive priorities for the rural infrastructure policy framework. Among the top priorities for rural infrastructure are the construction and rehabilitation of local roads, irrigation systems, and digitalisation as preconditions for increasing agricultural productivity and competitiveness. The digital transformation of agriculture and of the economies more broadly has significantly increased the amount of agricultural data of commercial significance. The enhanced ability of agri-food stakeholders to access, share and use agricultural data is reshaping competition in the sector. At the farm level, agricultural data can be analysed to generate information and actionable insights that support producers' decision making and help them to better manage their operations. This includes using agricultural inputs more precisely and adapting to pests, weather and climate. The increasing availability of data is also changing business models, fostering new types of vertical collaboration (for example, between machinery equipment and digital software providers), and providing increased opportunities to tailor products and services for farmers (Jouanjean et al., 2020^[3])

All six economies recognise the digital transformation of agriculture as a prerequisite for its development. Kosovo is making great efforts to improve its digital infrastructure in rural areas. Under the Digital Economy Project (KODE) 2018-23, supported with USD 25 million from the World Bank, more than 200 villages (will get a broadband connection by 2023. Most of Kosovo's rural areas are therefore expected to benefit from broadband Internet access within the next five years. This will give farmers access to increased digitalisation opportunities (market information systems, weather/climate data for preventive measures, online promotion/sales, etc). In November 2020, Serbia started implementing its last-mile broadband project, aimed at rural households that were not targeted for network expansion by a commercial operator in the next three years. Funded by the European Bank for Reconstruction and Development (EBRD), the project will support the deployment of last-mile fibre broadband that will connect the existing fibre backbone to 600 schools located in white zones (without access to broadband) in rural areas. This will improve living conditions in rural areas by providing better access to information and know-how, improved education for students, and allow new farmers to improve their skills. The project is part of a larger initiative and is the first of two phases; the second phase, targeting approximately 900 schools, is planned for 2021/22 as a separate project.

Investment in irrigation is increasing but policy progress is limited

Irrigation infrastructure is regarded as a high priority for boosting productivity and stabilising agricultural production in the six economies. However, only limited progress has been made in developing irrigation

policies to improve the efficiency and sustainability of irrigation, or instruments to measure soil erosion, drainage and soil moisture.

In 2018, Albania prepared a new irrigation and drainage strategy for 2019-31. Under this strategy, the Water Resource Management Agency was established, two river basin management plans were adopted in 2020 and three other plans are being prepared and should be finalised in early 2022. Montenegro is currently implementing its strategy for water management, including irrigation, for 2018-35. With the support of the Food and Agriculture Organization (FAO), North Macedonia is planning to prepare its irrigation and drainage strategy for 2021-31, which will set the future direction for the national irrigation system to increase water use on an efficient and rational basis.

Investment in new irrigation systems continues in all WB6 economies. North Macedonia continues to implement its Irrigation Project (2019), with EUR 80 million of funding from the German Development Bank KfW and EUR 7 million in EU funding through the Instrument for Pre Accession Assistance (IPA) projects. Investment in water management systems is being carried out in accordance with the Plan for Investment in Water Management Infrastructure for the Period 2015-25, which aims to increase the potential irrigated area by about 32 000 ha. In Bosnia and Herzegovina, the Irrigation Development Project 2013-20 has been financed by a World Bank loan of USD 40 million.

Water management remains an open question, as economies are still struggling to find the best irrigation water management model. Most of the water user organisations proposed as a model by the World Bank in the region have failed to assume the role intended for them. In North Macedonia, some of these organisations have been transformed into legally independent co-operatives, while in Albania and Kosovo, although irrigation water management has been transferred to the local level, the system continues to face considerable inefficiency and financial losses.

Agricultural education systems are not providing the skills the sector needs

Agricultural education and training remain underfinanced and the number of agriculture students in the WB6 economies continues to fall. All of the economies' agriculture and rural development strategies see education and training as an important area for development, but few measures are envisaged. In addition, there is a lack of inter-sectoral co-operation between the agriculture and education ministries. The integration between vocational education and the training system is also weak and the curricula offer little scope to practise the skills learned, despite this being a crucial component of agricultural work. Montenegro has been the first to make efforts to improve the integration of vocational education. In December 2019 it prepared the Strategy for the Development of Vocational Education in Montenegro (2020-2024) with an action plan for 2020-22.

Although the agriculture sector largely employs the working poor and low-skilled workers, vocational education and training services do not reach rural areas, where education levels are generally lower than urban areas and where most of the population of the region currently resides.

Qualified and professional agricultural workers who are ready to meet the challenges of new production technologies are in constant demand. For this reason, all of the WB6 economies face a pressing need to reorganise their agriculture education system, using the resources available, and to create sustainable links between the education institutions and the labour market.

Too many people still work in agriculture in the WB6 economies. Further reforms towards making it a more skill- and capital-intensive sector will release a lot of workers. Their integration into the labour market will demand a number of policies (medium- and long-term measures) that will support the reallocation of the agricultural workforce into new sectors, possibly in diversified rural economies or green initiatives.

Most of the economies lack any monitoring and evaluation of their agriculture education systems. Serbia has been the first to begin developing an evaluation mechanism. In March 2020, the national system for

assessment of the education and its outcomes was established as an education management information system, based on the Strategy for Education Development in Serbia 2012-20. The first results are expected in 2021, and the information gathered will help the future planning and implementation of agricultural education programmes.

The way forward for agro-food system capacity

- **Increase investment and improve the implementation of rural infrastructure policy.** Rural infrastructure policies are crucial to improving the competitiveness and productivity of the agriculture sector. There is a continuing need to improve rural infrastructure and increase the take up of current programmes. Support schemes need to be boosted by increasing the funds allocated and increasing support to the rural infrastructure projects implemented by local self-governments and other stakeholders.
- **Continue investing in irrigation infrastructure.** Irrigation and drainage are crucial to agriculture and can double, or even triple, yields for some crops. Current irrigation investment strategies need to be implemented as planned. Combined with the planned road infrastructure investment, this will improve the competitiveness of all six economies' agricultural products.
- **Improve irrigation water management.** Increasing funding for the maintenance of the existing irrigation network and the new areas being developed will be a priority. Without effective and efficient water management, the planned investments in irrigation will not be maintained and the system will not be sustainable. Economies could draw on the system implemented in the Emilia-Romagna region in Italy to optimise their irrigation water management (Box 17.1).
- **Ensure the skills taught in agricultural education meet labour market needs.** This will help students find practical work during their studies and after graduation. Accountability and certification mechanisms will need to improve to keep pace with labour market demand for the development of new know-how.

Box 17.1. Using information technology for agricultural water management in Emilia-Romagna, Italy

IRRINET is an irrigation IT system which advises farmers on efficient water management. The web service was developed with public funding by the Canale Emiliano Romagnolo (CER), a water consortium located in the Emilia-Romagna region

Emilia-Romagna is a leading Italian agricultural region with more than 84 000 farms, and about 1 million ha of farmland. About 33% of the farms have some irrigated land, making it increasingly important to use the water as efficiently as possible. Water scarcity and droughts are increasing in the region and climate change is expected to worsen the situation, reducing the amount of water available for agriculture. After the 2012 and 2013 drought events, the Emilia-Romagna regional authority put pressure on farmers to use water more efficiently, introducing new criteria for water resources governance and management and developing and adopting innovative techniques that can enable farmers to improve their overall economic and sustainable production, such as water scheduling.

IRRINET processes meteorological (rain and evapotranspiration), soil and crop information, to calculate the so-called water balance for individual crops, allowing farmers to know how much water is actually needed so they can reduce usage without reducing the quality of the crop. IRRINET is available free to farmers in Emilia-Romagna and currently provides more than 12 000 farms with daily irrigation scheduling via a web interface, text messaging or an app. This supports the efficient use of water resources in the sector. In 2017 it was estimated the service allowed about 90 million m³ of water to be saved in the region each year – 20% of the total agricultural demand – without reducing yields. In the long term, IRRINET can optimise the use of water resources and sustain agricultural production, especially in dry years.

Source: (Climate ADAPT, 2019^[41]), *IRRINET: IT irrigation system for agricultural water management in Emilia-Romagna, Italy*, <https://climate-adapt.eea.europa.eu/metadata/case-studies/irinet-it-irrigation-system-for-agricultural-water-management-in-emilia-romagna-italy>.

Agro-food system regulation (Sub-dimension 14.2)

The second sub-dimension assesses the regulations covering two main areas: natural resources such as land and water; and inputs, such as crops and fertiliser and pesticides. Regulations for natural resources are central to ensuring their long-term sustainable use, determining access to and use of land, water and biodiversity resources. Regulations for products and inputs aim to protect human, animal and plant health, and can also affect natural resource use.

Overall, the WB6 average score for this sub-dimension is 2.9 (Table 17.3). Serbia has the highest score, for natural resource regulations, at 3.6, with Albania and Montenegro close behind. Montenegro and North Macedonia have the highest score for regulations on products.

Table 17.3. Scores for Sub-dimension 14.2: Agro-food system regulation

Sub-dimension	Qualitative indicator	ALB	BIH	KOS	MKD	MNE	SRB	WB6 average
Sub-dimension 14.2:	Natural resources regulations	3.5	2.5	2.0	3.0	3.5	3.6	3.0
Agro-food system regulation	Product regulations	2.5	2.0	2.6	3.5	3.5	3.0	2.9
Sub-dimension average score		3.0	2.3	2.3	3.3	3.5	3.3	2.9

Natural resource regulations are hampered by limited land information systems

Efforts to regulate natural resources have been limited, especially when it comes to creating effective measures that will stop the loss of agricultural land and improve the implementation of legislation by providing more efficient mechanisms of inspection/control. Inconsistent cadastral information and the lack of implementation of property rights legislation are holding most of the WB6 economies back from improving their natural resources regulations.

Land parcel identification systems (LPIS) are an important tool for planning, implementing and monitoring agricultural support. It is an element of the Farm register (FR) and works as a spatial representation of areas utilized by agricultural households. Serbia is prioritising land consolidation to improve agriculture competitiveness. As part of its Serbia 2025 programme, it is allocating an additional EUR 70 million to land consolidation processes based on the Strategy for Rural Development 2014-24.

Product regulations are harmonised with the EU, but better management of fertilisers and pesticides is needed

The regulations on seeds and propagation material are aligned with EU directives and protocols, including consistent monitoring and evaluation on a quarterly basis following EU guidelines. The regulations cover

agricultural production, environmental protection and consumer health. Managing regulations for seeds and propagation material requires co-ordination between government agencies, as well as clear divisions of responsibilities and mandates. In 2018, Kosovo prepared a new Draft Law on Seeds as part of the Italian-Kosovo EU twinning project, but it is still awaiting further legal procedures for approval.

The use of fertilisers and pesticides requires proper management, inspection and control at all levels. The WB6 governments need to improve their efforts in this area. In Albania, the new Law on Fertiliser Products was approved in 2020 and harmonises the EU rules for production, registration, trade, import, export, use, quality control, traceability, information, advertising and inspection of activities related to fertiliser products, as well as the organisation and operation of the relevant structures.

The way forward for agro-food system regulation

- **Enhance the land consolidation process.** The land consolidation process is crucial for improved productivity. Continued implementation of consolidation policies using different approaches to increase the average farm size will significantly boost productivity.
- **Enhance agricultural land management policies.** The full establishment of a functional and operational land parcel identification system (LPIS) is crucial. LPIS are one of the preconditions for the accreditation of new IPARD measures and offer strong tools for planning, implementing and monitoring agricultural support policy.
- **Ensure continuous improvement of the regulations on fertilisers and pesticides.** Appropriate management of fertilisers and pesticides will reduce their long-term negative impact on farming, and promote the sustainable use of natural resources. Box 17.2 provides an example from Denmark on how policies can achieve this.

Box 17.2. Managing the biodiversity impacts of fertiliser and pesticide use in Denmark

Major increases in the use of pesticides were leading to a serious decline in Denmark's farmland wildlife at the beginning of the 1980s. For example, wild plant diversity decreased by 60% between 1970 and 1990 (PAN Europe, 2005^[5]). Denmark has a long history of implementing policies to reduce pesticide use, accompanied by quantitative targets. The first pesticide reduction plan was introduced in 1986 to protect groundwater that is consumed directly without any purification treatment. Since then, pesticides have been banned when it is proved that they have affected groundwater used for drinking (MIM and MFVM, 2013^[6]). Consequently, only around 80 types of active substances are permitted in Denmark, compared to 3-400 in many other EU Member States (Coll and Wajnberg, 2017^[7])

Along with tightening approval procedures, there are regulations requiring mandatory spraying certificates for professional users, mandatory spraying journals and mandatory buffer zones around water courses, lakes and public water supplies (Pedersen and Nielsen, 2017^[8]). Under the Pesticide Leaching Assessment Programme, authorised pesticides are applied to six representative test fields followed by intensive monitoring to determine if there is evidence of the pesticides, or their metabolites, leaching into groundwater. As a result of this programme, a small number of previously authorised pesticides have had their authorisations withdrawn in Denmark, and in some other cases the conditions of use have been modified (EC, 2017^[9]).

Source: (Sud, 2020^[10]), "Managing the biodiversity impacts of fertiliser and pesticide use: Overview and insights from trends and policies across selected OECD countries", <https://dx.doi.org/10.1787/63942249-en>.

Agricultural support system (Sub-dimension 14.3)

The third sub-dimension assesses the policies, instruments and organisation of agricultural support systems. The way in which economies provide support to farmers is arguably as important as the total level of that support. In that respect, this sub-dimension analyses the large portfolio of measures available to governments.

As Table 17.4 shows the average score for the WB6 economies in this sub-dimension is 2.7, which suggests limited progress. Montenegro and Serbia, the two economies that are already in the EU negotiation process, are the most advanced in the region. In contrast, Bosnia and Herzegovina and Kosovo are the only two economies whose IPARD support schemes are still not accredited and who therefore score the lowest.

Table 17.4. Scores for Sub-dimension 14.3: Agricultural support system

Sub-dimension	Qualitative indicator	ALB	BIH	KOS	MKD	MNE	SRB	WB6 average
Sub-dimension 14.3:	Agricultural policy framework	3.0	3.0	2.5	3.1	3.5	3.5	3.1
Agricultural support system	Domestic producer support	3.0	2.0	2.0	2.2	3.5	3.0	2.6
	Agricultural trade policy	2.5	2.0	2.0	3.0	4.0	3.0	2.8
	Agricultural tax regime	2.5	1.5	2.0	1.4	3.5	3.0	2.3
	Sanitary and phytosanitary measures	3.0	2.0	2.0	1.4	3.0	4.0	2.6
Sub-dimension average score		2.8	2.1	2.1	2.2	3.5	3.3	2.7

Agriculture policy frameworks are fairly well harmonised with EU policies

The region's agriculture support policies are based on national strategies and programmes which are harmonised overall with the EU Common Agricultural Policy (CAP) and the seven-year period for its implementation. These documents outline the strategic interventions needed to develop the agriculture sector and rural areas so they can meet the challenges of the EU single market requirements. The planning processes in all six economies involve long consultation exercises and discussions using participatory mechanisms so that all types of stakeholders can help to define the measures. All of the strategies include performance indicators (such as real economic growth in the sector, increased labour productivity in agriculture and processing, full compliance of formal agriculture holdings with EU standards, increased average farm sizes, increased export to import ratios, and the creation of new jobs). However, monitoring and evaluation mechanisms are limited. The agriculture support policy framework mainly consists of IPARD and domestic support measures.

Even though it has not yet started the EU negotiation process, North Macedonia's agriculture policy framework is the best organised of the six economies. Its support system is both functional and in line with the procedures and support system envisaged in the CAP. Albania, Montenegro, North Macedonia and Serbia implement IPARD measures through an accredited payment agency. Bosnia and Herzegovina and Kosovo still lack the administration mechanisms that would make them eligible for IPARD funding.

Domestic producer support instruments are in line with IPARD, but the criteria are not harmonised

All the economies provide direct payments to farmers. They are mainly based on land area, head of livestock and agricultural products sold and are the main income support instruments for agricultural producers. The support is based on income subsidies and non-production criteria. These income supplements largely determine the profitability of agriculture in most sub-sectors and represent a major element supporting the choice of agriculture as a profession.

Albania's domestic support instruments are aligned with IPARD support and funding measures and it has made substantial progress in natural disaster mitigation and preventative measures. Although no measures similar to the CAP agri-environmental indicators are in place yet, draft measures are being formulated. Domestic support to agriculture in Kosovo remains underfunded, reaching EUR 49.6 million in 2019, including direct payments and investments in rural development. While Kosovo's Ministry of Agriculture, Forestry and Rural Development (MAFRD) continued to subsidise farmers through direct crop payments based on the area cultivated, it has not introduced any cross-compliance measures.

Besides the fact that the criteria for domestic support measures are much easier to meet than for IPARD, there has been little monitoring to evaluate cross-compliance.

Trade policies follow EU principles, but tariff and non-tariff barriers remain significant in some economies

Agricultural trade is quite liberal as most economies in the region are World Trade Organization (WTO) members, or at least largely comply with its policies. Most of the economies apply some preferential tariffs on agricultural products originating from the EU, the Central European Free Trade Agreement (CEFTA), the European Free Trade Association (EFTA) and Turkey. The regulations on customs tariffs are adopted on an annual basis. In 2019, Kosovo increased its tariffs on goods originating from Bosnia and Herzegovina and Serbia to 100%. In April 2020, the tariffs were lifted and replaced by gradual trade reciprocity measures, which were subsequently abolished by the new Government of Kosovo in June 2020. Such tariffs seriously jeopardise the position of consumers in Kosovo and provoke retaliatory tariff and non-tariff barriers for the few Kosovo agricultural exporters trying to penetrate the regional market (Gap Institute, 2019_[11]).²

Laws on common market organisations (CMOs) is still pending in all economies in the region, even though CMOs are designed to manage production and trade in order to ensure steady incomes for farmers and a continued supply for consumers. CMOs represent the main pillar of the Common Agriculture Policy (CAP) and its framework for market support measures. This is a requirement for full alignment with the European Union (EU) *acquis*.

Farmers enjoy a highly preferential agricultural tax regime

The taxation system in all economies remains unified and applies few taxes to farmers. In most cases, value-added tax (VAT) for agriculture products is levied at a reduced rate. This reduction covers agricultural machinery and inputs such as seeds and seedlings. In Bosnia and Herzegovina the specific agricultural products attracting a reduced rate are decided at the entity level. Both entities can choose to defer their tax regime rates annually based on analysis by their finance and agriculture ministries.

Taxes on agriculture land are paid by the hectare. There are some exclusions for farms planted with permanent crops. For example, in Albania, orchards and vineyards are exempt from tax for the first five years after planting.³

Sanitary and phytosanitary frameworks partly comply with EU and international standards

All assistance to the agri-food sector requires the right interventions both in terms of specific measures and the overall government approach. To modernise the agri-food sector and foster rural development, while preparing the sector for the increasingly challenging environment posed by modern value chains, food safety standards and climate change, government policies and spending need to provide the right incentives for farmers and rural entrepreneurs. The sector must also be managed in alignment with EU policies, which requires significant changes in public sector support for agriculture, forestry, food security

and rural development. Perhaps the greatest issue is that both food safety and veterinary services continue to face capacity limitations in technical support, training and policy.

Even though Albania is a member of a number of international organisations for plant and animal health and has functional national contact points for each organisation, it has not transferred a lot of know-how and has made little progress in bringing its national SPS framework in line with international guidelines. It has a food safety, phytosanitary and veterinary network reference laboratory, but the law does not require the accreditation of tests. Only a limited number of food safety tests are internationally certified, preventing the recognition of these procedures abroad. Phytosanitary tests are partly recognised and a process for their recognition by CEFTA members is ongoing.

Most of the WB6 economies lack a comprehensive veterinary disease monitoring and control system that is in line with EU legislation and the World Organisation for Animal Health requirements. North Macedonia has made the most progress in these areas, followed by Serbia. However, there is a lack of in-service training and education programmes for field veterinarians in all six economies.

To improve the collection and disposal of animal by-products, Kosovo has been granted EU funding for a new, fully equipped rendering plant. Despite having been built two years ago, the plant is still not operational. The MAFRD was obliged to launch a call for tenders and select a management company for the plant. Collection will only be able to start in 2021.

A phytosanitary information system (PIS) for plant health and plant protection products contributes to better communication, co-ordination, transparency and more efficient functioning of all stakeholders involved in the phytosanitary sector. PISs are in the early phases of development in all the economies. The greatest progress has been made in North Macedonia where the Macedonian Phytosanitary Directorate within the Ministry of Agriculture, Forestry and Water Economy has designed, developed and implemented PIS administration and controls for plant health and pesticides. Currently, an official control module is being developed to upgrade the import, export, re-export and transit activities by including additional data for further risk analysis and the preparation of reports.

The way forward for the agricultural support system

- **Meet the preconditions for and increase capacity to facilitate IPARD funding.** As part of the harmonisation with the EU CAP, the economies need to make further efforts to accelerate the process of accreditation of new IPARD measures.
- **Adopt and implement common market organisation legislation** as part of the introduction of cross-compliance measures, especially among those economies that have not prepared them.
- **Continue to upgrade SPS systems in line with EU requirements.** Further efforts to implement integrated food control systems should be a priority. All the WB6 economies still need to establish functioning rendering plants for the disposal of animal by-products in order to complete their animal monitoring and control systems. In the phytosanitary sector, establishing and further strengthening of technical plant protection services is a priority for the implementation of pest monitoring and integrated pest management.
- **Speed up the process of establishing reference laboratories.** The economies need to increase the accreditation of laboratory methods used in hygiene, veterinary and phytosanitary controls. The reference laboratories will improve overall food safety and phytosanitary controls, increasing the competitiveness of the agriculture sector overall.
- **Strengthen institutional co-ordination and harmonise standards and criteria for support measures.** Harmonising the criteria used for IPARD and domestic support measures will help farmers transform the region's agriculture towards integration with the EU.

Agricultural innovation system (Sub-dimension 14.4)

The agricultural innovation framework spans public, private and higher education institutions, along with extension services, and creates the underlying knowledge needed for innovation in products, processes, marketing and organisation. Agricultural innovation priorities range from crops, livestock and fisheries to sustainable resource use and climate change. This sub-dimension assesses how well the agricultural innovation framework, supported by international co-operation, is helping the development of new knowledge in agriculture.

As Table 17.5 shows, almost all economies in the region face the same challenges of underfinanced innovation projects and extension services of limited efficiency. The average score is 2.6, with North Macedonia the most advanced, followed by Serbia and Montenegro. The other three economies are at early stages of development in this area.

Table 17.5. Scores for Sub-dimension 14.4: Agricultural innovation system

Sub-dimension	Qualitative indicator	ALB	BIH	KOS	MKD	MNE	SRB	WB6 average
Sub-dimension 14.4: Agricultural innovation system	Agricultural research and development framework	2.0	2.0	2.5	3.1	2.5	3.0	2.5
	Agricultural extension services framework	2.0	2.0	2.5	3.2	3.5	3.0	2.7
Sub-dimension average score		2.0	2.0	2.5	3.2	3.0	3.0	2.6

Research and innovation policy is underfinanced and limited in all economies

All the WB6 economies continue to neglect agricultural science and research. In a context of digitalisation and global market trends, agricultural innovation systems are essential to increasing competitiveness in world markets. Currently, all the economies have strategic documents covering innovation and the application of science. The strategies identify some key points regarding agricultural research and aim to increase the number of applied projects between research institutes and farmers, improving production technology and producers' competitiveness. Despite this, public spending on research and innovation was still below 1% of GDP in 2019, compared to 2.19% on average in the EU, even though in most of the economies they are prioritised as part of the agriculture budget.

Apart from the work of public institutes, none of the economies in the region have dynamic applied science and research fields. Research is largely dependent on donor-funded projects, while the national budget for such projects is extremely limited, which restricts projects to an ad hoc basis only.

Montenegro and Serbia have seen the greatest increase in agricultural research budgets over the last three years. In Montenegro 16% of research projects funded by the national budget were in the agriculture sector, while in Serbia support for agriculture research rose by 8%.⁴

Overall innovation, with a stress on sustainability, is a priority of the Smart Specialisation Strategy, a concept associated with European cohesion policy. Montenegro is the first non-EU country to have adopted a Smart Specialisation Strategy, in 2019 (S3.me, 2019_[12]). The strategy hopes to see Montenegro recognised for, among other things, agricultural innovation and sustainability, preservation of tradition in rural areas, and the development of a food value chain for authentic Montenegrin products.

Agriculture extension services lack human and financial resources

Extension services are the main source of information, education and training for the majority of producers in the WB region. They either are organised as agencies with a special mandate from the government or as part of the relevant ministry.

The national, state-owned extension services have a long tradition of support of agriculture in all the WB6 economies, except for Albania,⁵ where extension services were only introduced in the mid 1990s.

At present, the public agricultural extension services are strongly focused on production techniques, and only partly able to cover farm management, markets and marketing, regional rural development and the promotion of producer organisations. Extension services should be further diversified to meet market demand and farmers' needs.

Extension services in all WB6 economies are provided free of charge or at low cost, but each advisor serves a significant number of farmers which limits the scope and quality of the services they can provide. Almost all extension service agencies in the region lack the human and financial capacities to improve their performance in the field. Only in Kosovo are extension services widely available and very competitive due to the number of donor-supported projects and high awareness among farmers of their role. In 2019, 13 private companies were licensed to perform advisory activities. Approximately 300 agriculture and rural development advisors have been certified, and another 100 are expected to be certified by the end of 2020.

The introduction of private advisors into the extension network is a reform process in the WB6 economies. The smooth transformation of the existing state-owned system will take some effort and dedication. It will also require mechanisms for planning, standardisation, access, evaluation and continuing support for the development of services.

The way forward for the agricultural innovation system

- **Increase funding for and implement national scientific research strategies.** Increase the investments in research, in line with market demand, and stimulate links between producers and researchers while supporting innovation projects in targeted agricultural sub-sectors.
- **The current extension services need to be further supported** by increasing advisors' know-how through continuing training.
- **Improve farmers' access to information, especially market information.** The current information systems should be reformed into functional and dynamic platforms for the collection and dissemination of information.

Conclusion

Agriculture is a key pillar of the Western Balkan economy. The region's progress over the past two years has been notable in many areas, including improvements in rural infrastructure, irrigation, IPARD implementation and the regulation of natural resources. There is still room for improvements in education and training, innovation and research. All the WB6 economies are aligning their policies with those of the EU, but this process is very demanding and requires effort and dedication at all levels.

Given that they all share a similar background, it is not surprising that the problems and challenges the WB6 economies face are almost identical. Yet, although they could benefit from their shared experience, regional co-ordination and support mechanisms are lacking. The region would benefit from focusing on synergies and highlighting the most appropriate solutions in the process of harmonisation with the EU. The way forward for the Balkan economies will be to stabilise rural areas and provide a decent life for the rural population, which is only possible through sustainable and profitable agriculture. Agriculture remains the most labour-intensive sector in the region and investment in new technology, value-added production and the sustainable use of resources is the only way to improve rural living conditions.

References

- ANRD (2014), *Inter Sectoral Agriculture and Rural Development Strategy 2014-2020*, Government of Albania, <https://anrd.al/wp-content/uploads/2016/04/Strategjia-Nder-Sektoriale-ZhB.pdf>. [13]
- ASK (2020), *Distribution of employees by sector of economic activity for the years 2008-2019*, Kosovo Agency of Statistics Askdata website, https://askdata.rks.gov.net/PXWeb/pxweb/en/askdata/askdata_Structural%20business%20statistics/asn04.px/?rxid=ad787284-363a-44a5-bb3d-0f067afa36b7. [23]
- ASK (2020), *Number of agricultural holdings (agricultural households and agricultural legal entities)*, Kosovo Agency of Statistics Askdata website, https://askdata.rks.gov.net/PXWeb/pxweb/en/askdata/askdata_02%20Agriculture_Agricultural%20Household%20Survey/Nr.%20of%20agri.%20households%20and%20agricultural%20legal.px/?rxid=0a45da53-15da-4944-ae34-a9c7b8fd53c1. [24]
- ASK (2020), *Structure of gross domestic product by economic activities 2008-2019*, Kosovo Agency of Statistics Askdata website, https://askdata.rks.gov.net/PXWeb/pxweb/en/askdata/askdata_07%20National%20and%20government%20accounts_National%20accounts_Annual%20national%20accounts/gdp10.px/?rxid=ad787284-363a-44a5-bb3d-0f067afa36b7. [25]
- BHAS (2020), *Bosnia and Herzegovina in Figures 2019*, Agency for Statistics of Bosnia and Herzegovina, http://www.bhas.ba/data/Publikacije/Bilteni/2020/NUM_00_2019_TB_0_EN.pdf. [19]
- BHAS (2020), *Foreign Trade of BiH in 2019*, Agency for Statistics of Bosnia and Herzegovina, http://bhas.gov.ba/data/Publikacije/Bilteni/2020/ETR_00_2019_TB_0_BS.pdf. [20]
- BHAS (2020), *Transport: 2019*, Agency for Statistics of Bosnia and Herzegovina, http://www.bhas.ba/data/Publikacije/Bilteni/2020/TRA_00_2019_TB_00_BS.pdf. [22]
- BHAS (2020), *Use of Information and Communication Technologies in Bosnia and Herzegovina: 2019*, Agency for Statistics of Bosnia and Herzegovina, http://www.bhas.ba/data/Publikacije/Bilteni/2020/IKT_00_2019_TB_0_BS.pdf. [21]
- BHAS (2018), *A Survey on Household Consumption in Bosnia and Herzegovina in 2015*, Agency for Statistics of Bosnia and Herzegovina, http://www.bhas.ba/data/Publikacije/Bilteni/2018/CIS_01_2015_Y1_0_BS.pdf. [18]
- Bogdanov, N., D. Meredith and S. Efstratoglou (2008), "A typology of rural areas in Serbia", *Economic Annals*, Vol. 177, pp. 7-29, <http://dx.doi.org/10.2298/EKA08177007B>. [26]
- Climate ADAPT (2019), *IRRINET: IT irrigation system for agricultural water management in Emilia-Romagna, Italy*, Climate ADAPT website, <https://climate-adapt.eea.europa.eu/metadata/case-studies/irrinet-it-irrigation-system-for-agricultural-water-management-in-emilia-romagna-italy>. [4]
- Coll, M. and E. Wajnberg (2017), *Environmental Pest Management: The Need For Long-Term Governmental Commitment*, Wiley, <http://dx.doi.org/10.1002/9781119255574.ch18>. [7]

- DeBoe, G. (2020), "Impacts of agricultural policies on productivity and sustainability performance in agriculture: A literature review", *OECD Food, Agriculture and Fisheries Papers*, No. 141, OECD Publishing, Paris, <https://dx.doi.org/10.1787/6bc916e7-en>. [62]
- EC (2020), *European Innovation Scoreboard 2020: Main Report*, European Commission, <https://ec.europa.eu/docsroom/documents/42981>. [29]
- EC (2019), "Albania 2019 Report", *Commission Staff Working Document*, No. SWD(2019) 215 final, European Commission, Brussels, <https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/20190529-albania-report.pdf>. [30]
- EC (2017), *Member State National Action Plans and Progress in the Implementation of Directive 2009/128/EC on the Sustainable use of Pesticides: Report from the Commission to the European Parliament and the Council*, European Commission, <https://op.europa.eu/en/publication-detail/-/publication/9306d762-e63a-11e7-9749-01aa75ed71a1>. [9]
- EFSE (2018), *Agriculture Finance in Kosovo*, European Fund for Southeast Europe, Pristina. [28]
- FAO (2018), *Strategic Plan for Rural Development of Bosnia and Herzegovina (2018-2021) - Framework Document*, Food and Agriculture Organization, <http://www.fao.org/family-farming/detail/en/c/1144820/>. [15]
- Gap Institute (2019), *The 100% Tax: Is it Helping or Hurting Kosovo's Economy*, Gap Institute, https://www.institutigap.org/documents/18637_TaxEconomicImpact.pdf. [11]
- Government of Albania (2014), *National Employment and Skills Strategy 2014-2020*, Ministry of Social Welfare and Youth, Government of Albania, https://financa.gov.al/wp-content/uploads/2018/09/NESS-ENG-8-1-15_final-version.pdf. [55]
- Government of Albania (n.d.), *Rural Development Program 2014-2020*, Ministry of Agriculture and Rural Development, Albania. [49]
- Government of Kosovo (2018), *National Agricultural Research and Extension System in Kosovo*, Government of Kosovo, Pristina. [31]
- Government of Kosovo (2016), *National Development Strategy 2016 – 2021 (NDS)*, Government of Kosovo, http://www.kryeministri-ks.net/repository/docs/National_Development_Strategy_2016-2021_ENG.pdf. [32]
- Government of Kosovo (2010), *Land Consolidation Strategy, 2010-2020*, Government of Kosovo, Pristina, http://www.kryeministri-ks.net/repository/docs/Strategy_on_Land_Consolidation_2010-2020.pdf. [33]
- Government of Kosovo (n.d.), *Kosovo National Water Strategy Document 2017-2036*, Government of Kosovo, http://knmu.kryeministri-ks.net/repository/docs/Water_Strategy_final.pdf. [34]
- Government of Montenegro (2020), *2020 Agro budget*, Government of Montenegro, <https://mpr.gov.me/organizacija/agrobudzet/220480/Agrobudz.html>. [45]
- Government of Montenegro (2015), *Action Plan for Transposition, Implementation and Enforcement of the EU acquis*, Government of Montenegro. [35]

- Government of Montenegro (2015), *Fisheries Strategy of Montenegro for 2015-2020*, Government of Montenegro, Podgorica. [37]
- Government of Montenegro (2015), *Strategy for the Development of Agriculture and Rural Areas in Montenegro 2015-2020*, Ministry of Agriculture and Rural Development, Government of Montenegro. [47]
- Government of Montenegro (2006), *Montenegro's Agriculture and European Union: Agriculture and Rural Development Strategy*, Government of Montenegro, Podgorica, http://seerural.org/1documents/Documents/Development_Strategies/Montenegro-National_Strategy_ARD.pdf. [36]
- Government of Montenegro (n.d.), *National Development Strategy 2015-2020*, Government of Montenegro. [38]
- Government of Montenegro (n.d.), *Programme for Development of Agriculture and Rural Areas in Montenegro under IPARD II 2014-2020*, Ministry of Agriculture and Rural Development, Government of Montenegro. [39]
- Government of Serbia (2014), *STRATEGIJA POLJOPRIVREDE I RURALNOG RAZVOJA REPUBLIKE SRBIJE ZA PERIOD 2014-2024. GODINE*, Ministry of Agriculture and Environmental Protection, Government of Serbia, <http://uap.gov.rs/wp-content/uploads/2016/05/STRATEGIJA-2014-2020-.pdf>. [59]
- IBP (2019), *Underspending on Irrigation in Albania*, International Budget Partnership, <https://www.internationalbudget.org/wp-content/uploads/underspending-on-irrigation-albania.pdf>. [40]
- INSTAT (2020), *Administrative Data on Labour Market*, Albania Institute of Statistics website, <http://www.instat.gov.al/en/themes/labour-market-and-education/administrative-data-on-labour-market/#tab2>. [41]
- Joksimovic, A. et al. (2019), "The state of marine fisheries in Montenegro in the last 15 years", *Studia Marina*, Vol. 32/2, pp. 12-22, http://www.studiamarina.ac.me/pdf/32/No2/Joksimovic_et_al_State_of_marine_fisheries_in_MNE_last_15_yrs.pdf. [42]
- Jouanjean, M. et al. (2020), "Issues around data governance in the digital transformation of agriculture: The farmers' perspective", *OECD Food, Agriculture and Fisheries Papers*, No. 146, OECD Publishing, Paris, <https://dx.doi.org/10.1787/53ecf2ab-en>. [3]
- MAKStat (2020), *Gross Domestic Product, second quarter of 2020*, Statistical Office of North Macedonia, https://www.stat.gov.mk/pdf/2020/3.1.20.13_mk.pdf. [16]
- MAKStat (2019), *Active Population in the Republic of North Macedonia: Results from the Labour Force Survey: 2019*, Statistical Office of North Macedonia, http://www.stat.gov.mk/pdf/2020/2.1.20.06_mk.pdf. [43]
- MAKStat (2019), *Statistical Yearbook of the Republic of North Macedonia: 2019*, Statistical Office of North Macedonia, https://www.stat.gov.mk/PrikaziPublikacija_en.aspx?id=34&rbr=770. [44]
- MARD (2018), *Green Report: 2018*, Ministry of Agriculture, Forestry and Rural Development, Pristina, https://www.mbpzhr-ks.net/repository/docs/Green_Report_2018.pdf. [46]

- MARD (n.d.), *National Strategy for Irrigation and Drainage 2019-2031 and Action plan*, Ministry of Agriculture and Rural Development. [48]
- MIM and MFVM (2013), *Protect water, nature and human health*, Danish Environmental Protection Agency, http://eng.mst.dk/media/mst/69655/MST_spr%C3%B8jtemiddelstrategi_uk_web_let.pdf. [6]
- MONSTAT (2020), *Crop production - Releases*, Statistical Office of Montenegro website, <https://www.monstat.org/eng/page.php?id=1357&pageid=62>. [50]
- MONSTAT (2020), "Gross domestic product of Montenegro in 2019", *Release*, No. 159, Statistical Office of Montenegro, http://www.monstat.org/uploads/files/Nacionalni%20racuni/BPD/Annual%20GDP%202019_eng.pdf. [51]
- OECD (2020), "Global value chains in agriculture and food: A synthesis of OECD analysis", *OECD Food, Agriculture and Fisheries Papers*, No. 139, OECD Publishing, Paris, <http://dx.doi.org/10.1787/6e3993fa-en>. [2]
- OECD (2020), *Taxation in Agriculture*, OECD Publishing, Paris, <https://dx.doi.org/10.1787/073bdf99-en>. [17]
- OECD (2019), *Agricultural Policy Monitoring and Evaluation 2019*, OECD Publishing, Paris, <https://dx.doi.org/10.1787/39bfe6f3-en>. [52]
- OECD (2019), *Agricultural Trade and Domestic Policy Reform: Better Together*, Agriculture Policy Brief, OECD, https://issuu.com/oecd.publishing/docs/agricultural_trade. [1]
- OECD (2015), *Analysing Policies to Improve Agricultural Productivity Growth, Sustainably*, OECD, <http://www.oecd.org/agriculture/topics/agricultural-productivity-and-innovation/documents/analysing-policies-to-improve-agricultural-productivity-growth-sustainably.pdf>. [53]
- OECD/FAO (2019), *OECD-FAO Agricultural Outlook 2019-2028*, OECD Publishing, Paris/Food and Agriculture Organization of the United Nations, Rome, https://dx.doi.org/10.1787/agr_outlook-2019-en. [54]
- OICVET (n.d.), *Water Resource Management in Albania*, http://www.oicvet.org/Presentations/Water_Management_Symposium/Albania/Albania.pdf. [14]
- PAN Europe (2005), *Danish Pesticide Use Reduction Programme - to Benefit the Environment and the Health*, Pesticides Action Network Europe, https://www.pan-europe.info/old/Resources/Reports/Danish_Pesticide_Use_Reduction_Programme.pdf. [5]
- Pedersen, A. and H. Nielsen (2017), *Effectiveness of pesticide policies: Experiences from Danish pesticide regulation 1986-2015*, Wiley. [8]
- Republika Srpska Institute of Statistics (n.d.), *Education Releases*, Republika Srpska Institute of Statistics website, <https://www.rzs.rs.ba/front/category/12/198/?page=3>. [27]
- S3.me (2019), *Smart Specialisation Strategy adopted from the European Commission*, S3.me website, <https://www.s3.me/en>. [12]

- Statistical Office of the Republic of Serbia (2020), *Irrigation, 2019*, Statistical Office of the Republic of Serbia, <https://publikacije.stat.gov.rs/G2020/PdfE/G20201006.pdf>. [56]
- Statistical Office of the Republic of Serbia (2020), "Labour Force Survey in The Republic of Serbia, 2019", *Bulletin*, No. 658, Statistical Office of the Republic of Serbia, <https://publikacije.stat.gov.rs/G2020/PdfE/G20205658.pdf>. [58]
- Statistical Office of the Republic of Serbia (2020), *Permanent crop farming*, Statistical Office of the Republic of Serbia website, <https://www.stat.gov.rs/en-us/oblasti/poljoprivreda-sumarstvo-i-ribarstvo/biljna-proizvodnja/>. [57]
- Sud, M. (2020), "Managing the biodiversity impacts of fertiliser and pesticide use: Overview and insights from trends and policies across selected OECD countries", *OECD Environment Working Papers*, No. 155, OECD Publishing, Paris, <https://dx.doi.org/10.1787/63942249-en>. [10]
- World Bank (2018), *Kosovo Water Security Outlook*, World Bank, Washington, DC, <http://documents1.worldbank.org/curated/en/496071548849630510/Water-Security-Outlook-for-Kosovo.pdf>. [60]
- WTO (2020), *Montenegro: Trade Profiles*, World Trade Organization, https://www.wto.org/english/res_e/statistics_e/daily_update_e/trade_profiles/ME_e.pdf. [61]

Notes

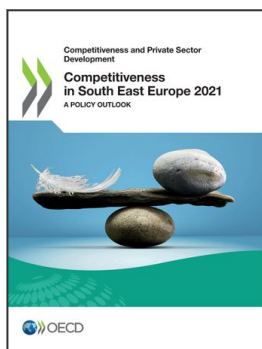
¹ The 11 Central and Eastern European countries (CEEC) which have joined the European Union: Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic and Slovenia.

² The 100% tax does not resolve the non-tariff barriers faced by Kosovo businesses exporting to Serbia. Empirical studies show that these barriers can become greater obstacles than tariff barriers, which were annulled with the entry into force of CEFTA. The tariff may have significantly increased consumer prices of food, the main expenditure for Kosovar consumers. Taking this into consideration, maintaining this tax for a longer period may increase poverty (Gap Institute, 2019^[11]).

³ Article 23 of the Albania law no.9632 of 30.10.2006 On Local Taxes System.

⁴ In 2020 the European Innovation Scoreboard ranked Serbia as a moderate innovator with an improvement in results of 13.3%. Almost 20% of all implemented research projects and success stories are in agriculture, focusing mainly on digitalisation, smart farming, modern technologies and sustainability (EC, 2020^[29]).

⁵ Albania now has five regional Agricultural Technology Transfer Centres with a mission of enabling the smooth transfer of agricultural technology according to the needs and regional priorities within their jurisdictions. The centres have 153 employees implementing an annual programme and offering training and educational material to farmers and agribusinesses.



From:
Competitiveness in South East Europe 2021
A Policy Outlook

Access the complete publication at:

<https://doi.org/10.1787/dcbc2ea9-en>

Please cite this chapter as:

OECD (2021), "Agriculture policy (Dimension 14)", in *Competitiveness in South East Europe 2021: A Policy Outlook*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/9b8c3a5d-en>

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document, as well as any data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area. Extracts from publications may be subject to additional disclaimers, which are set out in the complete version of the publication, available at the link provided.

The use of this work, whether digital or print, is governed by the Terms and Conditions to be found at <http://www.oecd.org/termsandconditions>.