

# Assessment of Sustainable Agriculture Development in Kosovo

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**Disclaimer:**

*This report is supported by the Promoting Private Sector Employment (PPSE) Project, and prepared by a team of researchers, Laura Courbois, Arben Mehmeti, and Egzon Bajrami. The opinions expressed and arguments presented herein do not necessarily reflect the official views of the Swiss Agency for Development and Cooperation (SDC), the PPSE Project, Swisscontact, or the Riinvest Institute.*

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## Executive Summary

This report presents a comprehensive analysis of the sustainable agriculture sector in Kosovo, commissioned by the Promoting Private Sector Employment (PPSE) project. The study aligns with Kosovo's National Development Strategy 2030 and the Green Agenda for the Western Balkans, particularly the commitments outlined in the 'Sofia Declaration' for sustainable agriculture and food production. The overarching goal is to facilitate Kosovo's transition towards a competitive, innovative, and environmentally sustainable economy, with a specific focus on the agriculture sector.

### Context and Objectives

Kosovo's economic landscape is characterized by a service-oriented structure, with agriculture contributing a smaller but vital portion to GDP, approximately 7.4%. Despite significant growth in agricultural output over the past decade, the sector faces challenges related to land fragmentation, outdated infrastructure, limited access to finance, and environmental pressures. The PPSE project commissioned this study to assess the readiness of small and medium-sized enterprises (SMEs) in Kosovo's agriculture sector to embrace sustainability and green transition practices. The study's objectives include evaluating current sustainability practices, identifying barriers, assessing available support mechanisms, analysing regulatory frameworks, and identifying opportunities for intervention.

### Methodology

The study employed a mixed-methods approach, combining qualitative and quantitative research to gain a deep understanding of the current state of sustainable agriculture in Kosovo. The research design included a literature review, key informant interviews (KIIs), and focus group discussions (FGDs) with a diverse range of stakeholders, including government officials, SMEs, NGOs, and international organizations. The sampling focused on four key agricultural sub-sectors with high potential for sustainable practices: soft fruits, medicinal and aromatic plants (MAPs), dairy, and vegetables.

### Key Findings

1. **Current State of Sustainable Agriculture:** The study found that while there is growing awareness and implementation of sustainable practices among SMEs in Kosovo's agriculture sector, significant challenges persist. Key practices adopted include the use of solar panels, organic fertilizers, drip irrigation systems, and adherence to standards like Global GAP and Organic certification. However, these practices are largely driven by external grants and subsidies, with limited initiative from the farmers themselves.
2. **Barriers to Adoption:** The primary barriers to the adoption of sustainable practices include economic sustainability concerns, a lack of technical support and training, insufficient regulatory enforcement, and the absence of role model farms. Many farmers perceive sustainable practices as financially unviable without clear and immediate economic benefits, leading to resistance to change.
3. **Support Mechanisms and Resources:** The study highlighted the crucial role of governmental and donor support in promoting sustainable agriculture. However, the effectiveness of these support mechanisms is often limited by insufficient coordination, inadequate training programs, and a lack of awareness among farmers about available

resources. Financial mechanisms, including direct payments and grants, are in place but need to be better aligned with sustainability goals.

4. **Regulatory and Policy Frameworks:** Kosovo's regulatory framework for agriculture is gradually aligning with EU standards, but significant gaps remain, particularly in areas related to environmental protection, water management, and sustainable land use. The Agriculture and Rural Development Strategy (ARDS) 2022-2028 sets out ambitious goals for aligning Kosovo's agricultural policies with the EU's Common Agricultural Policy (CAP), but implementation has been slow and uneven.
5. **Opportunities for Intervention:** The report identifies several critical areas for intervention, including enhancing technical training and advisory services, improving market access for sustainably-produced goods, providing economic incentives tailored to sustainable practices, and strengthening the connection between the private sector and academia. Specific opportunities include investing in waste management infrastructure, promoting renewable energy adoption, and leveraging market demand to drive sustainability.

## Conclusions and Recommendations

In conclusion, while Kosovo's agriculture sector is on the path towards sustainability, there is a need for more robust and coordinated efforts to overcome the existing challenges. The recommendations include:

- **Strengthening Technical Support:** Enhancing technical training and advisory services for farmers is essential to increase the adoption of sustainable practices. This should involve establishing dedicated offices within local municipalities and encouraging public-private partnerships.
- **Tailoring Financial Incentives:** Financial mechanisms should be better aligned with sustainability goals, including tailored grant schemes that incentivize the adoption of environmentally friendly practices. Monitoring and impact assessments of these investments are crucial to ensure effectiveness.
- **Improving Market Access:** Facilitating access to domestic and international markets for sustainably-produced agricultural products can drive demand for green practices. Export-oriented sectors like MAPs provide a model for how market requirements can promote sustainability.
- **Strengthening Regulatory Frameworks:** There is a need for more stringent enforcement of existing regulations and the development of new policies that align with EU standards, particularly in environmental protection and resource management.
- **Enhancing Awareness and Education:** Raising awareness among farmers and consumers about the benefits of sustainable agriculture is vital. Incorporating sustainability into school curricula and expanding research on sustainable practices will support long-term sector development.



# 1. Introduction

As outlined in Kosovo's National Development Strategy 2030<sup>1</sup>, **Kosovo strives to establish a favorable business environment and actively contribute to the development of a competitive economy focused on productive and value-added service activities.** Innovation, a pivotal factor for competitiveness, and the circular economy, as a sustainable development model, will receive significant emphasis in this new economic trajectory. According to the 2030 strategy, Kosovo's economic transformation will be grounded in competitive, innovative, and environmentally sustainable enterprises, facilitating favorable conditions for increased participation of Kosovo enterprises in international markets and value chains.

Consistent with the overarching goals outlined in the Green Agenda for the Western Balkans, the 'Sofia Declaration' incorporates a dedicated section addressing Sustainable Agriculture and Food Production. Within this framework, **Kosovo has officially affirmed its strong commitment to advancing sustainability across the agriculture and food production domains** by endorsing this pivotal agreement. This commitment involves ensuring that various sectors of its food industry—encompassing farming, processing, distribution, health-conscious consumption, and effective food waste management—are brought into alignment with the standards and practices established by the European Union.

Aligned with the strategic direction of the Government of Kosovo, which has integrated commitments to promote a green transition into national policies, and in coordination with the efforts of the donor community and development agencies, the Promoting Private Sector Employment (PPSE) project aims to leverage its extensive expertise to advance this shared goal. The PPSE project's aim is to enhance the competitiveness of Kosovo's businesses by promoting sustainable practices, creating green jobs, and fostering economic prosperity within a clean environment.

The report first examines Kosovo's regulatory and policy frameworks, highlighting gaps and areas for improvement, particularly in aligning with EU standards. It then includes an analysis of the current state of sustainable agriculture in Kosovo, identifying key practices, barriers to adoption, and support mechanisms. The following chapter outlines different funding mechanisms available to support the green agricultural transition, and finally the report concludes with recommendations for strengthening technical training, improving market access for sustainably-produced goods, and enhancing regulatory enforcement to drive the adoption of sustainable practices.

## 2. Research objectives and methodology

### 2.1. Objectives

In order to further contribute to advancing green and sustainable initiatives in the agricultural sector, **PPSE is commissioning a study aimed at assessing the readiness and preparedness of Kosovo's SMEs in the agriculture sector regarding their shifts towards sustainability and embracing green transition practices.**

The specific objectives of the study include:

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<sup>1</sup> <https://kryeministri.rks-gov.net/en/national-development-strategy-2030/>

### Evaluate Current Sustainability Practices:

- Assess the existing sustainability practices and initiatives implemented by SMEs in Kosovo's agriculture sector.
- Determine the level of awareness and understanding among agricultural SMEs about the green transition and sustainability benefits

### Identify Barriers and Challenges:

- Investigate the primary challenges and barriers faced by agricultural SMEs in Kosovo in adopting sustainable practices.
- Analyze the financial, regulatory, and technical constraints hindering the green transition.

### Assess Support Mechanisms and Resources:

- Examine the available funding sources and opportunities, including IPARD III, to support the sustainability initiatives of agricultural SMEs.
- Evaluate the effectiveness of current governmental and institutional supports in facilitating the green transition.

### Analyze Regulatory and Policy Frameworks:

- Review Kosovo's strategic documents, regulatory frameworks, and policies relevant to the agriculture sector's sustainability shift.
- Identify gaps and inconsistencies in the policies that may obstruct the green transition of SMEs.
- Compare and reference pertinent EU and international policies or strategies related to green transitions in agriculture sector.

### Identify Opportunities and Intervention Areas:

- Identify critical opportunities within the agriculture sector for SMEs to leverage in their sustainability journey.
- Define specific intervention areas that will aid SMEs in embracing sustainable and environmentally friendly business practices.

## 2.2. Methodology

**This study employed a mixed-methods approach, combining both qualitative and quantitative research techniques** to assess the readiness and preparedness of Kosovo's SMEs in the agriculture sector for the green transition. The methodology was designed to gather in-depth insights and robust data on current sustainability practices, challenges, and opportunities, as well as the effectiveness of support mechanisms and regulatory frameworks.

### Research Design

The research design incorporates the following key components:

**Literature Review:** A thorough review of relevant documents, including key policy documents, legal frameworks, and strategic plans, have been conducted. This review provided a foundational understanding of the existing policies and strategies that promote sustainable agriculture in Kosovo.

## Primary Data Collection:

**Key Informant Interviews (KIIs):** In-depth interviews were conducted with a diverse range of stakeholders, including government officials, representatives from international organizations, NGOs, and other relevant market actors including financial service providers and agricultural input suppliers. These interviews aimed to gather detailed information on current practices, awareness, challenges, and support mechanisms.

**Focus Group Discussions (FGDs):** FGDs were organized with various groups such as SMEs, farmers, and NGO representatives. These discussions facilitated the exploration of shared experiences, perceptions, and collective insights on sustainable practices and the green transition.

## Sampling Approach

Considering the scope of the study, a purposive sampling approach was employed. The study focused on four key agricultural sub-sectors with high potential for engaging in the green transition: soft fruits, medicinal and aromatic plants (MAPs), dairy, and vegetables. These sub-sectors were selected based on their economic importance, market presence, competitive position, and the significant number of farmers engaged in them.

A full list of stakeholders consulted for this research is included in Annex 1.

## Data Analysis

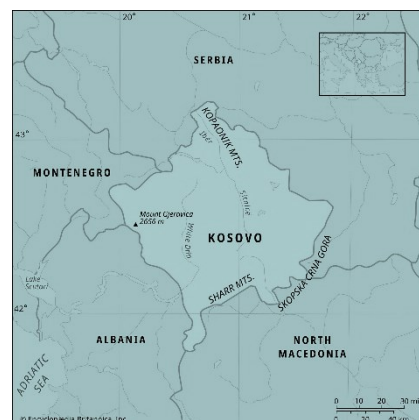
The collected data and reviewed was analyzed using largely qualitative methods. More specifically, thematic analysis was conducted on the interview and FGD transcripts to identify key themes, patterns, and insights. This involved coding the data and categorizing it into meaningful themes related to sustainability practices, challenges, and support mechanisms.

# 3. Context of agricultural development in Kosovo

## 3.1. Economic growth in Kosovo

**Kosovo, an upper-middle-income economy, is primarily service-oriented, with the majority of its workforce employed in the services sector. After a pandemic-induced downturn, the economy rebounded and continued to grow, while inflation, which spiked in 2022 due to global factors, began to ease in 2023.**

Kosovo is classified as a small upper-middle-income economy, with a GDP totaling €9.68 billion in 2023<sup>2</sup>. The country's economy is largely service-oriented, with the services sector making up 45.5% of GDP. Industry and agriculture contribute 27.6% and 7.4%, respectively<sup>3</sup>. Employment is predominantly in the services sector, which accounts for 72% of jobs, while industry and agriculture



<sup>2</sup> <https://www.imf.org/external/datamapper/profile/UVK>

<sup>3</sup> <https://databank.worldbank.org/source/world-development-indicators>



employ 23.9% and 4% of the workforce<sup>4</sup>. The informal sector is believed to represent 35% of employment as of 2017<sup>5</sup>.

**Kosovo's economy, which demonstrated significant resilience after the COVID-19 pandemic**, is now experiencing more moderate growth but is expected to continue expanding. After a 5.3% contraction in GDP in 2020, the economy rebounded by 10.7% in 2021 and grew by 3.5% in 2022<sup>6</sup>. The 2022 recovery was fuelled by stronger exports, increased private consumption, higher remittances, and greater bank lending. Economic growth was primarily driven by the trade and service sectors. By the third quarter of 2023, GDP had grown by 6.6% year-on-year.

Inflation, which spiked in 2022 due to rising global food and energy prices triggered by Russia's war in Ukraine, began to moderate in 2023 as global commodity prices slowed. It is expected to decline further through 2025<sup>7</sup>. Inflation dropped from 11.6% in 2022 to 4.9% in 2023, as a result of lower commodity prices.

### 3.2. State of play: agriculture sector

**Over the past decade, Kosovo's agricultural industry has grown by 54% due to increased investment and government support, while diversifying its output and facing challenges in employment and market access, with the sector's share of GDP slightly declining and trade deficits persisting despite improved productivity.**

**Over the last ten years, Kosovo's agricultural industry has grown, with its output increasing from €428 million in 2013 to €658 million in 2022<sup>8</sup>.** This 54% rise is mainly due to greater investment and government backing. Despite this growth in value, the sector's share of GDP has slightly declined from 8.4% to 7.8% in 2023. Additionally, the annual growth rate of the sector has been quite variable, with growth occurring in only two out of six years from 2017 to 2022, and the latter showing a modest increase of just 4.5%.

**In terms of agricultural production, Kosovo's agricultural sector has diversified its output over the past two decades, with significant growth in fruit and vegetable production, livestock and dairy, and specialty crops.** More specifically, Kosovo's agricultural sector has evolved significantly, with staples like wheat and maize consistently producing around 50,000 to 90,000 tons annually. Potatoes and a variety of vegetables also contribute substantially to the total output, with fruits adding around 30,000 tons each year. Export-wise, fresh produce like vegetables and fruits are prominent, particularly to neighbouring countries and the EU. The niche markets for herbs, medicinal plants, and organic products are growing, alongside an expanding wine export market. Despite facing challenges such as market access and competitive pressures, Kosovo's agricultural sector is capitalizing on high-value and niche products, enhancing practices and product quality to foster growth domestically and internationally.

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<sup>4</sup> [https://ilostat.ilo.org/data/countryprofiles/?ref\\_area=KOS](https://ilostat.ilo.org/data/countryprofiles/?ref_area=KOS)

<sup>5</sup> <https://documents1.worldbank.org/curated/en/814361497466817941/pdf/Kosovo-Jobs-Diagnostic.pdf>

<sup>6</sup> [https://economyfinance.ec.europa.eu/document/download/00bb7307-1694-4c7e-99de-5c3e662b2172\\_en?filename=tp070\\_en.pdf](https://economyfinance.ec.europa.eu/document/download/00bb7307-1694-4c7e-99de-5c3e662b2172_en?filename=tp070_en.pdf)

<sup>7</sup> [https://economyfinance.ec.europa.eu/document/download/00bb7307-1694-4c7e-99de-5c3e662b2172\\_en?filename=tp070\\_en.pdf](https://economyfinance.ec.europa.eu/document/download/00bb7307-1694-4c7e-99de-5c3e662b2172_en?filename=tp070_en.pdf)

<sup>8</sup> <https://databank.worldbank.org/source/world-development-indicators>

The sector's role in employment remains minimal, marking the lowest levels in the Western Balkans. This decrease is linked to demographic changes such as lower fertility rates and significant emigration of young people, as well as sector modernization<sup>9</sup>. Additionally, informal employment is prevalent in Kosovo, especially in agriculture. Agricultural land makes up about 38% of Kosovo's total land area. Similar to other Western Balkan nations, the sector is characterized by semi-subsistence farming on small, fragmented plots. According to the most recent data from the Kosovo Agency of Statistics, the average size of an agricultural holding is approximately 1.5 hectares. This is generally smaller compared to many of its neighbouring countries, and especially compared to EU's average of 17.4 hectares<sup>10</sup>.

**In the food and beverage sector, trade has faced a significant deficit**, reaching €739 million in 2021. Although the nominal deficit has increased, partly due to rising inflation, the export-to-import ratio has improved from 5% in 2010 to over 10% in 2021<sup>11</sup>. This positive change is attributed to improved productivity within the agriculture sector, driven by modernized infrastructure and increased investment.

### 3.3. Challenges affecting the agriculture sector in Kosovo

**As noted above, Kosovo's agriculture sector faces several key constraints that limit its growth, productivity, and sustainability. These constraints are rooted in economic, structural, environmental, and institutional challenges.**

A brief overview is provided in the table below:

CONSTRAINT	DESCRIPTION
<b>Fragmented Land Ownership</b>	Kosovo's agricultural land is highly fragmented, with small and scattered plots that make efficient farming difficult. Many farms are family-owned and average less than 2 hectares, which hinders economies of scale and limits investment in modern farming techniques. Fragmentation leads to inefficiencies, higher production costs, and difficulties in mechanization and irrigation.
<b>Outdated Infrastructure and Technology</b>	Much of Kosovo's agricultural infrastructure is outdated, including irrigation systems, storage facilities, and transportation networks. Farmers often rely on old machinery and lack access to modern agricultural technologies.
<b>Limited Access to Finance</b>	Farmers in Kosovo face significant challenges in accessing finance. The agricultural sector is perceived as high-risk by banks, leading to limited availability of credit and high interest rates. Additionally, many farmers lack the necessary collateral to secure loans. This restricts investment in farm modernization, expansion, and the adoption of new technologies.

<sup>9</sup> <https://ec.europa.eu/social/BlobServlet?docId=24031&langId=en>.

<sup>10</sup> <https://ec.europa.eu/eurostat/statistics-explained/SEPDF/cache/73319.pdf>

<sup>11</sup> <https://ec.europa.eu/social/BlobServlet?docId=24031&langId=en>.

<b>Insufficient Agricultural Extension Services and Education</b>	Agricultural extension services, which provide farmers with technical knowledge and training, are underdeveloped in Kosovo. The lack of effective extension services and agricultural education means that many farmers are not aware of or do not know how to implement modern and sustainable farming practices. This limits productivity, reduces innovation, and hinders the adoption of environmentally friendly practices.
<b>Weak Market Access and Value Chains</b>	Kosovo's agricultural sector struggles with weak market access, both domestically and internationally. Value chains are underdeveloped, and there are limited opportunities for farmers to engage in value-added processing.
<b>Environmental Challenges and Climate Change</b>	Kosovo's agriculture sector is vulnerable to environmental challenges such as soil degradation, water scarcity, and pollution. Additionally, climate change is causing more frequent and severe weather events, including droughts, floods, and temperature fluctuations.
<b>Weak Institutional Support and Governance</b>	Kosovo's agricultural sector suffers from weak institutional support, including inconsistent policy implementation, limited coordination between government agencies, and inadequate enforcement of regulations. Agricultural policies are often not fully aligned with EU standards, which Kosovo aspires to meet.
<b>Labor Shortages and Rural Depopulation</b>	Kosovo's rural areas are experiencing depopulation, with many young people migrating to urban areas or abroad in search of better opportunities. This has led to labour shortages in agriculture, where the workforce is aging and increasingly insufficient.
<b>Inadequate Food Safety and Quality Standards</b>	Kosovo faces challenges in enforcing food safety and quality standards, which are essential for accessing international markets. Many farms and processing facilities do not meet the required standards, and there is a lack of infrastructure for monitoring and certification. Inadequate food safety and quality standards limit Kosovo's ability to export agricultural products, especially to the EU.

### 3.4. Sustainable agriculture in Kosovo

**Kosovo has made significant progress in sustainable agriculture, though its efforts are still evolving and facing several challenges. The country's involvement in sustainable agriculture includes a combination of policy initiatives, adoption of sustainable practices by farmers, and international cooperation.**

Here's an overview of the key aspects of Kosovo's engagement in sustainable agriculture:

#### **Policy and Strategic Framework**

Kosovo's government has developed strategies aimed at promoting sustainable agriculture. The Agriculture and Rural Development Program (ARDP) 2014-2020 laid the groundwork for improving agricultural practices, with sustainability as a key focus. The new strategy for 2022-2028

continues this trend by emphasizing environmental protection, resource efficiency, and rural development. Moreover, Kosovo's agricultural policies are gradually aligning with EU standards as part of its aspirations for EU integration. This includes adopting measures related to environmental protection, food safety, and sustainable agricultural practices. This is discussed in more details in Section 6 of this report.

## Sustainable Farming Practices

Some farmers in Kosovo are implementing agroecological practices, such as crop rotation, reduced use of chemical fertilizers, and other relevant sustainability practices. Additionally, there is a growing interest in organic farming, although it is still a small portion of the overall agricultural output. Farmers are gradually adopting organic practices, supported by government subsidies and incentives. This is further elaborated in Section 5 of this report.

## Organic Production

Kosovo has a favourable climate and soil for organic farming. The areas with certified organic crops have expanded in Kosovo. According to the FiBL report from 2023, there is a 24.1% increase, with a total of 1990 ha, or 0.5% share of arable land. There are 56 producers and 19 processors in total, with the majority of the land planted with MAPs and 136 ha with other crops. Of the 481,000 ha of forest, 373,488 ha are organically certified for wild collection (FiBL IFOAM – Organics International. The World of Organic Agriculture Statistics and Emerging Trends 2023).

The cultivation of MAPs and NWFP collection are important because sustainable agriculture-based technologies are being implemented. This allows certified organic farmers to share their knowledge and experiences with other farmers, including environmental aspects of production that most farms are unfamiliar with.

The domestic market for organic products is expanding, driven by increasing consumer awareness, and Kosovo's organic products are finding export opportunities, particularly in the EU. It should be mentioned that, in addition to export requests, the establishment of collection points and subsidies have influenced the growth of organic areas, with special emphasis on the cultivation of MAPs. As a result, the MAPs and NWFP sector can

Figure 1: Arable Land Area (ha)

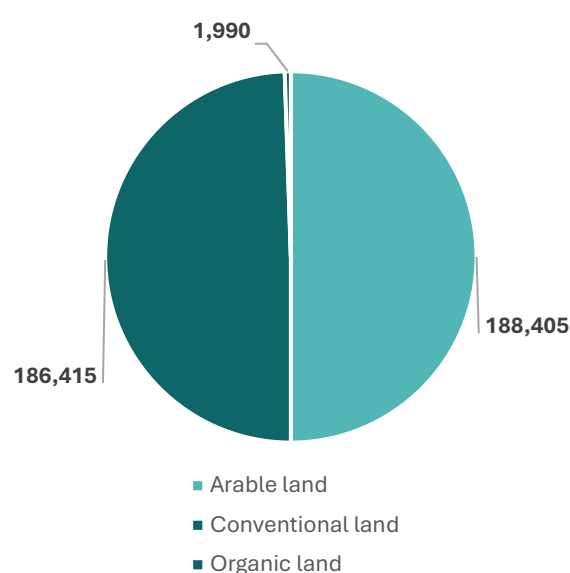
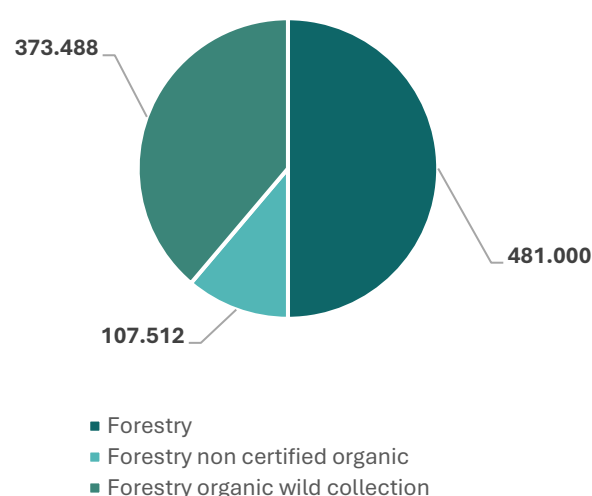


Figure 2: Forested areas (ha)



serve as a good model for the development of sustainable agriculture and the transfer of knowledge to other agricultural sectors in Kosovo.

**International Cooperation and Support**

**Various international organizations, including the European Union, USAID, SDC, and others, provide financial and technical support to Kosovo's agricultural sector.** These programs often focus on improving sustainability, including promoting organic farming, enhancing water management, and supporting rural development. International partners are also involved in training and capacity building for Kosovo's farmers, promoting best practices in sustainable agriculture.

**3.5. Key stakeholders promoting sustainable agriculture**

**In Kosovo, several key actors are involved in promoting sustainable agriculture. These include government bodies, international organizations, non-governmental organizations (NGOs), academic institutions, and private sector entities. Each of these actors plays a crucial role in shaping the policies, providing support, and implementing initiatives that encourage sustainable farming practices.**

INSTITUTION	ROLE	KEY INITIATIVES
Ministry of Agriculture, Forestry and Rural Development (MAFRD)	Primary government institution responsible for developing and implementing agricultural policies in Kosovo. It oversees programs related to rural development, sustainable farming practices, subsidies, and support for farmers. MAFRD also plays a role in aligning Kosovo's agricultural policies with EU standards, which include sustainability measures.	The ministry implements the Agriculture and Rural Development Program (ARDP), which includes components focused on environmental protection, organic farming, and sustainable land use.
Division for Agri-Environmental Policy and Least Favored Areas (LFA)	Responsible for creating comprehensive technical documents, guidelines, and administrative instructions to support agro-environmental measures under the ARDP and IPARD programs. It also includes coordinating information campaigns and collaborating with various stakeholders to address the needs of the rural population.	This division have proposed agro-environmental scheme number 3 as a pilot for summer grazing in mountain pastures, which are expected to cost 200,000 euros in 2025 and aim to protect biodiversity.
The Ministry of the Environment, Spatial Planning and Infrastructure (MESPI) <sup>12</sup>	Responsible for environmental policies, including water management, biodiversity conservation, as well as a few areas in agriculture. It works to ensure that	Initiatives include water resource management projects, soil conservation efforts, and regulations to

<sup>12</sup><https://www.mit-ks.net/>



	agricultural activities do not harm the environment and promotes sustainable resource management.	reduce agricultural pollution.
<b>Kosovo Investment and Enterprise Support Agency (KIESA), under the Ministry of Industry, Entrepreneurship and Trade (MIET)</b>	Kosovar state agency mandated to promote and support investments, exports, tourism, SMEs, and economic zones in the Republic of Kosovo.	Beside support for foreign investors, through different grant schemes MIET and KIESA are committed to providing ongoing support to businesses in Kosovo, helping them become more competitive by offering products with high added value and ultimately increasing exports to the international market.
<b>Kosovo Environmental Protection Agency (KEPA)</b>	Environmental monitoring and sustainable agricultural practices in order to reduce impacts on environment.	
<b>Kosovo Agricultural and Rural Development Advisory Service (KARDAS)</b>	Provides farmers with valuable guidance and training on sustainable agricultural practices. By applying these practices, farmers can boost their productivity and promote sustainability on their farms. In addition, the KARDAS is continuously used to achieve the objectives set in the ARDP. These objectives focus on raising agricultural income from farms through improved market competitiveness, productivity and rural development.	
<b>Kosovo Institute for Agriculture (KIA)</b>	Technical and scientific support for the technical departments of the MAFRD, quality control of agricultural inputs, food and preservation of the living environment, and research of varieties of agricultural crops (wheat, barley, corn and potato) in the agroecological conditions of Kosovo. Research works in the direction of the creation of wheat cultivars, corn hybrids, etc., preparatory works about the creation of the gene bank for different crops, soil analyses, identification and inventory of harmful biological agents (pests,	Research on organic farming, pest management, and soil health are among KIA's contributions to sustainable agriculture.

	pathogens, weeds, etc.), as well as developing agricultural technologies and practices that promote sustainability and increase agricultural productivity.	
<b>Universities and Research institutes</b>	Agricultural innovation, teach and train upcoming agricultural professionals, and carry out research on sustainable agriculture. Some of the universities are applying research projects for sustainable agriculture and part of the SDG targets, and they collaborate with multiple universities worldwide.	Research projects focus on sustainable crop production, soil management, and livestock systems. Also offer courses and extension services that promote sustainability in agriculture.
<b>Non-Governmental Organizations (NGOs)</b>	Support sustainable agricultural practices and enhance stakeholder knowledge and capacity building, also play a significant role.	Initiatives include supporting organic farming, providing training on sustainable practices, and helping farmers access markets for sustainable products.
<b>Kosovo Chamber of Commerce (KCC)</b>	Analyses the economic situation and actively promotes new and advanced local business models, as well as internationalizing Kosovar entrepreneurship. It also helps to promote businesses and align Kosovar society with European principles.	
<b>National Qualification Authority<sup>13</sup> (NQA)</b>	Develops accredited professional programs for agriculture in recent years (e.g. organic production).	
<b>Organica</b>	Promote its products and engage in lobbying in foreign export markets, to strengthen collaboration among industry participants and advance the sector's growth, but also the development of the organic Non Wood Forestry Products (NWFP) and (Medical Aromatic Plants) MAP sector through the sustainable collection of NWFPs and cultivation of MAPs <sup>14</sup> .	Activities include training for organic certification, organizing farmers' markets, and advocacy for policies that support organic farming.
<b>Pepeko</b>	Aims to strengthen and contribute to the development of the fruit and vegetable processing sector in	Involved in: Promoting Value-Added Processing; Supporting Quality

<sup>13</sup><https://akkks.rks-gov.net/#>

<sup>14</sup><https://organika-ks.org/en/home/>

	Kosovo including the implementation of the different standards which are aligned to the sustainable development <sup>15</sup> .	Standards and Certification; Enhancing Market Access; Advocacy and Policy Influence; Training and Capacity Building; Encouraging Sustainable Supply Chains.
<b>Mjedra e Kosovës<sup>16</sup></b>	Association that represents raspberry growers in Kosovo. It was established to support the development of the raspberry industry, which has become an important part of the agricultural sector due to the high demand for raspberries in domestic and international markets.	Through its support for sustainable farming practices, market access, quality control, and advocacy, the association helps ensure that raspberry farming remains a viable and environmentally responsible livelihood for farmers across Kosovo.
<b>Agricultural Development Foundation AgroDev<sup>17</sup></b>	Operates as a non-governmental organization (NGO) dedicated to improving the livelihoods of farmers and rural communities through a variety of programs and initiatives aimed at enhancing agricultural productivity, sustainability, and market access.	Through its comprehensive programs in capacity building, market access, innovation, and advocacy, AgroDev supports the growth and sustainability of Kosovo's agricultural sector, contributing to the well-being of farmers and the broader rural population.
<b>The part of AgroDev is the AgroPortal<sup>18</sup></b>	Website which through the social media networks informs the interested stakeholders for the benefit of the agricultural sector	
<b>Agricultural Development of Kosovo (IADK)<sup>19</sup> national organisation</b>	Increase the development of socio-economic environment in rural areas by supporting agricultural activities, reintegration of returnees, poverty alleviation, reducing imports, promoting good agricultural practices, and reducing unemployment including all social groups regardless of religion, ethnicity or gender.	

<sup>15</sup><https://pepeko.org/en/about-us/>

<sup>16</sup><https://www.internationalblueberry.org/mjedra-e-kosoves/>

<sup>17</sup>[https://keptrust.org/en/kep\\_jobs/agricultural-development-foundation-agrodev-general-manager/](https://keptrust.org/en/kep_jobs/agricultural-development-foundation-agrodev-general-manager/)

<sup>18</sup><https://agroportal-ks.com/>

<sup>19</sup><https://iadk.org/>

<b>The European Union (EU)</b>	Major supporter of sustainable agriculture in Kosovo, primarily through funding and technical assistance. The EU's support is linked to Kosovo's potential EU membership, which requires alignment with the Common Agricultural Policy (CAP) that emphasizes sustainability.	EU-funded projects include support for organic farming, rural development programs, and initiatives aimed at improving food safety and environmental standards.
<b>SDC, GIZ-et, Caritas, CNVP, USAID, Care international, World bank etc.)</b>	Support agricultural development in Kosovo through various programs aimed at improving productivity, sustainability, and market access. It often focuses on smallholder farmers and value chain development.	initiatives include capacity-building projects, support for agribusinesses, and efforts to promote sustainable practices in agriculture.

Despite the fact that some of market actors are particularly interested in sustainable agriculture, it will be important in the future to work together with all market actors to promote and develop sustainable agriculture in Kosovo.

## 4. Regulatory and policy frameworks

### 4.1. Kosovo's strategic documents, regulatory frameworks, and policies relevant to the agriculture sector's sustainability shift

Kosovo has a number of different strategic documents which underline the country's commitment to prioritizing environmental sustainability; some of which directly outline specific objectives and priorities related to sustainable agriculture, while others are broader and non-sector specific.

An overview of these is included in the table below:

STRATEGIC DOCUMENT	RESPONSIBLE INSTITUTION	OBJECTIVE/MISSION
<b>National Development Strategy (NDS) – 2030, adopted in 2023</b>	Government, including all relevant ministries for the implementation of the strategy	To achieve sustainable development through three key pillars: a digital, circular, and competitive economy; quality, sustainable, and integrated infrastructure; and a clean environment with efficient use of natural resources.
<b>The Agriculture Rural Development Strategy (ARDS) 2022-2028</b>	Ministry of Agriculture, Forestry and Rural Development	Advancing the agricultural and rural sectors, with specific importance on enhancing competitiveness in the agri-food industry, sustainable natural resource management, supporting rural business development, improving food safety, and implementing administrative reforms.

<b><u>National Programme for Implementation Stabilisation and Association Agreement (NPISAA) 2021-2025</u></b>	Government	To meet the obligations of the Stabilisation and Association Agreement (SAA), through the alignment of national legislation with the EU acquis and the implementation of approximated legislation. The agreement has a chapter dedicated to agriculture and rural development.
<b><u>The Kosovo National Water Strategy 2017-2036 (KNWS)</u></b>	Ministry of Environment, Spatial Planning and Infrastructure	To offer an integrated and sustainable development of the water sector by meeting the needs of drinking water supply, water for food production, for irrigation of agricultural lands, for industry, sports, recreation and electricity generation.
<b><u>Kosovo Advisory System for Agriculture and Rural Development (KASARD) 2023-2027</u></b>	Ministry of Agriculture, Forestry and Rural Development	To support and encourage the transfer of knowledge and technologies to increase productivity, quality, food safety standards, environmental protection, and sustainable development. The following topics are listed in this strategy as being covered by the KASARD: organic agriculture, sustainable agriculture, environmental issues, and regenerative agriculture.
<b><u>Kosovo Country Strategy 2023–2027 (Supported by the EBRD)</u></b>	Government	Develop a more competitive and inclusive private sector to foster economic recovery and growth; Support green economy transition in Kosovo through a more sustainable energy mix and greater resource efficiency; Strengthen regional integration, connectivity and foreign investment. Agriculture, industry and services: conducting reforms in agriculture, improving manufacturing, tourism and hospitality competitiveness, and trade in services.
<b><u>The Strategy for Local Economic Development 2019-2023</u></b>	Government	Defines how to operationalize the vision for municipalities with efficient governance, quality education, clean environment, health and social welfare, suitable business environment and developed agriculture in order to enhance the quality of life.
<b><u>Kosovo's Circular Economy Roadmap of Kosovo</u></b>	Ministry of Environment, Spatial Planning and Infrastructure	Outlines how agriculture plays a role in the circular/bio economy development.



<a href="#"><u>The Agriculture and Rural Development Plan (ARDP)/National Program for Agriculture and Rural Development 2023–2027</u></a>	Ministry of Agriculture, Forestry and Rural Development	Strongly supports Kosovo’s efforts to enhance resilience, achieve growth, and promote sustainable development. It provides a framework to address rural development issues, promote sustainability, and maximize the agriculture sectors potential.
<a href="#"><u>The Climate Change Strategy 2019-2028 and Action plan on climate change 2019-2021</u></a>	Ministry of Environment, Spatial Planning and Infrastructure	Policies for reducing greenhouse gas emissions (GHG) and adaption to climate change. It is an opportunity to identify and develop solutions to greenhouse gas emissions and the consequences of climate change, including those which will advance sustainable development.
<a href="#"><u>National Organic Action Plan (NOAP) for 2023–2026</u></a>	Ministry of Agriculture, Forestry and Rural Development	To increase in the proportion of land managed organically will ultimately help to reduce global greenhouse gas emissions and contribute to biodiversity.

Related to sustainable agriculture, and despite the fact that the topic is mentioned in a number of documents and strategies, the two key documents that govern the development of sustainable agriculture in Kosovo include: the **Agricultural and Rural Development Strategy (ARDS)** and the **Agricultural and Rural Development Program (ARDP)**.

The ARDS, for the period 2022-28, is a **comprehensive policy framework aimed at enhancing the agricultural sector and improving rural livelihoods in Kosovo**. The strategy is designed to address key challenges in agriculture and rural areas, promote sustainable development, and align Kosovo's agricultural policies with European Union standards.

#### ARDS 2022-2028

The ARDS 2022-2028 vision is the development of a competitive and innovative agri-rural sector based on modern knowledge, technology, and standards, offering high-quality products in the domestic market, the region, and the EU, as well as sustainable development of natural resources and the environment, providing economic activities and employment opportunities, social inclusion and quality of life for residents in rural areas.

While the ARDS defines the long-term goals and policy directions for agricultural and rural development in Kosovo, the **ARDP specifies the detailed actions and projects that will be implemented to achieve those goals**. In other words, the ARDS provides the strategic framework, and the ARDP translates this framework into concrete actions and projects. The ARDP is essentially an implementation plan derived from the ARDS.

Additional support plans and measures are elaborated in the national ARDP 2023-27, which is subject to yearly revision in relation to the annual budget’s drafting and approval processes. Each year, a new annual programme guiding rural development, which specifies support measures in the ARDP, is drafted by the MAFRD.

The ARDS’ key objectives include:

 <p><b>Enhancing Competitiveness</b></p>	<ul style="list-style-type: none"> <li>• <b>Modernization of Agriculture:</b> Focus on increasing productivity, efficiency, and competitiveness of the agricultural sector through technological innovations, infrastructure improvements, and better access to markets.</li> <li>• <b>Support for Farmers:</b> Provide financial incentives, training, and advisory services to farmers to adopt modern farming practices and improve their production quality.</li> <li>• <b>Value Chain Development:</b> Strengthen the entire agricultural value chain from production to processing and marketing, ensuring that products meet international quality standards.</li> </ul>
 <p><b>Sustainable Resource Management</b></p>	<ul style="list-style-type: none"> <li>• <b>Environmental Protection:</b> Promote sustainable farming practices that protect natural resources, including soil, water, and biodiversity. Emphasis on reducing the environmental footprint of agriculture.</li> <li>• <b>Climate Change Adaptation:</b> Develop and implement measures to help farmers adapt to the impacts of climate change, such as changing weather patterns and increased risk of natural disasters.</li> </ul>
 <p><b>Rural Development</b></p>	<ul style="list-style-type: none"> <li>• <b>Improving Rural Infrastructure:</b> Invest in infrastructure such as roads, water supply, and energy in rural areas to improve living conditions and support economic activities.</li> <li>• <b>Diversification of Rural Economy:</b> Encourage the development of non-agricultural economic activities in rural areas, such as tourism, crafts, and small enterprises, to create jobs and reduce rural poverty.</li> <li>• <b>Social Inclusion:</b> Focus on supporting vulnerable groups in rural areas, including women, youth, and marginalized communities, ensuring equal access to resources and opportunities.</li> </ul>
 <p><b>Alignment with EU Standards</b></p>	<ul style="list-style-type: none"> <li>• <b>Harmonization with EU Policies:</b> Align Kosovo's agricultural policies with the EU's Common Agricultural Policy (CAP), which is crucial for the EU integration process.</li> <li>• <b>Capacity Building:</b> Strengthen the capacities of institutions involved in agriculture and rural development to effectively implement and monitor policies.</li> </ul>
 <p><b>Food Safety and Quality Standards</b></p>	<ul style="list-style-type: none"> <li>• <b>Improvement of Food Safety Systems:</b> Ensure that food produced and sold in Kosovo meets high safety standards, protecting public health and enhancing the reputation of Kosovo's agricultural products.</li> <li>• <b>Promotion of Local Products:</b> Support the branding and marketing of local agricultural products, both domestically and internationally.</li> </ul>

The ARDS (2022-2028) includes several specific references and plans to promote **sustainable agriculture**. These initiatives are designed to ensure that agricultural practices in Kosovo are environmentally friendly, economically viable, and socially responsible. Below are some of the key elements related to sustainable agriculture within the policy:

### Promotion of Environmentally Friendly Practices:

- **Agro-environmental Measures:** The strategy emphasizes the adoption of agro-environmental measures that promote sustainable farming practices. These include crop rotation, organic farming, reduced use of chemical inputs (pesticides and fertilizers), and conservation tillage.
- **Organic Farming Support:** There is a specific focus on promoting organic farming by providing subsidies, training, and certification support to farmers. The strategy aims to increase the area under organic cultivation and promote organic products in local and international markets.

### Sustainable Resource Management:

- **Soil Conservation:** The strategy includes plans to promote soil conservation techniques, such as contour ploughing, terracing, and the use of cover crops. These practices help prevent soil erosion, maintain soil fertility, and enhance water retention.
- **Water Management:** Efficient water use is a priority, with plans to promote irrigation systems that reduce water waste, such as drip irrigation. Additionally, there are measures to protect water bodies from agricultural pollution by controlling runoff and managing livestock waste.

### Climate Change Adaptation:

- **Climate-resilient Agriculture:** The strategy identifies the need to develop and implement climate-resilient agricultural practices. This includes selecting and promoting drought-resistant crop varieties, diversifying crops to reduce climate risk, and adopting agroforestry practices that combine trees with crops to improve resilience.
- **Disaster Risk Management:** There are plans to integrate disaster risk management into agricultural practices, such as early warning systems for extreme weather events and insurance schemes to protect farmers from climate-related losses.

### Biodiversity Conservation:

- **Protection of Genetic Resources:** The strategy includes measures to conserve agricultural biodiversity by protecting local plant and animal genetic resources. This involves the promotion of traditional crop varieties and livestock breeds that are adapted to local conditions and more resilient to environmental changes.
- **Habitat Protection:** Efforts are made to protect natural habitats within agricultural landscapes, including the maintenance of hedgerows, woodlots, and buffer zones along watercourses to support biodiversity.

### Sustainable Livestock Management:

- **Pasture Management:** The strategy promotes sustainable grazing practices to prevent overgrazing and degradation of pastures. This includes rotational grazing systems and the restoration of degraded pasturelands.
- **Nutrient Management:** Plans are in place to promote the efficient use of animal manure as fertilizer, reducing the reliance on synthetic fertilizers and minimizing nutrient runoff into water bodies.

## Sustainable Rural Development:

- **Diversification of Income Sources:** The strategy encourages the diversification of income sources in rural areas by promoting agri-tourism, craft production, and other non-agricultural activities. This helps reduce pressure on agricultural land and resources, contributing to overall sustainability.
- **Capacity Building and Education:** There is a strong emphasis on educating farmers and rural communities about sustainable practices. This includes training programs on sustainable agriculture, resource management, and environmental conservation.

## Alignment with EU Environmental Standards:

- **Compliance with EU Directives:** The strategy aims to align Kosovo's agricultural practices with EU environmental standards, particularly those related to sustainable land use, water management, and biodiversity conservation. This alignment is crucial for Kosovo's EU integration process and ensures that sustainable practices are in line with broader European goals.

## Research and Innovation:

- **Support for Research:** The strategy supports research and innovation in sustainable agriculture, including the development of new technologies and practices that can improve sustainability. Collaboration with academic institutions and research centres is encouraged to advance knowledge and application of sustainable agriculture.

These references and plans underscore the commitment of Kosovo's National Strategy for Agriculture and Rural Development to promoting sustainability in the agricultural sector, ensuring that economic growth is balanced with environmental protection and social well-being. Despite this, implementation of these commitments remains limited. **This is in part due to the lack of specific legislation and regulatory framework<sup>20</sup> for sustainable agriculture as underscored by key stakeholders at the government level.**

## 4.2. Other relevant policies and strategies

**Kosovo's efforts in sustainable agriculture are influenced by a range of EU and international policies designed to promote environmental protection, climate resilience, and sustainable development. These policies provide frameworks and guidelines that Kosovo can align with as part of its EU integration process and broader international commitments.**

Here's an overview of key EU and international policies relevant to sustainable agriculture in Kosovo:

	POLICY	OVERVIEW	RELEVANCE TO KOSOVO	IMPLEMENTATION
EU Policies	Common Agricultural Policy (CAP)	CAP provides financial support to farmers and promotes sustainable	As Kosovo is not an EU member, it does not directly participate in	Kosovo's alignment with CAP principles is ongoing. Efforts include adopting sustainable agricultural practices

<sup>20</sup> Further information on regulations which relate to sustainable agriculture are included in Annex 2

		agricultural practices across the EU. It includes environmental measures, rural development programs, and direct payments to farmers.	CAP but is encouraged to align its agricultural policies with CAP principles as part of its EU integration process.	and integrating environmental measures into national policies. The alignment is part of Kosovo's broader EU accession process, which involves harmonizing local policies with EU standards.
	<b>European Green Deal</b>	The Green Deal aims for climate neutrality by 2050 and includes targets for reducing greenhouse gas emissions, enhancing biodiversity, and promoting sustainable food systems.	Kosovo is encouraged to align its policies with the Green Deal's objectives to improve environmental sustainability and climate resilience.	Kosovo's alignment involves integrating climate action and environmental protection into national policies and strategies. Kosovo is working towards these goals, although full alignment is a gradual process dependent on ongoing reforms and EU support.
	<b>Farm to Fork Strategy</b>	This strategy is part of the Green Deal and focuses on creating a fair, healthy, and environmentally-friendly food system. It aims to reduce the environmental impact of food production and enhance food security.	Kosovo is encouraged to adopt practices that align with the strategy, such as reducing pesticide use, promoting sustainable farming, and improving food safety.	Kosovo is making efforts to align with this strategy by promoting sustainable agriculture, supporting local food systems, and improving food safety standards. The adoption of these practices is supported by various national programs and international assistance.
	<b>Horizon Europe</b>	Horizon Europe is the EU's research and innovation program that funds projects related to sustainable agriculture, climate action, and	Kosovo can participate in Horizon Europe projects or align its research priorities with the program's goals to access	Kosovo has engaged in Horizon Europe-related activities through collaboration with research institutions and participation in funded projects. This involvement helps drive innovation in



		environmental protection.	funding and expertise for sustainable agricultural innovations.	sustainable agriculture.
International Policies and Frameworks	United Nations Sustainable Development Goals (SDGs)	The SDGs provide a global framework for sustainable development, with Goal 2 focusing on ending hunger and promoting sustainable agriculture, and Goals 12 and 13 addressing responsible consumption, production, and climate action.	Aligning with the SDGs involves implementing policies that support sustainable agriculture, food security, and environmental sustainability.	Kosovo has incorporated SDG principles into national strategies and development plans, associated with the National Development Strategy (NDS)/Plan for Sustainable Development 2016-2021 <sup>21</sup> , the "Stabilization and Association Agreement", and the "European Reform Agenda". The resolution on the SDGs was officially supported by the Kosovo parliament in January 2018 <sup>22</sup> , marking the culmination of this commitment.
	Paris Agreement	The Paris Agreement aims to limit global warming and involves commitments to reduce greenhouse gas emissions and enhance climate resilience.	Kosovo's alignment with the Paris Agreement requires integrating climate action into agricultural policies, reducing emissions from agriculture, and adapting	Kosovo is working on implementing measures to meet its climate commitments under the Paris Agreement. This includes developing strategies for reducing greenhouse gas emissions and enhancing climate resilience in agriculture.

<sup>21</sup>[https://mapl.rks-gov.net/wp-content/uploads/2017/10/National\\_Development\\_Strategy\\_2016-2021\\_ENG.pdf](https://mapl.rks-gov.net/wp-content/uploads/2017/10/National_Development_Strategy_2016-2021_ENG.pdf)

<sup>22</sup><https://www.kuvendikosoves.org/eng/for-the-public/sutainable-development/the-commitment-of-kosovo/>

			to climate impacts.	
	<b>Convention on Biological Diversity (CBD)</b>	The CBD focuses on conserving biodiversity, promoting sustainable use of natural resources, and ensuring equitable sharing of benefits from genetic resources.	Kosovo's agricultural policies should incorporate practices that protect biodiversity, such as promoting diverse crop species and reducing the use of harmful pesticides.	Kosovo has made efforts to align with CBD principles through national biodiversity strategies and action plans, which include measures to protect and promote biodiversity in agricultural practices.
	<b>Agenda 2030</b>	Seek to end poverty and hunger, realise the human rights of all, achieve gender equality and the empowerment of all women and girls, and ensure the lasting protection of the planet and its natural resources.	The Kosovo has confirmed its commitment to the Agenda 2030, specifically to SDGs and has played an important role in determining this global agenda.	Kosovo continued with a tough plan to integrate and implement the SDGs, associated with the National Development Strategy (NDS)/Plan for Sustainable Development 2016-2021, the "Stabilization and Association Agreement", and the "European Reform Agenda". The resolution on the SDGs was officially supported by the Kosovo parliament in January 2018, marking the culmination of this commitment.
<b>Regional and bilateral agreements</b>	<b>Green Agenda for the Western Balkans</b>	The Green Agenda is a regional initiative aimed at aligning the Western Balkans with the EU's Green Deal, focusing on environmental protection,	Kosovo is part of this regional initiative, which provides a framework for integrating green practices into national policies and collaborating	While Kosovo is working on implementing the Green Agenda's objectives through various national and regional projects, as stated in the European

		climate action, and sustainable development.	with neighbouring countries.	Parliament (EP) <sup>23</sup> report, Kosovo needs to increase its political commitment to address environmental degradation and climate change challenges and substantially improve the implementation of its legislation, to align it with the Green Agenda for the Western Balkans' goals.
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### 4.3. Comparative analysis of Kosovo and EU policies and strategies

**Kosovo is making significant strides toward aligning its agricultural policies with the EU's standards, yet faces considerable challenges in implementation, financial resources, and cultural adaptation, which hinder its full integration into the EU framework.**

Kosovo is actively working towards European Union EU membership, with the signing of the Stabilization and Association Agreement marking a significant step in this process. One of the critical areas where alignment with EU standards is necessary is in the agricultural sector, which remains a cornerstone of Kosovo's economy. **Despite its importance, Kosovo's agricultural potential remains largely untapped, and the sector faces numerous challenges.** These include outdated technology, low productivity, and limited export capacity, which collectively hinder its competitiveness in both regional and EU markets.

To address these challenges, Kosovo has developed the Agriculture and Rural Development Strategy for 2022-2028, which aims to harmonize its agricultural policies with the EU's Common Agricultural Policy (CAP). This strategy is crucial for Kosovo as it seeks to improve resource utilization, increase agricultural competitiveness, and gradually align its regulations with EU standards. **However, Kosovo's agricultural policies currently align with only four of the ten objectives outlined in the CAP, reflecting a limited degree of integration.** While Kosovo's policies focus heavily on increasing productivity and ensuring food security, the EU's CAP has evolved to emphasize environmental sustainability, rural development, and competitiveness. The most significant gap in alignment is observed in the environmental domain, where Kosovo's efforts in biodiversity conservation, climate change mitigation, and renewable energy adoption are minimal compared to EU standards. The ARDS does introduce measures to address some of these issues, such as investments in photovoltaic energy, fertilizer storage facilities, and improved animal welfare, but much more remains to be done.

**In terms of specific areas of alignment, Kosovo's ARDS does show progress in several key domains.** For instance, it echoes the EU's CAP objectives by promoting organic farming, sustainable land management, and efficient water use, all of which are critical for environmental sustainability and climate action. These efforts are aligned with broader EU initiatives such as the

<sup>23</sup> <https://neighbourhood-enlargement.ec.europa.eu/system/files/2022-10/Kosovo%20Report%202022.pdf#page=108&zoom=100,93,842>

European Green Deal and the Farm to Fork Strategy, which aim to make agriculture more sustainable by reducing greenhouse gas emissions and enhancing biodiversity.

Kosovo's strategy also aligns with the EU's goals for biodiversity and ecosystem services by prioritizing the conservation of local plant and animal genetic resources and promoting traditional farming practices that are beneficial to biodiversity. **However, the effectiveness of these measures depends heavily on the robustness of their implementation, which remains a challenge for Kosovo.** Similarly, Kosovo's ARDS supports rural development and social inclusion, two of the EU's core CAP objectives. The strategy includes initiatives to improve rural infrastructure, promote income diversification through agri-tourism, and support vulnerable groups, including women and young farmers. These initiatives reflect the EU's emphasis on balanced rural development and ensuring that the benefits of agricultural growth are widely shared.

In the area of food safety and quality, Kosovo's ARDS outlines objectives to strengthen food safety systems and improve the quality of agricultural products, aligning with EU standards that prioritize high food safety, traceability, and quality. Furthermore, the strategy aims to modernize the agricultural sector by fostering innovation, improving access to modern technologies, and enhancing market access, which is in line with the EU's focus on economic competitiveness and innovation.

Despite these areas of alignment, Kosovo faces significant challenges in fully harmonizing its agricultural policies with those of the EU. One major obstacle is the limited capacity for effective policy implementation. **Kosovo's institutions, which are responsible for agriculture, environment, and rural development, often lack the necessary staffing, expertise, and resources to enforce and monitor compliance with EU-aligned policies.** Additionally, the country's legal framework is still not fully aligned with EU directives, particularly in critical areas such as water management and pesticide regulation. For instance, while the EU has stringent regulations on pesticide use, Kosovo is still in the process of fully aligning its regulations, including the banning of harmful substances and promoting integrated pest management practices.

**Financial constraints further complicate Kosovo's efforts to align with EU standards.** Achieving the level of investment required for sustainable agriculture and environmental protection is challenging given the country's limited public funding. Kosovo's reliance on external funding sources, such as the Instrument for Pre-Accession Assistance (IPA) funds, is crucial, but these funds are often insufficient to cover all necessary initiatives. Moreover, the technological and infrastructure gaps in rural areas, such as inadequate roads, irrigation systems, and waste management facilities, further hinder the adoption of sustainable agricultural practices.

**Another significant barrier to full alignment is the lack of awareness and resistance to change among Kosovo's farmers.** Many farmers, particularly those in rural areas, are accustomed to traditional farming practices and may be reluctant to adopt new, more sustainable methods that align with EU standards. This resistance is compounded by insufficient training and support services, which are essential for educating farmers on the benefits of sustainable practices and how to implement them effectively.

**Kosovo's exclusion from the IPARD III program, an EU initiative that provides financial assistance for rural development to candidate and potential candidate countries, underscores the challenges the country faces in its EU integration efforts.** According to the

ARDP 2023-27, Kosovo is currently not a beneficiary of the IPARD program, and all measures are financed through the national budget until accreditation for the implementation of IPARD measures is achieved.<sup>24</sup> One of the main reasons constitutes Kosovo's current institutional capacity and legal framework, being not yet fully developed to meet the stringent requirements of managing IPARD funds.

Despite these challenges, Kosovo continues to receive support through broader IPA funds, which are vital for capacity-building, institutional reform, and infrastructure development. However, without access to IPARD III, Kosovo misses out on significant opportunities to boost sustainable agriculture through subsidies, grants, and technical assistance that are essential for aligning with EU standards.

**In conclusion, while Kosovo has made notable progress in aligning its agricultural policies with those of the EU, significant challenges remain.** These include gaps in legislative alignment, institutional capacity, financial resources, and cultural readiness. Addressing these challenges will require sustained efforts and stronger diplomatic engagement to fully integrate Kosovo into the EU framework and realize its goal of EU membership.

## 5. Readiness assessment of agricultural sector

### 5.1. Existing sustainability practices and initiatives implemented by SMEs in Kosovo's agriculture sector

This study has identified several widely adopted sustainable practices currently being implemented by farmers, collection centres, processors, and other relevant stakeholders. Common practices observed during field work, including focus group discussions and key informant interviews, **include investments in solar panels, the use of organic fertilizers, drip irrigation systems, smart irrigation technologies, manure storage, manure spreading equipment, bio stimulants, and resistant crop varieties.** Additionally, it is encouraging to see that some value chain members are adhering to standards such as Global GAP, IPM, GRASP, GACP, IFS, BRC, and ISO 22000, with some even being certified organic. A summary of key practices across the four sub-sectors studies is provided below, with specific practices for each sub-sector detailed in the table below.

#### Solar Panels

Depending on the sub-sector, electricity is primarily used for irrigation, lighting, refrigeration, and the operation of various equipment and machinery on the farm. At the primary production part of the value chain, many farms across the country have installed solar panels for generating electricity and water heating, primarily through the grant scheme of the Ministry of Agriculture, Forestry, and Rural Development (MAFRD). These investments aimed to reduce reliance on traditional energy sources and lower electricity bills. There is no correlation between the size of the farm and installed solar panels<sup>25</sup> through this grant scheme. However, the effectiveness of

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<sup>24</sup> [https://www.mbpzhr-ks.net/repository/docs/NATIONAL\\_PROGRAM\\_FOR\\_AGRICULTURE\\_AND\\_RURAL\\_DEVELOPMENT\\_20232027.pdf](https://www.mbpzhr-ks.net/repository/docs/NATIONAL_PROGRAM_FOR_AGRICULTURE_AND_RURAL_DEVELOPMENT_20232027.pdf)

<sup>25</sup> Up until two years ago, farmers in primary production could allocate 5% of their total investment to solar energy to receive from 5 to 10 additional points in the application evaluation, whereas the processing industry had to allocate 10% to receive 10 to 20 additional points. In the past two years, the



these panels remains limited, mainly due to the quality of the installed systems and the mismatch between the capacities of the panels and the actual energy consumption needs of the farms.

At the processing level, nearly all companies using solar panels rely on grants for installation, despite one processing company which invested its own funds into installing solar panels, and is now successfully generating enough capacity to cover its entire electricity need. While the study could not accurately quantify the number of processing facilities, stakeholders estimated that, so far, nearly half of the processing facilities have installed solar panels with different capacities, with 70% dedicated to electricity generation and 30% to water heating.

## Waste Management

Waste management constitutes a crucial aspect of agricultural production, yet most primary production (farms) lack measures for handling waste. Furthermore, farmers' awareness remains limited in this area. However, the dairy subsector makes an exception with several cases of good practices, where farmers have invested in building manure storages and septic pits to properly manage manure and waste. These initiatives have largely been driven by grants from the Ministry of Agriculture or donor organizations. At the secondary part of the production, most of the processors have made investments in waste treatment and/ or storage solutions, mostly directing investments towards treating implants for handling sanitary water and the installation of septic tanks for composting purposes. Similarly, to the primary production part, these investments have also been largely driven by grants.

## Irrigation

Drip irrigation is being utilized by farmers, primarily in the cultivation of fruits, some MAPs and other perennial crops, while its adoption in annual crop cultivation is still in its early stages. Vegetables are primarily irrigated with a sprinkler system in regulated areas, though traditional irrigation with furrows remains common. Irrigation practices also depend on farm size, with small farmers often using furrows, while larger farms investing in various irrigation equipment. Nevertheless, irrigation water is not analysed unless required to meet specific standards.

Drip irrigation is an effective method for managing water, as it delivers water directly to the plant roots, minimizing waste and ensuring efficient use of water. However, there are also cases where farmers use water directly from public canals without any concrete measures to monitor or control the amount of water being used.

## Organic Fertilizer

A growing number of farmers are adopting organic fertilizers over synthetic alternatives, leading to higher yields and healthier soil. The use of organic fertilizers, predominantly derived from cattle manure, is surfacing in several subsectors as a common practice. There are also instances where chicken manure has been utilized as an organic fertilizer. This use towards organic options has contributed to a reduction in the use of chemical fertilizers, thereby promoting more sustainable agricultural practices and minimizing environmental impact. The use of organic fertilizers can be attributed to a strong tradition of their application, their availability, affordability (cost-effectiveness) and the promotion by both, private and public extension services. However, the

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grant scheme has slightly changed, allowing farmers to install solar panels with a capacity of up to **120% of their own consumption levels**. However, the requirement to invest at least 5% of the total investment in solar energy remains in place, and the majority of farmers continue to follow this option.

quantity used is not controlled and is not based on soil analysis. The table below lists the main findings as existing sustainable practices by subsector.

SECTOR	KEY INSIGHTS
Dairy	<ul style="list-style-type: none"> <li>• Many dairy farms have installed roof solar panels, and some farmers have installed solar panels for water heating.</li> <li>• Some farmers have invested in waste management systems, particularly in dedicated manure storages for handling manure. However, manure storages were only functional on farms equipped with machinery for spreading manure. Farms lacking this equipment were not utilizing their manure storages.</li> <li>• Dairy farmers have participated in training programs on sustainable practices, leading to the adoption of new approaches, including improved manure handling, the use of organic fertilizers, and enhanced overall farm management.</li> <li>• The largest dairy plants (5-7) have invested in waste treatment systems, primarily directing investments toward treatment facilities (implants)<sup>26</sup> for discharged water. While the majority of these systems have been funded through grants from MAFRD or other donors, there is one case where a dairy plant has independently financed the construction of such an implant.</li> <li>• Similarly, the largest dairy plants have installed solar panels, with one processor having invested in a solar system using their own funds.</li> <li>• Whey discharge remains a critical challenge for the dairy industry, as many dairy plants lack the financial and infrastructure capacities for whey treatment. As a practical solution, three dairy plants have been producing and marketing a product known as "kumesht," thereby reusing a portion of the whey and reducing the amount that gets discharged.</li> </ul>
Vegetables	<ul style="list-style-type: none"> <li>• Vegetables producers are increasingly using less pesticides. This is driven by a reduction in pests' problems, as well as adherence to Global GAP standards, for those certified.</li> <li>• In recent times, the application of bio fertilizers has increased, due to traders offers.</li> <li>• Some farmers with the support of MAFRD have started using Traps for insects in pepper production.</li> <li>• The Vegetable Collection Center provides farmers with advice on the proper use of pesticides and fertilizers, as well as contracts to sell their products.</li> <li>• The adoption of sustainable agricultural practices including standards (e.g. Global GAP, IPM, Organic etc.) is primarily driven by market demand for the healthiest products.</li> <li>• Most vegetable processors have facilities for treating sanitary water, and some also have installed solar panels, similarly to other agricultural industries.</li> </ul>
Soft fruits	<ul style="list-style-type: none"> <li>• Some farmers use organic fertilizers, originating mainly from cattle farms nearby their plots.</li> <li>• Almost 90% of farmers use plastic foil, leading to decreased herbicide use; however, plastic foil waste remains a problem.</li> </ul>

<sup>26</sup> In the local industry language, these facilities are known as "implants".

	<ul style="list-style-type: none"> <li>• Raspberry cultivation has limited pesticide use, with most farmers applying just one fungicide and one insecticide.</li> <li>• Despite the difficulties in production, they regularly hold trainings, primarily provided by the association Mjedra e Kosoves, including some topics for sustainable practices (e.g. use of biostimulants).</li> <li>• Raspberry farmers are increasingly aware, frequently inquire about irrigation and pesticides. They primarily receive advice from association experts or other specialists, often hired by donor organizations.</li> <li>• One of the collection centres reduces waste by selling the strawberry stems to a tea producer in Prizren, who has repurposed them into a marketable product.</li> <li>• A farmer specializing in soft fruit cultivation has invested into a smart irrigation system, incorporating advanced technology. This investment was inspired by insights gained from visits to various farms in the region and the EU. The system provides precise irrigation and fertigation, adjusting according to the specific needs and areas of the farm. The farmer is highly satisfied with the efficiency and effectiveness of this system.</li> <li>• Moisture sensors have been installed by 4-5% of soft fruits farmers in the country.</li> <li>• Previously, raspberry growers cultivated spring varieties, but now they exclusively use autumn varieties due to their suitability for the current climate. Spring varieties were often damaged by frost, making autumn varieties a better fit for Kosovo conditions.</li> <li>• A collection centre has installed 30 kW solar panels, which now meet 70% of its energy needs and have reduced electricity costs by 70-80%. This investment was partially funded by the owner, and 70% of the cost was covered through a grant from Caritas. The owner admitted that they initially did not recognize the value of this investment but now understands its significance.</li> <li>• Currently, 0.50 ha of organic raspberry are being cultivated in Kosovo.</li> <li>• Farmers face challenges with raspberry irrigation but have received training on efficient water use.</li> </ul>
MAPS	<ul style="list-style-type: none"> <li>• Farmers with large fields apply green manure.</li> <li>• All farmers cultivating MAPs are certified as organic producers.</li> <li>• They have no pest problems, and they use bio fertilizers (mostly imported) and organic fertilizer (from nearby farms), as well as compost made from plant cleaning waste.</li> <li>• Crop rotation is practiced by all farmers; it is more of a certifying body requirement, but it has had an impact on raising farmer awareness.</li> <li>• Large farmers use solar panels for energy (primarily collection points for storing products) and smart irrigation systems, but not small farmers. Organika organizes organic farming trainings that focus on new technologies and new certification requirements.</li> </ul>

**In summary, the uptake of these sustainability practices has been mostly driven by investment grants, either from public institutions or donor organizations.** In some cases, this was driven also by the pressure from the relevant regulatory and implementing bodies, such as ministries or local authorities, including the Ministry of Infrastructure, Ministry of Agriculture, their inspectorate, Food and Veterinary Agency, and/ or municipal inspectors.

For most of these practices, the future trend does not look very promising, as farmers seem to be heavily dependent on grants. In an absence of the grant, most of the farmers do not consider these practices as a priority for the next investment.

## **5.2. Challenges and barriers faced by agricultural SMEs in Kosovo in adopting sustainable practices.**

**Farmers in Kosovo face numerous challenges in implementing sustainable agriculture practices. Key challenges include the lack of already existing role model sustainable farms, economic sustainability concerns, awareness and training gap, inadequate technical support, previous experience with some of the sustainable practices, and insufficient regulatory and institutional support. Below are detailed descriptions of these key challenges.**

### **Lack of role model farms**

A major challenge in promoting sustainable agriculture in Kosovo is the lack of visible role model farms that successfully implement and profit from sustainable practices. Based on the information collected during the field work, there are no notable examples of primary production farms that demonstrate successful and profitable implementation of these practices, aside from some of the organic production farms. The rest of the farms that to some extent implement sustainable practices are mostly those farms supported through specific grant schemes, such as solar panel investments and manure storages. Furthermore, some farmers have benefited from various projects equipment to use smart irrigation systems and support to analyze soil fertility. However, the functionality of these investments remains a critical challenge. Thus, farmers are often deterred from adopting sustainable methods due to the absence of established examples they can observe and learn from. The lack of functional, profitable farms operating under sustainable models implies that there are no concrete examples to demonstrate the feasibility and benefits of such practices. Without these role model farms, farmers struggle to envision the potential success of adopting sustainable practices, hindering a broader implementation and acceptance within the farmers community.

### **Return on investment**

Economic sustainability constitutes another crucial challenge for the adoption of sustainable practices across the agricultural sector in Kosovo. Farmers are often reluctant to implement sustainable practices due to a longstanding perceived belief that these practices have no economic benefit. Many are used to a specific set of agricultural practices and are resistant to change. Farmers stated a belief that they will face losses upon transitioning to new and more costly practices. Thus, without clear economic benefits, farmers are hesitant to change their production practices, as financial benefit is often the primary motivator for change across farmers in Kosovo. To encourage the adoption of sustainable practices, it is crucial to demonstrate their economic potential, translating concrete sustainable practices into measurable financial terms. Until farmers can see a clear economic advantage, they are unlikely to make the necessary changes to their farming practices. Also, this is tied to making sure that products are sold, most farmers are ready to implement new technologies in production once they have established a market.

### **Awareness, training, and technical support**

Another barrier to adopting sustainable agriculture practices in Kosovo is the lack of awareness and technical support available to farmers. Many farmers are not fully aware of the environmental damage caused by their current farming practices, which in a way hampers their motivation to change. Additionally, there is a critical shortage of technical staff to assist farmers in implementing sustainable methods, leading to difficulties in effectively utilizing new technologies and practices. The gap in knowledge and training on sustainable practices and proper equipment usage further worsens the challenge. Without adequate and increased technical support and broader awareness, farmers will struggle to transition to more sustainable practices, slowing sector progress.

### **Utilization of previous investments**

The effective utilization of previously provided investments in sustainable agricultural practices, such as solar panels and manure storages, remains a significant challenge. Many farmers have underutilized the support provided through grant schemes due to the lack of knowledge and support. For example, for solar panels, ineffective solar panel installations, characterized by mismatched capacities or poor quality, are common among farmers, leading to often wasted investments. Adding to this, most investments have been implemented through grants, with farmers relying on these grants as their primary source of funding for such investments. Thus, despite the majority of these investments being funded by grants, many farmers are sceptical about the effectiveness of these technologies, i.e., in the case of solar panels as a reliable energy source.<sup>27</sup> In addition, the reluctance of farmers to invest their own funds poses another hindrance to a broader adoption of these technologies. This scepticism, combined with inadequate technical assistance and farmers reluctant to invest their own funds, results in the ineffective use of these resources. The lack of sufficient regulatory and institutional support further adds to the problem, leaving farmers unable to fully benefit from the technologies intended to enhance sustainability.

### **Regulatory and institutional support**

Regulatory and institutional support for sustainable agriculture practices in Kosovo is insufficient and inadequate, with notable gaps in linkage and support from public institutions. There are inadequate measures and regulations in place to ensure effective implementation of the sustainable practices, which undermines efforts to promote sustainability. Furthermore, the current legal framework is poorly implemented, resulting in a lack of enforcement and effectiveness.

The table below lists the main challenges and barriers faced by farmers, collection centres, processors, and other stakeholders into the four different subsectors which were covered by the study.

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<sup>27</sup> Other examples include investments such as plastic mulch, which constitute additional difficulties due to plastic waste, and the smart irrigation systems funded by various donors have faced operational issues due to equipment maintenance problems.

SECTOR	KEY INSIGHTS
Dairy	<ul style="list-style-type: none"> <li>• There have been minimal efforts in implementing sustainable agriculture practices within the livestock and dairy sectors, with farmers remaining largely unaware of the benefits and environmental effects associated with such practices.</li> <li>• Most of the organic manure in livestock farms remains untreated.</li> <li>• Farmers often included manure storage facilities in their MAFRD grant applications merely to gain additional points, but the vast majority of these storages are now unused, primarily due to their insufficient capacity and the lack of necessary equipment for spreading manure</li> <li>• Similarly, for solar panels, farmers have included solar panels in their MAFRD grant applications merely to gain additional points, while 90% of installed capacities in dairy farms are not functional or there is a mismatch in their capacities.</li> <li>• One large dairy farmer reported that investing in solar panels is not appealing due to the long return on investment period, which is approximately 10 years for a system with a 20-30 kW capacity.</li> <li>• Input providers, including those supplying solar panels and other technologies, lack oversight regarding the quality of their products and quality of installations. Also, there are no field inspections or controls to ensure the efficacy of the inputs used.</li> <li>• In the milk processing industry, the treatment of whey remains a critical challenge due to its high cost and the complex management required to handle it effectively. Most dairy plants discharge it into the sewage system.</li> <li>• The management of liquid manure and water sources presents significant challenges, as some farmers use the same well for both irrigation and household needs, which can result in potential contamination.</li> <li>• Market access and export issues are significant challenges, with currently limited opportunities available for exporting animal products.</li> </ul>
Vegetables	<ul style="list-style-type: none"> <li>• Farmers continue to plant with non-certified seeds from their grandparents.</li> <li>• Most farmers are unaware of pesticide residue and the harvesting period following pesticide application.</li> <li>• Irrigation is difficult to control due to the lack of adequate equipment (smart irrigation system), and more water is spent than the plants require.</li> <li>• Crop rotation is rarely used because some areas lack irrigation systems and have weaker soils.</li> <li>• Soil analyses are not performed and fertilization is not based on plant requirements.</li> <li>• In some cases, farmers have stated that they are not satisfied with the effect of pesticides, so they have increased the dose of use.</li> <li>• Lack of various government schemes to support farmers for sustainable agriculture.</li> <li>• Farmers are dissatisfied with the plant-growing services they receive, so there is a lack of professional advisors.</li> </ul>
Soft fruits	<ul style="list-style-type: none"> <li>• Organic farming does not work because the price difference between organic and conventional raspberries is negligible. We tried it, but it did not work.</li> <li>• Farmers irrigate without any regulation or control, primarily using water from wells</li> </ul>



	<ul style="list-style-type: none"> <li>• High temperatures pose a significant risk for raspberry cultivation in Kosovo, as they can lead to reduced fruit quality, lower yields, and increased vulnerability to pests and diseases. This is a major current challenge for farmers, as they must find ways to mitigate this risk and adapt their practices to protect their production in increasingly warmer conditions.</li> <li>• The main barrier to adopting sustainable practices in soft fruit cultivation is financial. High upfront costs for sustainable technologies and limited access to affordable financing options make it challenging for farmers to invest, despite the long-term benefits.</li> <li>• Some farmers have repeatedly mentioned that pesticides no longer seem effective, leading them to apply higher doses.</li> <li>• It has become difficult to provide organic fertilizers in recent years due to a decrease in the number of animals as a result of migration and population movements from rural to urban areas.</li> </ul>
MAPS	<ul style="list-style-type: none"> <li>• Organization of farmers to use special equipment's for weed control in organic production together (e.g. for weed control) is a big problem and they spend a lot of time to remove weeds</li> <li>• Irrigation is difficult to control due to the lack of adequate equipment (smart irrigation system), and more water is spent than the plants require.</li> <li>• Lack of various government schemes to support farmers for sustainable agriculture.</li> <li>• There is no specific measure offered by the MAFRD for organic MAPs to apply for grants.</li> <li>• Expensive price for the certification of organic products.</li> <li>• There is a small difference in price between organic and conventional products.</li> </ul>

### 5.3. Opportunities and intervention areas

There are numerous opportunities to enhance sustainable practices in the agricultural sector in Kosovo. **Increasing the availability and quality of technical training** for farmers is crucial to improve the adoption and uptake of sustainable practices. **Improving the functionality of advisory services** and creating dedicated offices for farmer support within local municipalities could provide ongoing assistance. **Tailoring grant schemes towards sustainable practices** could constitute another significant step towards the implementation of sustainable practices. Investments in waste management infrastructure could mitigate environmental impact.

Furthermore, **raising awareness among farmers about the benefits of sustainable practices** and the proper use of equipment can lead to better adoption rates. In addition, strengthening the connection between the private sector and academia, along with increased support for research in sustainable agriculture and the circular economy, can further drive innovation and enhance the effectiveness of these practices. Some of the key opportunities and intervention areas are described in more details below.

#### Enhanced technical training and support

Enhancing technical training and support is a crucial intervention area for advancing sustainable agriculture. To address this need, it is essential to provide continuous, specialized training tailored to the specific requirements of farmers, focusing on sustainable practices. This training should be designed to equip farmers with the latest knowledge and skills necessary for effective

implementation. Additionally, establishing dedicated advisory services<sup>28</sup> and support offices within local municipalities can offer a close by ongoing assistance and guidance to farmers, ensuring they have access to the resources and expertise needed to adopt and maintain sustainable practices.

Incorporating private advisory services or public-private partnership advisory services can further strengthen support for farmers. These services could offer expert advice on sustainable practices, help identify the most effective solutions and technologies per specific farmer case and assess the return on investment and economic benefits of these technologies. By advising farmers on their specific needs and providing guidance on the best sustainable alternatives, these services can play a critical role in promoting informed decision-making and optimizing the benefits of investments in sustainable agriculture.

### **Market access**

Facilitating access to markets for sustainably-produced agricultural products would further contribute to the green transition. The demand for exporting agricultural products, particularly in the EU market, can drive changes in agricultural practices in Kosovo. Importers often impose additional requirements on products, which can lead to stricter agricultural standards, including sustainable practices. For instance, farmers in Kosovo cultivating medicinal and aromatic plants (MAPs) are required to adhere to sustainable practices due to the organic standard, as their export market demands them. These farmers have a very specific market; however, without these market requirements, they would not implement those practices voluntarily.<sup>29</sup> This represents a market-driven development. This market-driven approach effectively promotes sustainability, as the pressure to meet market demands encourages the adoption of environmentally friendly practices. Lastly, market driven developments are sustainable, and the market could play a significant role in advancing sustainable agricultural practices, as it creates the demand and the necessary pressure for a broader change in current production practices.

### **Economic incentives and support**

Economic incentives and support could be key intervention areas for promoting sustainable agriculture. For instance, grant schemes could be specifically tailored to encourage and reward sustainable practices, ensuring that financial support aligns with environmental and production standards. However, it is very important to monitor and control that these investments are executed according to established standards and address the needs of farmers. This targeted approach could help farmers adopt effective, long-term solutions that enhance both productivity and promote environmental protection.

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<sup>28</sup> Considering the current available expertise of public and private advisory services, it is crucial to first train advisors so they can effectively share their knowledge with farmers. Although the MAFRD certifies advisors, it is critical to provide targeted training and certification for new advisors specializing in sustainable agriculture to ensure they pass on relevant knowledge and best practices. This need was also emphasized by the majority of farmers during the focus group discussion.

<sup>29</sup> In addition, some berry and vegetable farmers implement standards such as Global GAP in response to market demands for exports. The collection points sign contracts with farmers because they are motivated to implement the relevant standards due to the demand for imports.

## Knowledge, awareness programs and collaborative networks

Knowledge and awareness programs, alongside collaborative networks could constitute crucial intervention areas for advancing sustainable agriculture in Kosovo. Raising awareness among farmers about the benefits of sustainable practices and the proper usage of equipment is essential for encouraging a culture of sustainability. Workshops and tailored-made training sessions could be conducted to keep farmers informed about the latest sustainable technologies and methods, ensuring farmers and other members of the value chain have the knowledge to implement these practices effectively. In addition, farmer associations can play a crucial role in promoting sustainable practices as they constitute a trustworthy source of information and advice for farmers. Strengthening farmer associations can facilitate the sharing of best practices and resources, creating an environment that supports these types of technologies. Additionally, incorporating sustainable agriculture into school curricula will increase awareness and knowledge among future generations. The Ministry of Education's dedicated funds for sustainable agriculture research will also play a crucial role in implementing best practices and recruiting young researchers. Key opportunities and intervention per subsector are described in the table below.

SECTOR	KEY INSIGHTS
Dairy	<ul style="list-style-type: none"><li>• MAFRD did not have any measure so far on educating farmers. In the future, MAFRD should develop specific measures that aim to educate farmers in particular aspects, such as sustainable practices.</li><li>• To build and support sustainable farms that can serve as role models and inspire other farmers. This approach can create also opportunities for sharing knowledge and working together to improve farming methods.</li><li>• Market demand can bring sustainable farming practices, as the market can determine the cultivation/production method and the standards to be followed.</li><li>• Cultivating fodder, such as subsidizing the planting of alfalfa, can be viewed as a form of sustainable agriculture as less manure is produced.</li><li>• Investing in manure storage facilities, along with the necessary equipment for managing and spreading manure, and combining this investment with efforts to raise awareness and educate farmers about optimal fertilization timing, can significantly enhance the efficiency and environmental sustainability of manure use in agriculture. The manure management project implemented by KAMP, funded by the SDC had a positive effect as it has followed this approach.</li><li>• Grants have sometimes led to a lack of motivation among farmers, as evidenced by their tendency to invest in unnecessary machinery and fulfil personal desires rather than focusing on essential areas that would improve their farm's productivity and sustainability. Thus, MAFRD needs to change the structure of grant schemes and even subsidies and try to link them with sustainable practices.</li><li>• Investments in waste management infrastructure, such as facilities for treating whey and other by-products, could significantly reduce environmental impact; however, due to the high cost of whey treatment, using whey as animal feed for calves presents a practical solution, and promoting whey for human consumption could generate substantial market demand by highlighting its benefits. This is considered as the most affordable solution at the current situation.</li></ul>

	<ul style="list-style-type: none"> <li>• Promoting the use of renewable energy sources, such as solar panels for electricity and heating, requires ensuring that farmers receive proper training on the installation and maintenance of these systems, while also guaranteeing the quality of the technology provided.</li> <li>• Considerable funds have been spent on MAFRD grants, but there has been no feedback or impact assessment on their effectiveness. An impact assessment is needed to ensure funds are redirected towards investments that produce tangible results and support environmental goals.</li> </ul>
<b>Vegetables</b>	<ul style="list-style-type: none"> <li>• To increase the knowledge about sustainable agriculture as a concept.</li> <li>• To train the farmers for the pesticide residue and the harvesting period following pesticide application.</li> <li>• Promote the use of new technologies and paprika varieties (resistant against, pests, drought etc.) and climate change.</li> <li>• To increase the awareness for the soil health and crop rotation. To raise awareness about the environmental aspects, because most farmers think only of production.</li> <li>• Dissatisfied with the current subsidies; they demand that the subsidy be paid based on yield and quality.</li> <li>• To push sustainable practices through financial incentives such as subsidies: e.g., leaving 20% of the land fallow to support biodiversity.</li> <li>• Enforcing the legal framework through certification, implying that when certification is required, the legal framework can be effectively applied and upheld via certification schemes, ensuring compliance with established regulations and standards.</li> </ul>
<b>Soft fruits</b>	<ul style="list-style-type: none"> <li>• Need for increased awareness and training on the proper timing and methods of fertilization and other sustainable practices.</li> <li>• Promote the use of organic fertilizers and sustainable farming methods.</li> <li>• A key intervention area for raspberry cultivation is investing in anti-hail nets and/or shading nets. These measures help reduce temperatures by up to 30%, which can significantly improve fruit quality and yield. Digital irrigation could be the second priority intervention area. For an adoption in scale of these interventions, at least 70% of the costs should be covered by grants, with the remaining 30% financed by the farmers.</li> <li>• Large farmers are actually more interested to invest in alternative energy sources than small farmers. Beside the government support, one of the main causes is the recent increase in the price of electricity.</li> <li>• Establishing markets for farmers that require certain set of practices and standards could support a faster and more sustainable adoption of sustainable agricultural practices. Collection points and farmer associations that facilitate the sale of farmers' products could play a significant role in this direction.</li> </ul>
<b>MAPS</b>	<ul style="list-style-type: none"> <li>• To increase the knowledge about sustainable agriculture as a concept.</li> <li>• Promote the use of new technologies and MAPS varieties (resistant against, pests, drought etc.) and climate change.</li> <li>• Practices in sustainable agriculture to be conditioned by subsidies (direct payments).</li> <li>• As consumers are not aware of organic products, the majority of them are sold outside the country, so it is necessary to raise consumer awareness about organic products.</li> </ul>

- Future grant applications should be submitted by groups of farmers, allowing them to apply for equipment that supports the adoption of new technologies and enables shared use.

### Opportunities through the IPARD Programme

The IPARD III Programme can play a key role in promoting innovation within Kosovo's agricultural sector, particularly through opportunities around the circular economy and sustainable practices. By utilizing innovation networks that link the private sector, farmers, and academia, the program can support the development of circular and sustainable agricultural solutions. Such collaborations can lead to innovations in waste management, renewable energy use, water conservation, and sustainable production practices. For example, supporting projects that develop and/ or implement water-saving irrigation technologies, such as drip irrigation systems. Funding could be used to pilot these systems on farms, providing technical training to farmers on their installation, usage and maintenance. This would help optimize water use, reduce waste, and improve crop yields, while also addressing environmental concerns related to water scarcity.

Another opportunity constitutes supporting research and development of precision agriculture technologies, such as smart irrigation systems that optimize water usage and reduce waste, thereby promoting sustainability. Advisory services can play a critical role ensuring that farmers are equipped with the necessary knowledge to utilize these new technologies effectively.

Additionally, the IPARD III Programme could fund collaborative research initiatives between universities, farms and agribusinesses to develop and implement the above-mentioned opportunities and other practices that relate to sustainable farming practices. Establishing research-driven initiatives that can be implemented in the specific-country context of Kosovo, and strengthening knowledge exchange between academia, producers and other relevant stakeholders can further drive technological developments. By aligning IPARD support with Kosovo's key areas for intervention, such as technical training, market access, and sustainability-focused investments, the program can stimulate innovation, making the agricultural sector more sustainable and competitive.

## 6. Funding options and financial mechanisms

**Access to finance for sustainable agriculture includes various green funding options from both the public and the private sector. Public sector funding primarily consists of grants and subsidies provided by the Ministry of Agriculture, partly aiming to promoting environmentally friendly farming practices and partly supporting the transition to sustainable agriculture. In the private sector, funding sources include loans from private banks and microfinance institutions, some sort of grants from donor organizations, multi-lateral development agencies, and predominantly small projects funded by non-governmental organizations (NGOs).**

These financial mechanisms provide some sort of support to farmers and agribusinesses, enabling them to adopt sustainable practices, improve productivity, and contribute to environmental protection.

## 6.1. Public Sector Funding Sources

The Ministry of Agriculture, Forestry, and Rural Development (MAFRD) is the main funding provider for the agricultural sector. MAFRD offers its support through its main two programs: the direct payments program and the grants (investment scheme) program.

### Direct Payments

The Direct Payments (DP) program is one of the two key policy support programs of MAFRD. In an effort to support Kosovo farmers in increasing their income, expanding farm sizes, and cultivating higher-quality and higher-volume production, MAFRD has been implementing the DP program since 2009 (Bajrami & Ostapchuk, 2019). The main objectives of the program consist of increasing the competitiveness of primary agricultural production, increasing farm income, increasing yield, reducing imports, improving product quality and implementing food safety standards, lowering production costs, expanding processing capacities, and intensifying the economization of agricultural activities. To achieve these objectives, the DP program implements various direct payments targeting the main agricultural sectors in the country, including grains, livestock, horticulture, fruits, beekeeping, and fisheries.

All payments are linked to the cultivated area, the number of animals for livestock, or the delivered quantity and/ or quality to processing units or formal markets (Bajrami, 2016; Bajrami & Ostapchuk, 2019). For example, in 2023, the program incorporated a total number of 28 measures, with a total planned budget of over €40 million.

In terms of supporting sustainable agriculture, the DP program includes only one measure that can be directly linked to it—the DP measure on organic agriculture, which supports organic cultivation of crops. This measure is described below.

### The DP measure for Organic Agriculture

According to the 2023 Program for Direct Payments, Kosovo has significant potential for the development of organic agriculture due to traditional farming practices, particularly in remote rural areas, and the high demand for these products in EU markets. Other reasons for supporting this sub-sector include environmental protection and maintaining good soil conditions. The aim of this direct payment measure is to increase farmers' incomes, ensure the continuous maintenance of organic production areas, and improve competitiveness. Specific objectives include expanding the areas of organic production, improving production quality, reducing production costs, and increasing exports of organic products. Farmers must dedicate at least 0.10 hectares to organic production or be in the conversion phase and provide proof or certification of organic status from an EU-accredited certifying body. The subsidy is provided per hectare: €50/ha for areas in the conversion phase and €100/ha for areas certified for organic production, in addition to the base subsidy for certain crops, such as for example, €150/ha for wheat, €500/ha for open-field vegetables, and €450/ha for medicinal and aromatic plants, and honey plants.

According to the Strategy for Agriculture and Rural Development 2022-28, with the public support for organic farming implemented since 2016, 480 ha of medicinal and aromatic plants have been certified in the organic farming system, with 35 producers in total, and there are 522.47 ha of cultivated zucchini for organic oil production and 34.07 ha of organic walnuts.



Another measure which could partly be related to sustainable production is another direct payment scheme which support the cultivation of MAP and honey plants. This measure is also described below.

### **The DP measure for Medicinal and Aromatic Plants (MAP) and Honey Plants**

The supporting scheme of direct payments for Medicinal, Aromatic Plants (MAP), and honey plants in Kosovo aims to expand the cultivation areas for these plants, increase exports to EU countries, and preserve the country's natural resources. The MAP sector has shown a positive development trend with growing exports to the EU. This sector is also significant for agro-processing and beekeeping industries, as many of these plants serve as honey sources (honey plants). Currently, around 500 hectares of MAP and honey plants are cultivated in Kosovo, with approximately 45 different types of MAPs. The direct payment support aims to maintain existing cultivation areas and expand new ones. The policy's goal is to increase farmers' incomes, ensure the continuous maintenance of planted areas, and improve competitiveness. Specific objectives include expanding the areas for MAP and honey plants, increasing yields, improving production quality, reducing production costs, boosting MAP exports, and increasing honey production. Farmers must cultivate at least 0.10 hectares of MAP or honey plants to qualify for the subsidy, which is provided at a rate of €450 per hectare. In total, 21 main types of MAP and honey plants cultivated in Kosovo are supported, including chamomile, nettle, oregano, mint, sage, mallow, lavender, and others.

This direct payment measure that supports the cultivation of MAP, and honey plants can be linked to sustainable agriculture and have positive effects on the environment. These plants often require fewer chemical inputs, improve biodiversity, and contribute to soil health. Additionally, they can support pollinator populations, improve ecosystem services, and promote sustainable land management practices, thereby contributing to overall environmental sustainability.

Nevertheless, it is important to note that, aside from the measure supporting organic agriculture, direct payments are not linked to any environmental condition, and there are currently no agri-environment measures in place, or any DP measure conditioned on environmentally friendly or sustainable agricultural practices in Kosovo.

### **Investment Grant Schemes**

The Grants Program have supported investments in the primary sector, but also in the processing industry, as well as the diversification of farms and business development. The preparation and implementation of local development strategies - LEADER approach - has also been supported. In 2023, the planned budget for the grant program reached almost €25 million.<sup>30</sup>

The MAFRD grant program is structured around several key measures, with support varying depending on the specific activity or subsector. In terms of sustainable agriculture, the grant scheme of MAFRD includes the following measures:

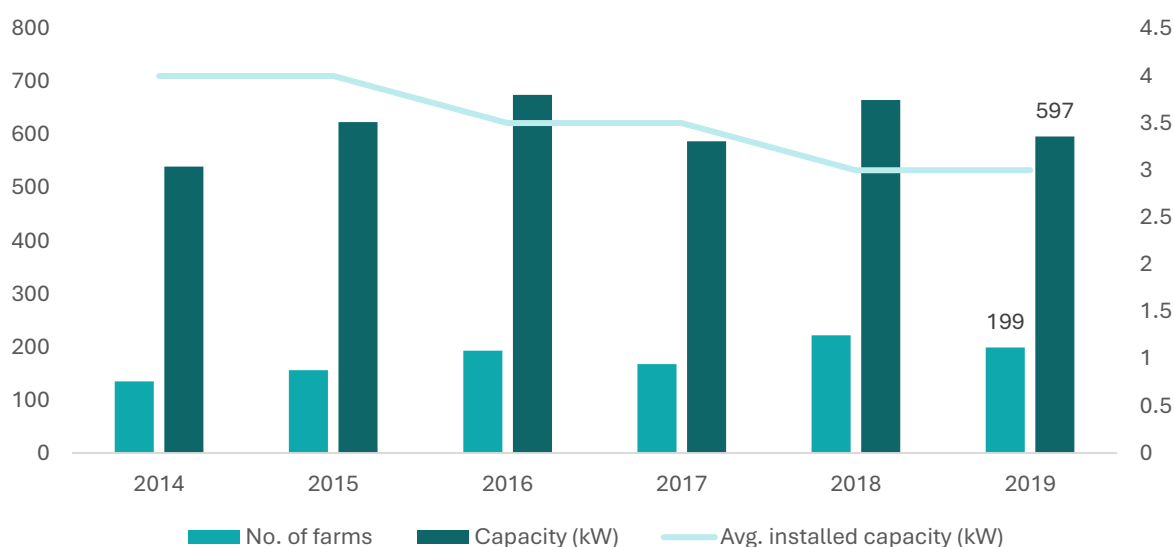
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<sup>30</sup> According to a Key Informant Interview (KII) with an official from the MAFRD, the Agricultural and Rural Development Plan (ARDP) 2023–2027 currently does not include grant schemes for sustainable agriculture. However, MAFRD is negotiating with GIZ to establish a €5 million grant scheme support measure for 2025 focused on sustainable agriculture, which will include two measures: Agro-Environment and Organic Agriculture.

- **Measure 1:** Offers additional points for solar panel installations and requires mandatory septic tanks. It also supports investments in advanced irrigation and anti-hail systems, if desired by the farmer.<sup>31</sup>
- **Measure 3:** The installation of solar panels is mandatory, while investments on water treatment plants are recommended. Additional points are given for the recommended sustainable investments.<sup>32</sup>
- **Measure 7:** Supports investments in small-scale facilities, such as treatment plants and solar panels, which are tied to agricultural activities and small-scale processing.<sup>33</sup>

For example, solar panels have been a common practice which has been supported through the grant scheme. The average installed capacities of renewable energy (solar panels) per unit farm/agribusiness, range from: 3 to 4 kw.<sup>34</sup> Only over the period, 2014-19, over €6.6 million have been invested on solar panels, reaching a total capacity of over 3,690kW. The figure below presents the number of benefiting units – farms/ agribusinesses, the capacity installed by year and the average capacity installed per unit. As depicted in the figure below, there is a consistent year-over-year decrease in the average installed capacity per unit during this period.

Figure 1: Number and Capacity of Solar Panels on Supported Farms, 2014-2019<sup>35</sup>



<sup>31</sup> [https://azhb-rks.net/repository/docs/2023\\_11\\_08\\_034631\\_Udhezuesi\\_per\\_aplikues\\_Masa\\_1-\\_Investimet\\_ne\\_astete\\_fizike\\_te\\_ekonomive\\_familjare.pdf](https://azhb-rks.net/repository/docs/2023_11_08_034631_Udhezuesi_per_aplikues_Masa_1-_Investimet_ne_astete_fizike_te_ekonomive_familjare.pdf)

<sup>32</sup> [https://azhb-rks.net/repository/docs/2023\\_10\\_30\\_075928\\_Udhezuesi\\_per\\_Aplikues\\_Masa\\_3\\_-\\_Investimet\\_ne\\_astete\\_fizike\\_ne\\_perpunimin\\_dhe\\_tregtimin\\_e\\_produkteve\\_bujqesore.pdf](https://azhb-rks.net/repository/docs/2023_10_30_075928_Udhezuesi_per_Aplikues_Masa_3_-_Investimet_ne_astete_fizike_ne_perpunimin_dhe_tregtimin_e_produkteve_bujqesore.pdf)

<sup>33</sup> [https://azhb-rks.net/repository/docs/2023\\_10\\_30\\_075811\\_Udhezuesi\\_per\\_Aplikues\\_Masa\\_7\\_Diversifikimi\\_i\\_fermes\\_dhe\\_zhvillimi\\_i\\_biznesit\\_.pdf](https://azhb-rks.net/repository/docs/2023_10_30_075811_Udhezuesi_per_Aplikues_Masa_7_Diversifikimi_i_fermes_dhe_zhvillimi_i_biznesit_.pdf)

<sup>34</sup> [https://www.mbpzhr-ks.net/repository/docs/STRATEGJIA\\_20222028\\_FINAL\\_ENG\\_Web\\_Noprint\\_final\\_PDF.pdf](https://www.mbpzhr-ks.net/repository/docs/STRATEGJIA_20222028_FINAL_ENG_Web_Noprint_final_PDF.pdf)

<sup>35</sup> constructed by the authors with the data retrieved from [https://www.mbpzhr-ks.net/repository/docs/STRATEGJIA\\_20222028\\_FINAL\\_ENG\\_Web\\_Noprint\\_final\\_PDF.pdf](https://www.mbpzhr-ks.net/repository/docs/STRATEGJIA_20222028_FINAL_ENG_Web_Noprint_final_PDF.pdf)

## 6.2. Private Sector Funding Sources

The private sector offers relevant green funding options, primarily through banking products such as loans and credit guarantee schemes linked to support sustainable initiatives directly or indirectly.

### Banking Products

Private sector financing for sustainable initiatives in the agriculture sector in Kosovo is primarily provided through banks and microfinance institutions (MFIs). While commercial banks offer agricultural loans<sup>36</sup> (Agro Loans) as part of their standard product offerings, there are **no specialized loan products specifically tailored for sustainable agriculture practices**. Some commercial banks provide eco loans, but these are generally targeted at the renovation of apartments or houses rather than agricultural initiatives. In contrast, emergency loans are typically financed by MFIs.

**The Kosovo Credit Guarantee Fund** is an independent entity that enhances access to finance for Micro and Medium Enterprises by providing credit guarantees to financial institutions, aiming to support entrepreneurship, boost domestic production, create jobs, and drive overall economic development. They do have a couple of credit guarantee windows. **The Green Recovery and Opportunity Window (GROW)** aims to assist businesses in investing in renewable energy (RE) and energy efficiency (EE). However, its application in agriculture has been minimal, with no reported cases of using these funds.

Additionally, value chain finance has been applied through certain commercial banks, which offer financing linked to collection centres and processors. This has led to successful investments in new raspberry orchards with certified seedlings and drip irrigation systems, as well as schemes to purchase milk-designated heifers for dairy farms. Nevertheless, despite these efforts, a significant gap remains in tailored financial products that specifically support sustainable agriculture.

## 6.3. Other Sources of Funding

Another important source for green funding in agriculture comes from international organizations, donor agencies, and multilateral development banks, as well as NGOs, which offer various financial support options to promote sustainable practices in the agricultural sector.

### Multilateral development banks

**The World Bank Group is actively promoting sustainable agriculture in Kosovo by providing funding, advisory and support to financial and public institutions.** For example, there are initiatives by the International Finance Corporation (IFC), a member organization of the World Bank Group which relate to sustainable agriculture. In this regard, over the recent years, IFC's approach has been focused on two key areas: capacity building and product development. They have trained the staff from financial institutions to better understand and manage agricultural risks and have collaborated with banks to design financial products tailored to the needs of agricultural clients. These products include financing for agricultural machinery, anti-hail systems, drip irrigation, fertigation, dairy cows, and solar panels, often linked to agricultural

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<sup>36</sup> Credit cards are another funding option which is offered by a number of commercial banks to purchase inputs.

insurance to help banks manage risks more effectively. Additionally, IFC has introduced an agricultural insurance system to the market, aimed at mitigating risks and facilitating better decision-making for farmers. They also engage in value chain financing, working with various stakeholders—input suppliers, farmers, and processors—to strengthen the entire agricultural value chain. Current projects, such as the EU Sustainable Finance Project and the Crop and Warehouse Receipts Project, further emphasize IFC’s role in advancing sustainable agricultural practices in Kosovo.

Similarly, **the European Bank for Reconstruction and Development (EBRD), operates in Kosovo with a focus on promoting sustainable economic development through investments in various sectors.** Its main products include financing for infrastructure, energy efficiency, and private sector growth. Recent green funding initiatives include support for energy efficiency projects, such as energy efficiency and renewable energy investments by local households and businesses, such as assisting households in transitioning from traditional wood stoves to more sustainable heating systems, and energy efficiency for families by financing home insulation and energy-efficient windows. In Agriculture, example initiatives have included financing upgrades for a meat factory and a biscuit producer to reduce energy consumption and operational costs. Another example is financing an agribusiness retail operation, including the opening of six new stores, renovating seven existing ones with sustainability upgrades, and constructing a modern, sustainability-certified logistics center. Also, the EBRD has facilitated sustainable financing by providing loans to local banks, which in turn support investments in energy-efficient technologies and renewable energy solutions for agricultural operations.

Likewise, the KfW Development Bank (KfW) is active in Kosovo with projects such as funding a solar farm to enhance renewable energy capacity and supporting the District Heating Project in Pristina to improve energy efficiency and reduce emissions.

### Donor organizations

Most major donor organizations have been involved in various initiatives in recent years, either directly or indirectly supporting sustainable agriculture efforts. Some of the key donors include The U.S. Agency for International Development (USAID), Swiss Agency for Development and Cooperation (SDC), Caritas, United Nations Development Programme (UNDP), German Agency for International Cooperation (GIZ), Austrian Development Agency (ADA), Community Development Fund (CDF), Danida, and the European Union Office in Kosovo (EU).

For example, USAID’s recent activity - the USAID Kosovo Adapt Activity, funded by the USAID and implemented by Tetra Tech, is a five-year, \$13 million program designed to enhance climate resilience in Kosovo’s communities and businesses. The initiative aims to increase public and private sector awareness and demand for climate-smart initiatives, while improving Kosovo’s capacity to adopt and implement supportive policies and technologies. By focusing on identifying constraints and opportunities, raising awareness, and enabling stakeholders to introduce climate-smart initiatives, the program seeks to create a more resilient environment and foster economic sustainability for Kosovo’s citizens. **Recent initiatives include grant schemes for NGOs, private foundations, universities, companies, and business associations to develop initiatives promoting the adoption of climate adaptation and mitigation measures, with grant activities ranging between €20,000 and €60,000, for a period of 12 to 24 months.**

Another example is the Integrated Water Resources Management in Kosovo (IWRM-K) Program, funded by the SDC and implemented by Skat Consulting, which has **supported individual**

**farmers with competitive grant schemes aimed at enhancing sustainable water resource management.** These initiatives target dairy farmers by supporting manure storage construction and providing the necessary machinery to spread liquid and solid manure in fields. Another grant scheme has focused on raspberry and apple growers, offering grants to support modern farming practices designed to reduce environmental impacts and improve production quality. Support included tailored advice, grants, and innovative equipment like uMethos stations for precise irrigation to reduce water use and costs while improving efficiency and yield. Also based on soil analysis, informative sessions were organized to provide fertilization recommendations and schedules, addressing soil pollution and improve crop health.

### NGOs and other sources

In Kosovo, NGOs play an important role in supporting sustainable agriculture and sustainable development in general, primarily through advocacy for policy development and institutional support. For instance, NGOs such as Balkan Green Foundation (BGF) focus on advocacy for energy and decarbonization, and also engaging youth in innovative ideas that promote decarbonization efforts. NGOs also implement small-scale projects, such as providing drip irrigation systems, small greenhouses, and capacity-building training for farmers.

Despite these efforts, as identified through key informant interviews and focus groups, Kosovo faces significant challenges in implementing its well-formulated strategies<sup>37</sup> and national plans for sustainable development and decarbonization. One major obstacle is that highly educated people tend to work for institutions that propose but do not implement policies, leaving a gap in the implementation of these strategies. Key intervention areas identified by civil society include promoting efficient energy use, insulation, renewable energy (such as solar and wind), and both formal and informal education on sustainable practices.

### 6.4. Alternative Financing Opportunities under the IPARD III Programme

The IPARD Program of the EU has played a significant role in supporting the agricultural sectors of Western Balkan (WB) countries, including Albania, Montenegro, North Macedonia, Serbia, and Türkiye by providing financial assistance to modernize the agricultural sector and improve competitiveness. Most IPARD countries are still in the process of implementing the IPARD II Program. However, these countries have also adopted the IPARD III Program for the 2021-2027 period. The three most commonly utilized measures across all countries are M1 (Investments in physical assets of agricultural holdings), M3 (Investments in physical assets related to the processing and marketing of agricultural and fishery products), and M7 (Farm diversification and business development), though M7 is not implemented in Montenegro. The measure - M4 (Agri-environment, climate, and organic farming) is only present in Türkiye, albeit with modest funding<sup>38</sup>. Regarding sustainable agriculture and overall green economy projects, there were no specific measures directly supporting such investments. However, investments were made using the commonly utilized measures mentioned above. The table below outlines the key investments in this context, with examples from Albania, North Macedonia and Serbia.

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<sup>37</sup> Strategy for decarbonization of the energy sector. National Plan for Energy and Climate. National Determined Contribution (NDC).

<sup>38</sup> <https://seerural.org/wp-content/uploads/2024/03/agricultural-policy-developments-in-the-eu-pre-accession-countries-final-report.pdf>

Country	Green Economy Investment Examples under the Previous IPARD program
Albania <sup>39</sup>	During the 2014-2020 period under IPARD II, small green economy components were implemented, including photovoltaic panels, animal treatment systems, and energy efficiency investments.
North Macedonia	The existing measures in the previous IPARD 2014-2020 for investments in physical assets and diversification supported green initiatives, such as energy-efficient machinery, better manure management, more efficient water use, renewable energy, and improved resource efficiency at the farm level. There were no measures on organic farming during this period.
Serbia	Measure 1 supporting manure storage and handling, Measure 3 promoting renewable energy, and Measure 7 enabling the purchase of equipment for energy production from renewable sources.

With IPARD III, the EU aims to provide beneficiary countries with concrete financial and technical support to achieve balanced territorial development by raising social, environmental, and economic standards in rural areas. The program seeks to:

- Enhance the competitiveness and viability of the agri-food sector by building an agriculture that can compete in the market,
- Promote sustainable management of natural resources, and
- Strengthen resilience to climate change<sup>40</sup>.

New measures under the recently adopted IPARD III (2021-2027) for pre-accession countries include: agri-environment, climate, and organic farming (M4), implementation of local development strategies through the LEADER approach (M5), investments in rural public infrastructure (M6), skills and competence improvement (M8), advisory services (M10), and forest establishment and protection (M11). Within the "*Agri-environment-climate and organic farming*" measure, all WB6 countries offer various agri-environmental investment options, with **organic farming** being the most common.<sup>41</sup> The specific sub-measures for M4 are listed in the table below.

<sup>39</sup> <https://seerural.org/wp-content/uploads/2024/03/agricultural-policy-developments-in-the-eu-pre-accession-countries-final-report.pdf>  
<https://ipard.gov.mk/wp-content/uploads/2024/07/AIR-2023.pdf>  
<https://uap.gov.rs/wp-content/uploads/2024/02/Annual-Implementation-Report-on-IPARD-II-Programme-for-2022.pdf>

<sup>40</sup> [https://agriculture.ec.europa.eu/international/international-cooperation/enlargement/pre-accession-assistance/overview\\_en](https://agriculture.ec.europa.eu/international/international-cooperation/enlargement/pre-accession-assistance/overview_en)

<sup>41</sup> Zhang, Fang; Zorya, Sergiy; Zivkov, Goran. 2024. Greening Agriculture in the Western Balkans. Washington, DC: World Bank. <https://hdl.handle.net/10986/41843>



	Albania	Montenegro	North Macedonia	Serbia
IPARD III M4 Sub-measures <sup>42</sup>	Organic farming (only to F&V, MAP, and vineyards)	Sustainable use of mountain pastures	Green cover of permanent crops	Crop rotation on arable
	Conversion of local breeds of small ruminants: sheep and goats	Organic production	Crop rotation of vegetables	Weed control in perennial plantations
		Genetic resources in agriculture	Organic farming	Establishment and maintenance of pollinator strips Sustainable management of meadows and pastures

Generally, IPARD III offers several opportunities for advancing sustainable agriculture. The program opens potential for introducing greener approaches, particularly through new measures focused on agri-environment, organic farming, forestry, and climate change adaptation and mitigation, as well as advisory services. The implementation of M4 sub-measures could play a key role in improving environmental awareness in agriculture by strengthening institutions' capacity to apply agri-environmental measures effectively, introducing farmers with these practices, and increasing stakeholders' knowledge<sup>43</sup>. For Kosovo, once accreditation is achieved, the IPARD III Program presents a promising opportunity for alternative financing in the agricultural sector. This program could provide funding to farmers and agribusinesses to invest in infrastructure, equipment, and sustainable practices, enabling them to increase productivity and meet EU standards.

## 7. Opportunities/recommendations to support sustainable and green transition

Kosovo's agricultural sector is at a critical juncture as it seeks to transition towards more sustainable practices in line with European Union standards and global environmental goals. Despite notable progress, significant challenges remain, including fragmented land ownership, outdated infrastructure, limited access to finance, and a lack of awareness among farmers about the benefits of sustainability. To address these issues, a comprehensive approach is necessary, involving enhanced technical training, increased awareness, improved market access, and better alignment of policies with EU directives. By leveraging international cooperation, financial mechanisms, and innovative technologies, Kosovo can build a more resilient, competitive, and

<sup>42</sup> “Zhang, Fang; Zorya, Sergiy; Zivkov, Goran. 2024. Greening Agriculture in the Western Balkans. Washington, DC: World Bank. <http://hdl.handle.net/10986/41843>

<sup>43</sup> <https://www.greenpolicyplatform.org/sites/default/files/downloads/best-practices/Greening%20Agriculture%20in%20the%20Western%20Balkans.pdf>

environmentally sustainable agricultural sector that not only improves the livelihoods of its farmers but also contributes to the country's broader economic and environmental objectives.

Below are some recommendations and suggestions for supporting the transition toward sustainable agriculture in Kosovo:

### Enhance Technical Training and Support for Farmers

#### Continuous Training Programs:

- **Tailored Education:** Develop training programs specifically designed for different types of farming operations (e.g., small-scale vs. large-scale, organic vs. conventional). These should cover a wide range of topics, including soil health management, integrated pest management (IPM), water conservation, renewable energy use, and climate resilience strategies.
- **Practical Workshops:** Organize hands-on workshops and field demonstrations to show farmers how to implement sustainable practices. These could include demonstrations on how to set up and manage organic composting systems, install and maintain solar panels, or optimize drip irrigation systems.

#### Advisory Services:

- **Local Advisory Centres:** Establish advisory centres within municipalities where farmers can access expert advice on sustainable farming practices. These centres could provide regular updates on new technologies, market trends, and best practices in sustainability.
- **Mobile Advisory Units:** Create mobile advisory units that can visit farms to offer personalized advice and technical support, helping farmers troubleshoot specific issues related to sustainable practices.

### Increase Awareness and Knowledge

#### Awareness Campaigns:

- **Environmental and Economic Benefits:** Launch campaigns that highlight the dual benefits of sustainable practices: improving the environment and enhancing farm profitability. Use success stories from within Kosovo or similar regions to demonstrate how sustainable practices can lead to higher yields, better quality produce, and increased market access.
- **Social Media and Digital Platforms:** Utilize social media, websites, and mobile apps to reach a broader audience, including younger farmers. Create engaging content, such as videos, infographics, and interactive tools that explain sustainable farming practices.

#### Farmer Associations:

- **Capacity Building:** Provide training and resources to strengthen farmer associations, enabling them to play a more active role in promoting sustainable practices. This could include training in leadership, communication, and advocacy, as well as technical skills in sustainable agriculture. This would also be relevant for young professionals, either by including sustainable agriculture into the current curricula at the Universities that has Faculty of Agriculture, or developing their skills in this topic through tailor made training programs.

- **Peer Learning Networks:** Encourage the formation of peer learning networks within these associations, where farmers can share experiences, challenges, and solutions related to sustainable farming.

## Improve Access to Finance and Economic Incentives

### Tailored Grant Schemes:

- **Link Grants to Sustainability Metrics:** Modify existing grant schemes to reward practices that enhance sustainability, such as reducing chemical inputs, conserving water, and protecting biodiversity. Ensure that these grants are contingent on measurable outcomes, like reduced pesticide use or improved soil health.
- **Targeted Subsidies:** Introduce subsidies for specific sustainable practices, such as organic certification, installation of renewable energy systems, or adoption of precision agriculture technologies. These subsidies should cover a significant portion of the initial costs to make these practices more accessible.

### Access to Credit:

- **Development of Green Loan Products:** Collaborate with financial institutions to create loan products specifically for sustainable agriculture investments, such as purchasing organic seeds, renewable energy systems, or water-saving irrigation technologies. These loans could have lower interest rates or longer repayment periods to make them more attractive. Additionally, alternative financing through banks, particularly green loans, could be incorporated as a complementary funding source to MAFRD grants. This approach would facilitate a gradual transition from direct government funding to commercial financial mechanisms, promoting long-term investment and innovation in the agricultural sector.
- **Credit Guarantee Schemes:** Expand existing credit guarantee schemes to reduce the perceived risk for banks in lending to farmers who are transitioning to sustainable practices. This could be coupled with technical support to ensure that these investments are successful.

## Strengthen Market Access for Sustainable Products

### Market-Driven Developments:

- **Certification and Branding:** Support farmers in obtaining organic or sustainability certifications, which can open up access to premium markets, particularly in the EU. Create a national brand for Kosovo's sustainable and organic products to improve visibility and marketability.
- **Trade Fairs and Export Promotion:** Organize participation in international trade fairs and export promotion events to showcase Kosovo's sustainable agricultural products. This can help farmers connect with buyers who are willing to pay a premium for certified sustainable products.

### Support Value Chains:

- **Infrastructure Development:** Invest in infrastructure that supports the entire value chain, from production to processing to market. This could include establishing local processing facilities, cold storage, and transportation networks that are accessible to smallholder farmers.

### Enhance Policy and Regulatory Frameworks

#### Alignment with EU Standards:

- **Policy Harmonization:** Accelerate efforts to align Kosovo's agricultural policies with EU standards, focusing on areas like pesticide regulation, water management, and organic farming. This could involve revising existing laws and regulations to reflect EU directives, as well as implementing new policies that promote sustainable practices.
- **Compliance Support:** Provide support to farmers and agribusinesses in meeting these new regulatory requirements, including offering subsidies or technical assistance to help them transition to compliance.

#### Incentivize Sustainable Practices:

- **Regulatory Incentives:** Introduce regulations that require or incentivize sustainable practices, such as mandating crop rotation or offering tax breaks for farms that use renewable energy. These regulations should be backed by strong enforcement mechanisms to ensure compliance.
- **Environmental Impact Assessments:** Make environmental impact assessments mandatory for large agricultural projects, with a focus on sustainability metrics like water use efficiency, biodiversity impact, and carbon footprint.

### Promote Research and Innovation

#### Support for Research:

- **Research Grants:** Provide grants to universities and research institutions to study sustainable agriculture practices and develop new technologies that can be applied in Kosovo's unique environmental and economic context.
- **Pilot Projects:** Fund pilot projects that test new sustainable agriculture technologies or practices in real-world conditions, with the aim of scaling up successful initiatives.
- **Education:** Increased inclusion of sustainable agriculture in high school and university curricula to raise awareness and importance of sustainable agriculture.
- **Cooperation:** Strengthening collaboration among key stakeholders for multidisciplinary research studies and innovation projects in sustainable agriculture, as well as establishing research groups. To foster collaboration among academia, business, ministries, and local governments through innovative projects focused on sustainable agriculture.
- **Research Institutes:** Increase research institutions' ability to conduct market-oriented, sustainable agriculture projects. Greater collaboration between local research institutions and the international research community.

- **Funds:** Funds specifically designated for research and innovative projects in sustainable agriculture, as well as the participation of young researchers. Lobbying for increased funding for research and innovation from the government and international institutions. Adopting an open innovation model is critical for successfully financing innovation. This approach promotes collaboration among numerous institutions and stakeholders (business, public, and academic sectors), allowing for the financing of cluster or sector-level innovations.

Future financing programs should effectively utilize the open innovation model to promote knowledge sharing and advancements in sustainable agricultural practices, ensuring innovative solutions are grounded in practical applications and benefit the entire sector.

The Ministry of Industry, Entrepreneurship and Trade, through KIESA, has introduced three new grant schemes worth 2.5 million Euro for micro, small, and medium enterprises this year. The grant scheme covers purchasing manufacturing and processing machinery, product certification, and digitization of businesses. In addition, the Ministry of Industry, Entrepreneurship, and Trade plans to launch three new grant schemes to promote innovation, tourism, and handicrafts growth.

- **Policy:** Improving the legal framework for innovation, knowledge transfer, and scientific research funding regarding sustainable agriculture. In the future, compliance with the Science European Strategy 2021-2026 should be considered in different strategic documents regarding science. Implementation and monitoring of the Republic of Kosovo's 2023-2028 National Scientific Program, which encourages innovative agricultural technologies. Implementation and monitoring of the Law on scientific innovation and transfer of knowledge and technology.
- Strengthening the cooperation between Ministry of Education, Science and Technology (MEST) and the relevant ministries which are responsible for motivating and promoting the development of innovative activities. Implementation and monitoring of the e Law on research-scientific activities for the fulfilment of the necessary conditions and for the provision of funds for the promotion of research.

## Facilitate Infrastructure and Technological Investments

### Renewable Energy:

- **Solar Energy:** Expand the installation of solar panels with a focus on off-grid solutions for remote areas and for large farm operations. Also ensuring that the installed capacity matches the consumption levels of the farm, and quality as well. Provide training on installation, maintenance, and the economic benefits of renewable energy.
- **Energy Efficiency:** Promote energy efficiency measures, such as upgrading irrigation pumps or improving insulation in storage facilities, to reduce energy consumption and costs.

### Water Management:

- **Advanced Irrigation Systems:** Encourage the adoption of drip irrigation and other water-saving technologies by providing subsidies, technical assistance, and demonstrations of their effectiveness.

- **Water Harvesting and Recycling:** Promote the use of rainwater harvesting systems and the recycling of wastewater for irrigation, particularly in areas prone to water scarcity. These systems can be integrated into new farm designs or retrofitted onto existing operations.

## Strengthen Institutional Support and Governance

### Capacity Building:

- **Institutional Strengthening:** Invest in building the capacity of government institutions responsible for agriculture, environment, and rural development to implement and enforce sustainable agriculture policies. This could include training programs, staffing increases, and the development of new tools for monitoring and evaluation.
- The division for agro-environment in MAFRD's new organizational chart can be renewed in the future as division for sustainable agriculture, which can include agro-environment and organic farming.
- **Coordination Mechanisms:** Establish mechanisms for better coordination between government agencies, NGOs, and the private sector to streamline support for sustainable agriculture. This could involve creating inter-agency working groups or task forces focused on specific sustainability issues.

## Leverage International Cooperation and Funding

### International Partnerships:

- **Collaboration with Donors:** Continue to work with international donors and development organizations to secure funding and technical assistance for sustainable agriculture projects. Focus on building partnerships that bring in new expertise, technologies, and approaches.
- **Participation in Regional Initiatives:** Engage more actively in regional initiatives like the Green Agenda for the Western Balkans, which can provide access to additional resources, knowledge exchange, and collaborative projects.

### Access to Funding Mechanisms:

- **Multilateral Development Banks:** Seek funding from multilateral development banks like the World Bank and EBRD for large-scale projects that can drive significant improvements in sustainability, such as upgrading irrigation infrastructure or developing renewable energy facilities.
- **Climate Finance:** Explore opportunities to access climate finance, such as the Green Climate Fund, to support projects that enhance climate resilience in the agricultural sector. These funds can be used to implement climate-smart agriculture practices and technologies.



## Suggested Intervention Areas for Specific Sectors

### Dairy:

- **Manure Management:** Invest in manure storage facilities and spreading equipment. Provide education on the environmental and productivity benefits of proper manure management, including reducing methane emissions and improving soil health.
- **Market Requirements:** Develop export markets that require sustainable dairy practices, such as high animal welfare standards or low carbon footprints, to incentivize farmers to adopt these practices.

### Vegetables:

- **Soil Health:** Promote the use of crop rotation, cover crops, and organic fertilizers to improve soil health. Provide training on the benefits of soil conservation and the long-term productivity gains from maintaining healthy soils.
- **Pesticide Management:** Educate farmers on the risks of pesticide and fertiliser overuse, including the development of resistant pests and environmental contamination. Introduce integrated pest management (IPM) practices as an alternative.

### Soft Fruits:

- **Climate Resilience:** Support investments in anti-hail nets and digital irrigation systems to protect crops from climate-related risks, such as extreme temperatures and water shortages. Provide grants or low-interest loans to cover the high upfront costs of these technologies.
- **Organic Transition:** Encourage more farmers to transition to IPM then organic production by providing financial support, technical assistance, and access to markets that demand organic products.

### Medicinal and Aromatic Plants (MAPs):

- **Group Applications for Grants:** Facilitate group applications for grants to allow small farmers to collectively invest in new technologies, such as specialized equipment for organic production or shared processing facilities.
- **Consumer Awareness:** Launch campaigns to raise awareness of the benefits of organic MAPs among local consumers, helping to build a domestic market alongside export opportunities.

## 8. Annex 1 – List of stakeholders

KII Interviews	FGD Participants
MAFRD	Kosovo Association of Milk Producers (KAMP)
International Finance Corporation (IFC)	Kosovo Association of Dairy Processors;
Balkan Green Foundation	Organica;
Kosovo Credit Guarantee Fund	Pepeko;
Input dealers (Agronomi, Agromarket, Agrohelp, Agroeko)	Mjedra e Kosoves
Caritas	AgroDev;
CNVP	Eurolona Dairy;
Care International	Aldi Dairy;
	Rudina Dairy Farm
	Agro Celina;
	Bliff & Agropduct Syne
	Eurofruti

## 9. Annex 2 – Information on regulations

The Law for Agriculture and Rural Development No. 08/L-072 in the relevant article mentions that sustainable development of agriculture shall rely in particular on ecological use of resources, integrated agriculture production, organic agriculture, implementation of applied research and development projects, cooperation with scientific institutions and in creation of advisory services.

The Law on Organic Farming No. 04/L 085, which was drafted in response to Council Regulation (EC) No. 834/2007 on organic production and labeling of organic products, is part of Kosovo's current legal framework. The main objective of this law is to provide the basis for the sustainable development of organic production while ensuring the effective functioning of the market, guaranteeing fair competition, ensuring consumer confidence, and protecting consumer interests.

The Law on Agricultural Land No. 02/L-26 determines the use, protection, regulation and lease of agricultural land for the purpose of permanent preservation and protection of agricultural potential, based on the principles for a sustainable development.

Furthermore, MAFRD has prepared a secondary legislation for organic agriculture supported by the KosAgri project and TAIEX experts. Based on the current Law, eight Administrative Instructions have been prepared.

It is also important to mention that the MAFRD approved the National Organic Action Plan (NOAP) for 2023–2026<sup>1</sup>, which is essential to organic agriculture. Organic agriculture is seen by the majority of individuals we spoke with from various sectors as the path toward sustainable agriculture.