

STOCKTAKING REPORT

Qualitative assessment of the SDGs
principles and positive practices
adopted by the main actors in
Albania's agro-processing sector

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ACRONYMS

ALL	Albanian Lek	KII	Key Informant Interview
CAP	Common Agricultural Policy	LNOB	Leave No One Behind
CCA	Common Country Analysis	MAPs	Medicinal and Aromatic Plants
CPI	Consumer Price Index	MARD	Ministry of Agriculture and Rural Development
EGD	European Green Deal	NN	Nearest Neighbour
EU	European Union	OMW	olive-mill wastewater
FAO	Food Agricultural Organization	OPC	olive press cake
FBO	Food Business Operator	PPP	Plant Protection Products
FGD	Focus Group Discussion	RCA	Revealed Comparative Advantage
GA	Global Agenda	RCO-UNCT	Resident Coordinator's Office–UN Country Team
GAP	Good Agricultural Practices	SDG	Sustainable Development Goal
GDP	Gross Domestic Product	SDR	Sustainable Development Report
GHG	Greenhouse Gas	SMEs	Small and Medium-sized Enterprises
GIZ	<i>Gesellschaft für Internationale Zusammenarbeit</i>	SWOT	Strengths, Weaknesses, Opportunities and Threats
INSTAT	National Institute of Statistics	UN	United Nations
IOC	International Olive Council	UNCTAD	United Nations Conference on Trade and Development
IPA	Instrument for Pre-Accession Assistance	UNDP	United Nations Development Programme
IPARD	Instrument for Pre-Accession Assistance for Rural Development	VAT	Value Added Tax
		VNR	Voluntary National Review

Executive Summary

Albania is committed to the 2030 Agenda for sustainable development and the Albanian government has incorporated Sustainable Development Goals (SDGs) into the national policy. As the country progresses towards European Union (EU) membership, harmonisation with SDGs and the European Green Deal (EGD) becomes increasingly important.

The agro-processing sector in Albania holds significant value in the nation's economic landscape, providing employment and contributing significantly to the country's development. Over the past decade, the sector has experienced growth and has emerged as one of the country's main economic pillars. Despite this progress, the sector faces numerous challenges that require attention to ensure the sector's resilience and alignment with the SDGs and the EGD.

Supporting progress in this area is the priority of the UN Joint Project *Business Partnerships and Solutions for SDGs*, a key objective of which is to present a comprehensive analysis of Albania's agro-processing sector's current state.

The present stocktaking report presents an overview of the status quo of the agro-processing sector in Albania and lays the foundation for the creation of a roadmap that will outline the steps and recommend actions to implement in support of SDG adoption in the sector. This stocktaking report and the accompanying roadmap will serve as guides for future interventions and initiatives designed to support SDG alignment within the sector.

Albania's agro-processing sector is diverse, encompassing various value chains such as milk, meat, fruits and vegetables, apples, olive oil and cereals. Each value chain engages various stakeholders and production and distribution channels. There have been encouraging positive developments, such as an increase in the export of plant-based products, but to fully support sustainable growth and resilience within this sector a range of challenges needs to be addressed. This includes constraints on financial resources, incomplete reforms and the need for enhanced government support, especially when compared to the level of support found in neighbouring countries.

The SWOT analysis that was conducted unveiled key strengths, such as positive corporate social responsibility practices, environmental protection through green investments and progress towards EGD alignment.

However, it also brought to light significant weaknesses, such as lack of capital and limited awareness among small and medium-sized enterprises, labour shortages, corruption, informality and limited stakeholder unions. Opportunities can be found in the form of access to European markets, availability of grant schemes for sector development and investments, external expertise and a growing consumer preference for local products. Simultaneously, threats are evident in competition from imported products and the adverse impacts of climate change.

Evaluation of SDGs implementation in the country shows progress. Focus Group Discussions and case studies with agro-processors reveal practices aligned with the SDGs in areas such as supporting communities, value chain development, promoting decent work and capacity building. They also invest in renewable energy, implement sustainable packaging and adopt environmentally friendly production practices. Agro-processors engage in employing local communities, establishing local infrastructure, providing support to vulnerable groups, facilitating coordination between processors and exporters and offering assistance and training to farmers. Waste management, raising consumer awareness, improving value chain coordination and addressing environmental pollution are some of the areas where further SDG alignment is required.

To address these challenges, the report puts forward a set of recommended actions to be integrated into the roadmap. These actions span various areas, including supporting agro-biodiversity and pasture management, improving waste management systems, investing in wastewater systems, addressing the issue of plastic use and promoting good practices for environmental protection.

While the agro-processing industry in Albania has shown growth and alignment with the SDGs, challenges remain. By developing a comprehensive roadmap and implementing the recommended actions, Albania can bolster the sector's resilience and contribute to future sustainable development.

INTRODUCTION & METHODOLOGY

1. Introduction

Albania is in the process of becoming a full member of the European Union (EU), a process initiated when it was granted candidate status in 2014 and followed in 2020 when official accession negotiations began.¹ The country is also committed to the 2030 Agenda for Sustainable Development, adopted by all United Nations (UN) member states in 2015. All 17 Sustainable Development Goals (SDGs) are integrated within national policies and the EU integration agenda.² Albania has also established strategic decision-making mechanisms, including the Inter-Ministerial Committee and the Inter-Institutional Technical Working Group on the SDGs.³

Despite Albania's efforts and a strong commitment to the 2030 Agenda and EU integration many challenges remain and hinder the full implementation of the SDGs. Socio-economic inequality still exists in the country, along with high levels of unemployment and a weak social protection system, leaving vulnerable groups at significant risk of being left behind. In 2020, Albania's Gross Domestic Product (GDP) per capita was ALL 579,339 (approximately USD 5,500) with a population of 2,837,849.⁴

The country ranked 67th on the Human Development Index in 2021, and, since 2020, the net migration has worsened, going from a yearly average of -18,090 between 2011 and 2020, to -32,675 for 2021–2022.⁵ This trend of large-scale emigration has caused labour shortages and created challenges for labour-intensive sectors such as agriculture and agro-processing. Among the main economic pillars of the Albanian economy, employing approximately 33 percent of the country's workforce,⁶ understanding and addressing these difficulties is crucial for the sustainable development of the sector and the wider economy.

Albania's agricultural dynamics are complex and shaped by the transition from a centrally planned economy to a market economy beginning in the early 1990s. Agricultural production has been characterised by a small farming structure: more than 80 percent of all farms are smallholdings with less than two hectares (ha) of small plots in a fragmented landscape. The farmers face several challenges, including access to modern equipment, unclear property rights and poor access to funding, technology, services and markets.⁶ Such constraints hinder smallholder farms from capitalising on market opportunities, thereby impacting the

1. In June 2014, Albania was awarded candidate status by the EU. In March 2020, the members of the European Council endorsed the General Affairs Council's decision to open accession negotiations with the country. In July 2022, the Intergovernmental Conference on accession negotiations was held with Albania: https://neighbourhood-enlargement.ec.europa.eu/enlargement-policy/albania_en

2. https://integrimi-ne-be.punetejashtme.gov.al/wp-content/uploads/2022/02/NPEI_2022-2024_EN-.pdf

3. https://gold.uclg.org/sites/default/files/2022-07/albania_2018.pdf

4. www.instat.gov.al/media/11571/regional-gdp-2021-english_press-release.pdf

5. <https://hdr.undp.org/data-center/country-insights#/ranks>

6. <https://www.fao.org/documents/card/en/c/ca7450en>

development of the agro-processing industry, which, naturally, is dependent on agriculture for raw materials. Yet another layer of complexity is added when Albania's susceptibility to disaster is considered. Albania stands among the top ten economies worldwide most susceptible to such risks.⁷

A staggering 88.5 percent of its GDP stems from sectors that are prone to natural disaster, with 86 percent of the territory exposed to multiple types of disaster, including flood, erosion and earthquake, emphasising the country's vulnerability and the need to build resilience at multiple levels. The vulnerability of Albanian citizens is also of concern. Recent disasters, such as the floods in 2015 and 2016 and the earthquakes of 2019, compounded by the Covid-19 pandemic and the war in Ukraine, have underscored the importance of enhancing the private sector's capacity to mitigate, manage and recover from such external shocks.

Against this backdrop, the present stocktaking exercise provides an in-depth view of the current state of the agro-processing sector and draws upon data collected through a series of focus group discussions (FGDs) and semi-structured interviews. A SWOT analysis is developed that sheds light on the strengths, weaknesses, opportunities and threats inherent in the sector, offering invaluable insights for stakeholders and decision makers. Furthermore, based on the qualitative information, the report provides an assessment of the level of alignment of the agro-processing sector with the SDGs.

Finally, a set of recommendations and actions are proposed for integration into a roadmap (which also forms part of the report) designed to provide guidance for future interventions in the sector. To fully unlock its potential Albania must plan carefully and ensure actions are aligned with the SDGs. By implementing the recommended actions and developing a comprehensive roadmap, Albania can support the sector's resilience and contribute to future sustainable development.

7. <https://climateknowledgeportal.worldbank.org/sites/default/files/2021-06/15812-Albania%20Country%20Profile-WEB.pdf>

1.1 Rationale and Objectives of the Study

Against the context provided above, prioritising implementation of the SDGs within the agro-processing industry is crucial for fostering sustainable development in Albania's local economy and building a more resilient sector.

However, achieving SDG compliance and unlocking the growth potential of the sector in Albania necessitates substantial investment. Therefore, within the framework of the project *Business Partnerships and Solutions for SDGs*, the Food and Agriculture Organization (FAO) of the UN and the United Nations Development Programme (UNDP) commissioned the present analysis. The report aims to take stock of the current business practices implemented by the agro-processing industry in Albania and outline the steps for implementing the SDGs by this industry, serving as a foundational document for future interventions in the form of a roadmap.

The main findings and results of this report will facilitate inter-sectoral cooperation, while also supporting the agro-processing sector in the delivery and monitoring of social and environmental impacts. Raising awareness of best practices and demonstrating the impact of investments that contribute to SDG goals will lead to a better understanding and engagement of the private sector in implementation of the SDGs and help identify opportunities to co-design and pilot solutions in the agro-processing sector.

2. Methodology

The study follows a qualitative approach and is based upon six FGDs with agro-processors and ten Key Informant Interviews (KIIs) with agro-processing industry stakeholders. In addition, the report outlines data obtained from secondary sources and four case studies performed with four agro-processors in Albania.

The qualitative information obtained from the FGDs and KIIs is analysed by using a simple content summary approach, from the results of each discussion and interview summarised in the respective reports.⁸ Moreover, Section 8 of this report outlines the key messages from the FGDs on the SDGs relevant to the agro-processing sector.

The various agro-processing sub-sectors considered and the companies involved in the FGDs are reported in Table 1.

Table 1 Focus group discussion participants, by sub-sector

Meat Processing	Drinking Water	Dairy	Fruits and Vegetables	Flour and Bread	Olive Oil
Fix	Lajthiza	Lufra	Doni Fruits	Miell Tirana	Musai
Tona	Canaj	Erzeni	Koni	Bloja	Lundra
Kmy	Tepelena	Albamilk	Zdrava	Atlas	
Hako	Kristal	Shaka	Sejega	Elenikos	
Mnela	Agna Group Sh.a	Velecik		Nela	
	Koral			Someg	
	Uji Tamara			Bread And Flour Association	
Date of FGD					
7 December 2022		8 December 2022		9 December 2022	

8. Submitted as a separate file together with this report.

When selecting the agro-processing companies to participate in the FGDs, the following approach and criteria were considered:



3.

OVERVIEW OF THE AGRO-PROCESSING INDUSTRY

Agro-processing is a sub-sector of agriculture, forestry and fisheries comprising manufacturing from raw materials and processing of intermediate products. Albania is experiencing a transformation of agriculture and fisheries products requiring economically viable operators equipped to meet the current and future challenges to ensure the country's sustainable food system.

A recent report of the [Albanian Investment Council](#) indicates that there are 2,476 agro-processing companies⁹ in the country, of which 65.4 percent deal predominantly with production of flour, bakery, pasta, biscuits and confectionary, 12.8 percent with dairy produce, 5.4 percent with meat and fish products, and 4.2 percent with wine and alcoholic drinks production. Only 1.2 percent of companies process fruit, vegetables and Medicinal and Aromatic Plants (MAPs), with the rest (11%) dealing with the production of mineral water, soft drinks and other, uncategorised, products¹⁰.

The agro-processing industry is considered to have significant potential for investment and increased contribution to the local economy, especially for fresh plant origin products and MAPs. Other products with significant potential include olive oil, honey, blueberry, strawberry and pomegranate.

Reported obstacles relate to access to finance, raw materials (i.e., primary agricultural produce), land fragmentation and lack of cooperation. Most of the needs at the processing level concern modernisation of the storage and processing environment. Except for a few large companies, most agro-processing companies are micro and small businesses with modest technologies and relatively small processing capacities, producing primarily for the local market. Informality and unfair competition, tax evasion and lack of required standards are other problems that hinder the advancement of the sector.

Product quality plays a crucial role in enhancing the competitiveness of the Albanian agro-processing industry in local, regional and international markets. However, it is observed that some actors within the value chain do not fulfil their responsibilities and evade legal obligations. Investments and modernisation of premises in the processing and marketing of agricultural and fisheries products are supported by donors such as *Gesellschaft für Internationale Zusammenarbeit* (GIZ), the Ministry of Agriculture and Rural Development (MARD) and the Instrument for Pre-Accession Assistance for Rural Development (IPARD) which have committed to reaching up to 270 beneficiaries by 2027.

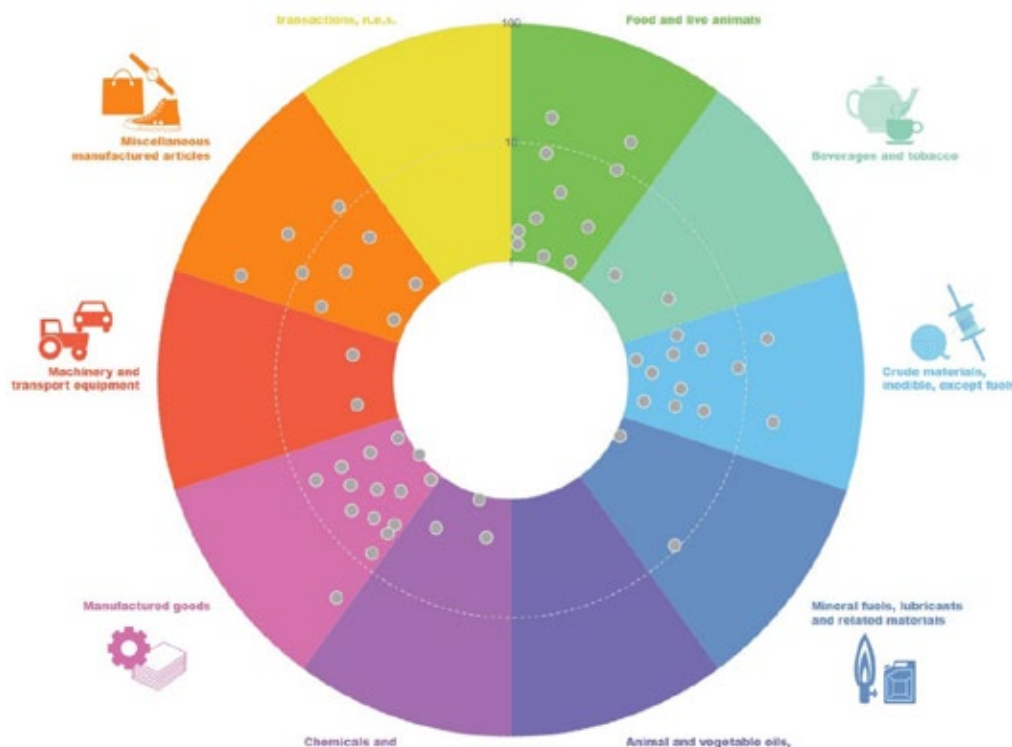
Albania possesses comparative advantages in some sectors, as highlighted by the UN Conference on Trade and Development (UNCTAD)'s comparative advantage graph for

9. Data in this report are based on MARD data, which differ from those from INSTAT due to methodological differences.

10. Invest in Agriculture in Albania (n.d.) Invest in Albania.org. <https://invest-in-albania.org/industries/agriculture/#:-:text=Main%20Products%20That%20Albania%20Exports%20and%20Some%20of%20The%20Agriculture%20Companies>

2022 (Figure 1).¹¹ The country excels in footwear production, with a revealed comparative advantage (RCA) of 28.4, while men’s clothing (RCA, 18.0), women’s clothing (11.6), fish (17.5), fruits, preserved and fruits preparations (17.2), crude materials (18.0), mineral fuels (9.3), and manufactured goods (22.6) are also areas where Albania shows export strengths.

Figure 1 Comparative Advantage, UNCTAD 2022



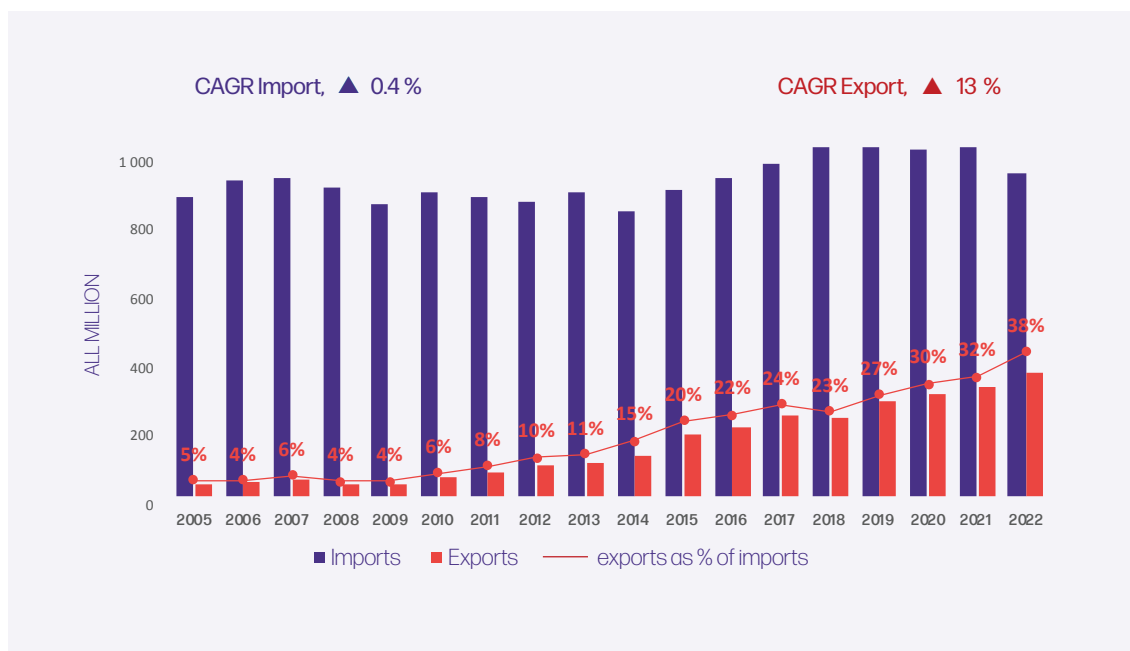
Trade plays a significant role in Albania’s economy, with external trade accounting for 76.4 percent of GDP in 2021. The EU is the country’s main trading partner for both goods and services. Trading of goods with Central European Free Trade Agreement countries has increased, reaching 7.6 percent of GDP in 2021, with Kosovo being the primary destination.¹² With regard to agricultural trade, Albania has made progress in reducing its trade deficit over the past decade (Figure 2). The export to import ratio for agricultural products has

11. https://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx?sCS_referer=&sCS_ChosenLang=en
The plots in the graph are designed to present a full picture of any country’s revealed comparative advantage in producing and exporting a full range of products in a given year. Products plotted are Standard International Trade Classification product groups, revision 3, at the 3-digit level using data from the trade matrix available in UNCTAD Data Centre. The revealed comparative advantage of exported products is indicated in the plot for all product groups with an RCA greater than 1. When a country has such a revealed comparative advantage, it is classed as a competitive producer and exporter of the product compared to countries producing and exporting that good at or below the world average. A country with a revealed comparative advantage for a certain product is considered to have an export strength. The higher the value, the higher the export strength for that product.

12. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52022SC0332>

improved, from 1:20 to 1:3, indicating a more rapid increase in food exports than food imports. However, challenges remain, including the need to address food safety concerns, enhance value-added capacities in primary production and improve coordination within food value chains.

Figure 2 Change in the Albanian trade balance for food products, 2005–2022



Note: Values represent categories 01–24 in the Harmonised classification system, with Compound Annual Growth Rate

Source: National Institute of Statistics (INSTAT), 2023¹³

The labour market in Albania experienced a recovery in 2021 following a slight increase in unemployment during the previous year. The unemployment rate among the age group 15–64 years declined to a record low of 11.7 percent in the first quarter of 2022. Structural changes were observed, including variation in the unemployment rate among tertiary education graduates and young individuals of age 15–24 years.¹⁴ To unlock its full potential, Albania must navigate the middle-income trap and diversify its export portfolio. Enhancing productivity and competitiveness across the economy will be key to achieving equitable and sustainable growth.

TOURISM AND AGRO-PROCESSING SECTORS

Albania’s rural areas have great potential for sustainable nature-based tourism, but such potential is not yet exploited fully nor linked with other sectors of the local economy, such as agriculture and the processing of traditional and typical products to support agro-tourism.

13. <https://www.instat.gov.al/en/themes/international-trade/international-trade-in-goods/>

14. <https://www.instat.gov.al/al/temat/tregu-i-pun%C3%ABs-dhe-arsimi/pun%C3%ABsimi-dhe-papun%C3%ABsia/>

Tourism is expected to be a driving force in the economic recovery following the end of the Covid-19 pandemic, based on a ‘build back better‘ strategy with a focus on increased standardisation and certification to meet the high expectations of tourists. However, this will require an improvement in the skills of employees in the sector. An increased demand for recreational activities and increased appreciation for rural areas is expected.

OWNERSHIP AND AGRICULTURAL LAND STRUCTURE

The major challenge for the Albanian agriculture sector is land tenure and the ownership structure. Agricultural land is mainly owned by small and fragmented farms with an average of 1.3 ha, further fragmented into 5–7 non-contiguous parcels. Such a structure, where the farmed plot is smaller than 0.3 ha, makes agricultural activities difficult, increases transport and production costs, limits the maximisation of the impact of investments and makes the utilisation of advanced technologies virtually impossible. Owing to non-existent economies of scale and difficulties in cultivation, the small and scattered plots of land are often abandoned. Exceptions to this norm are the capital- and labour-intensive types of production such as greenhouses, open-field vegetables and orchards. For comparison, the average farm holding in the EU is some eleven times larger, at 14.2 ha.¹⁵ If Albania were to join the EU with the current ownership structure, it would find itself among the lowest-ranking member countries in terms of average farm size, between Malta (0.9 ha) and Cyprus (3 ha).

LAND DEGRADATION AND CLIMATE CHANGE

Erosion, soil degradation, low levels of land-related investment and the loss of agricultural land to other uses present constant challenges to the entire agro-food sector in Albania. Projected trends in climate change indicate temperature increases of 1–2°C for the country during the summer, as well as fluctuations in precipitation and an increase in extreme weather events, posing serious threats to agriculture production, water availability, food security and economic growth.

EMPLOYMENT AND MINIMUM WAGE

The agro-processing industry plays a pivotal role in driving economic development and offers substantial employment opportunities. Over the past decade, this sector has witnessed remarkable growth, with both income and employment nearly doubling (11,139 employed in 2010; 20,744 in 2021).¹⁶ This impressive expansion can be attributed to a rising domestic demand for processed goods, coupled with an upsurge in the export of plant-based products. However, challenges persist in exporting animal-based products due to incomplete reforms on food safety (limited resources, lack of institutional capacity, ineffective regulatory framework implementation and enforcement, and insufficient public awareness of food safety practices) and non-compliance with international food safety standards. Moreover, mass emigration is making it extremely difficult for agro-processors and agricultural sector

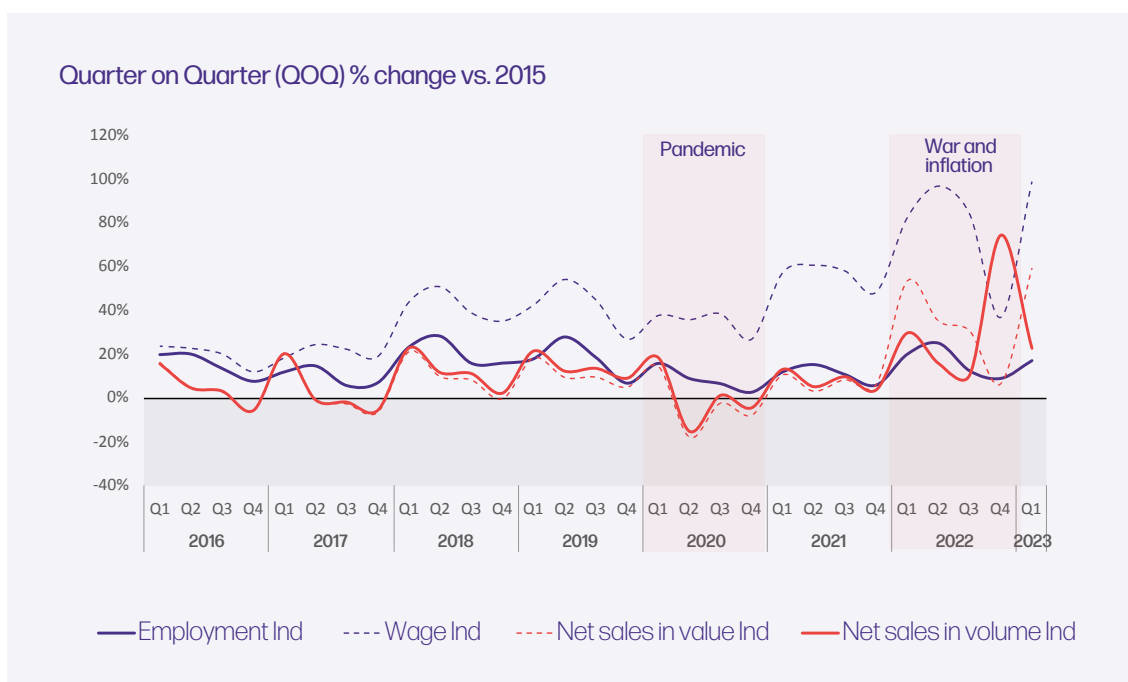
15. https://ec.europa.eu/eurostat/databrowser/view/ef_m_farmleg/default/table?lang=en

16. https://databaza.instat.gov.al:8083/pxweb/en/DST/START__EE/SSEO3/

stakeholders to find a labour force. Moreover, all interviewed stakeholders emphasised that this absence has led to a considerable increase in payments for agriculture, from ALL 1,000–1,200 per day prior to 2022 to ALL 2,000–2,500 per day in that year. Some initiatives have been made by large enterprises to bring workers from abroad. During one interview, it emerged that a large farmer and processor of MAPs had employed fifty workers from Bangladesh during the 2021 harvest season and was planning to do the same in 2022. The payment per worker was USD 250 (about ALL 26,775)¹⁷ per month. Some interviewed stakeholders believe that the future of the agricultural labour market in Albania rests with the foreign workforce though this will be feasible almost exclusively for big farmers and agro-processors.

Figure 3 shows that the uptrend in employment came to a halt in 2019, started to decline during 2020 but subsequently returned to pre-Covid levels. Interestingly from the beginning of 2022 the indices net sales in value and net sales in volume began to diverge, explained by the high levels of inflation that began in 2022.

Figure 3 Indices for the food, beverage and tobacco industry



Source: INSTAT, 2023¹⁸

IMPLICATIONS OF MULTIPLE CRISES

The Covid-19 pandemic had a highly significant socio-economic impact on all of society, though many of the disruptions have since been alleviated. Disruptions included supply

17. Exchange rate on 31 December 2022 was USD 1 = ALL 107.1.

18. <https://www.instat.gov.al>

chain impacts that led to higher costs for wholesalers due to travel restrictions, price shocks and delays in agricultural processes such as harvesting and planting. Many of these disruptions have since been mitigated.

The war in Ukraine aggravated further the existing challenges in Albania's agricultural sector, such as scarcity of labour force, limited access to markets, and farmers facing financial constraints. The conflict drove up significantly the prices of crucial agricultural inputs, including fertilisers and feed, which surged by at least 200–250 percent, impacting the cost of production for farmers.

This price escalation had a disproportionate impact on Albania when compared to the international market. The Albanian market is highly concentrated, with three major companies responsible for 76 percent of all urea imports. These companies were able to maintain significantly higher profit margins compared to industry standards in other countries.

Such factors compounded the difficulties faced by Albanian farmers, hindering their productivity and profitability. Addressing these issues and ensuring fair competition within the market are vital steps towards promoting a sustainable and resilient agricultural sector in the country.

Due to limited liquidity, small and medium farmers reduced the use of inputs in response to price spikes. With an increase in food prices, farmers allocated less money to input procurement and, with a surge in input prices, bought much less than they used to, leading to lower yields, soil depletion, lower profitability and often a rash decision to give up the work.

IMPLICATIONS PER SUB-SECTOR

Increases in product prices were some 18 percent for bread and cereals, 20–35 percent for fruit and vegetables and 10–18 percent for milk and meat (Figure 4). The combined increase of product and input prices had differing impacts on the profitability of the agro-food sectors.

For wheat and maize producers, profitability increased. On the other hand, dairy producers experienced a significant reduction in profitability. The sub-sector of small ruminants placed under an extensive grazing regime was more resilient than where livestock are placed under an intensive grazing regime.

Figure 4 Albania Consumer Price Index (CPI) changes (month on month % change since December 2020)



NOTE: cereals includes bread; milk includes cheese and eggs; vegetables includes potatoes

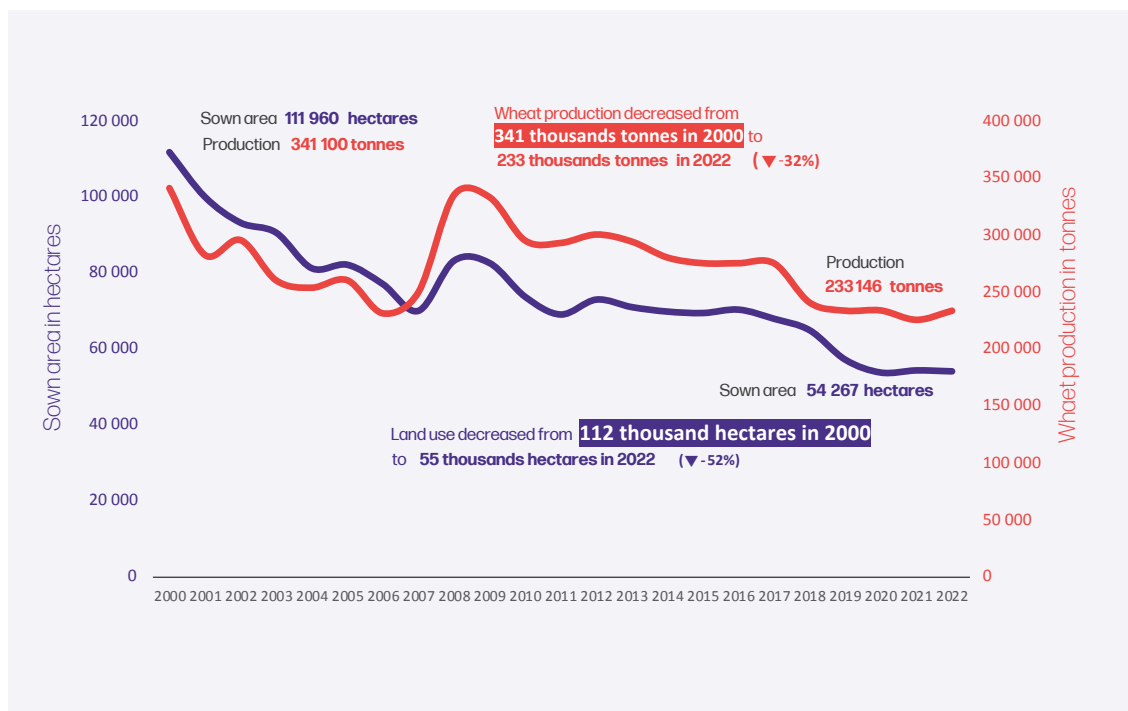
Source: INSTAT (2023)¹⁹

Over the past decade, wheat production in Albania has been steadily declining, reaching only 225,000 tons in 2021 (Figure 5), a decline of 30 percent compared with 2009. This decline is attributable to the reduction in the area sown with wheat, which has, over the same period, decreased by about 35 percent (from 82,778 ha in 2009 to 54,514 ha in 2021).²⁰ In addition, most domestic wheat goes for animal feed. Meanwhile, about ten percent of processed wheat comes from domestic supply, with the rest coming from imported wheat.

19. https://databaza.instat.gov.al:8083/pxweb/en/DST/START__PR__PRCPI/CPI003/

20. <https://www.instat.gov.al/en/themes/agriculture-and-fishery/agriculture/>

Figure 5 Albania wheat production changes, 2000-2022

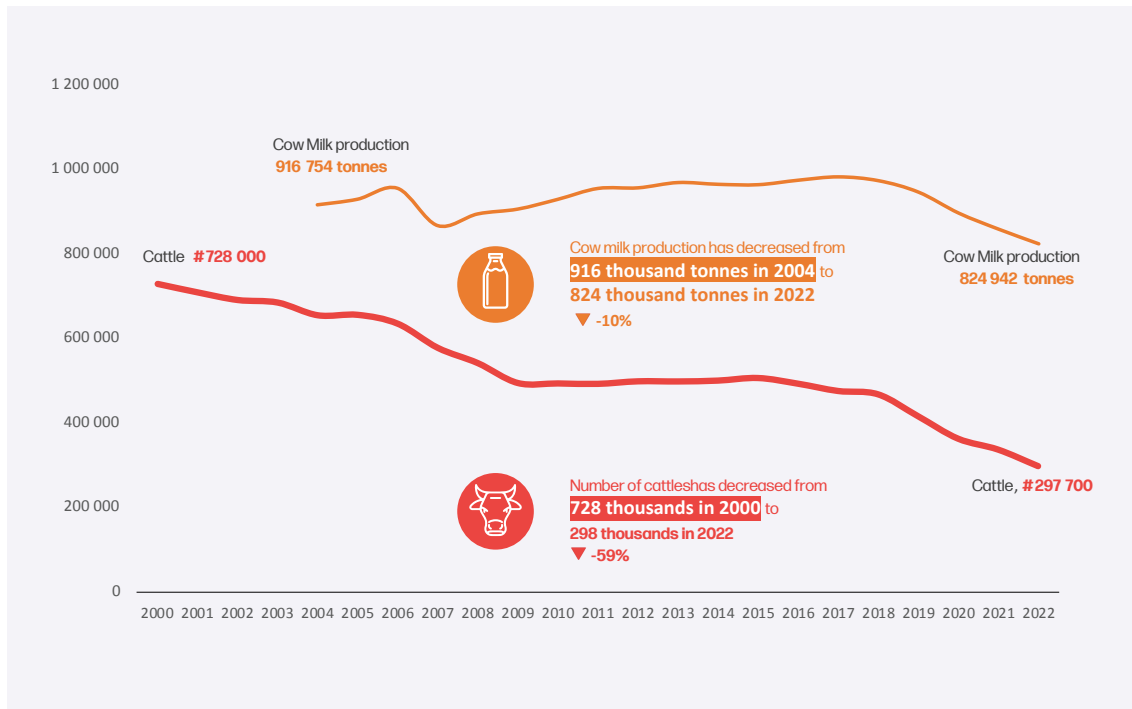


Source: INSTAT, 2022

Large livestock production has been constantly declining over the past two decades with a trend that appears to have accelerated over the past 2–3 years, especially for cow farmers (Figure 6). The main reasons for the decline are lack of a labour force, low profitability due to low prices (particularly for milk), limited government support and, recently, increased feed costs, as well as the grazing regime. For comparison, small ruminants are generally placed under an extensive grazing regime, which tends to be more resilient, and no accelerating trend in reduction has been observed in that sub-sector.

The significant decline in the number of cows is primarily driven by small farmers who have been forced to sell their animals and cease their operations due to low profitability. The substantial increase in feed costs during 2022 made it financially unsustainable for many farmers to maintain their livestock. In contrast, larger cow farmers have been expanding their herds. To ensure the long-term development of the dairy sector, it is crucial to extend support to those farmers who have the potential to thrive. Identifying and assisting these farmers will contribute to the growth and sustainability of the dairy industry. Conversely, it is important to acknowledge that some farmers may no longer be viable in the current market conditions. In such cases, it may be necessary for them to exit the industry and explore alternative livelihoods. Balancing support for promising farmers and facilitating an orderly exit for those unable to sustain their operations will foster a resilient and prosperous dairy sector.

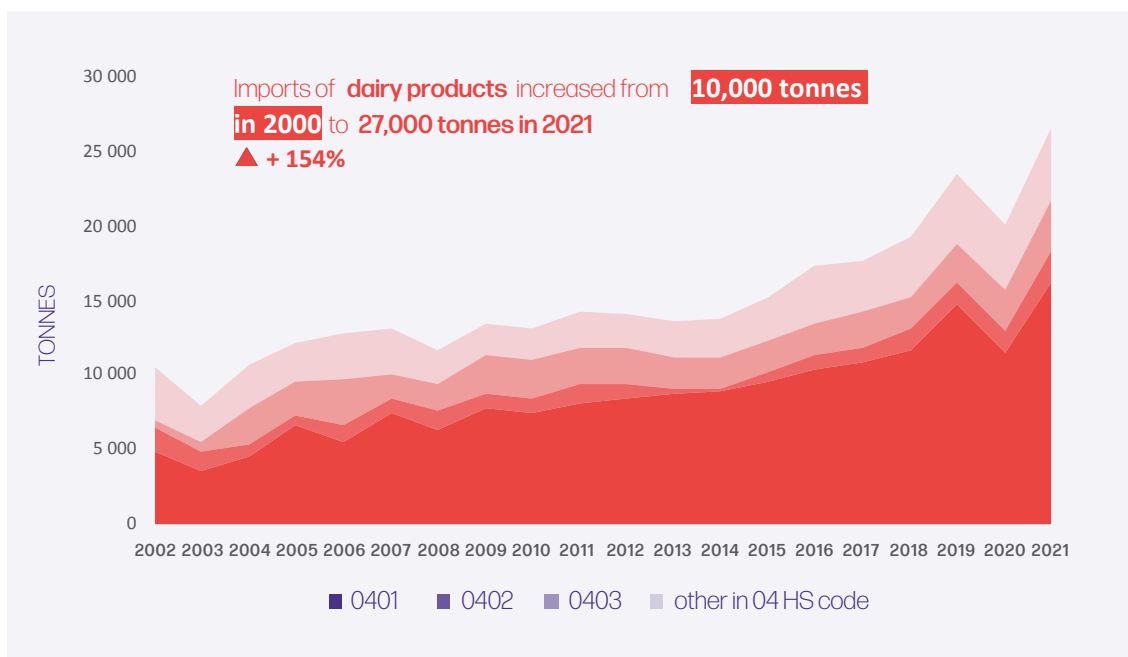
Figure 6 Change in cattle numbers, 2000-2022



Source: INSTAT, 2022

The milk processing industry is struggling to secure a domestic supply for maximum processing capacity, resulting in increases in dairy product imports over the past two decades (Figure 7). The number of milk processing businesses and the quantity of processed milk has also declined significantly (some dairy processors claim cheese production fell by 20% in 2022 compared to the previous year).

Figure 7 Albanian imports of dairy produce²¹



GOVERNMENT SUPPORT TO THE SECTOR

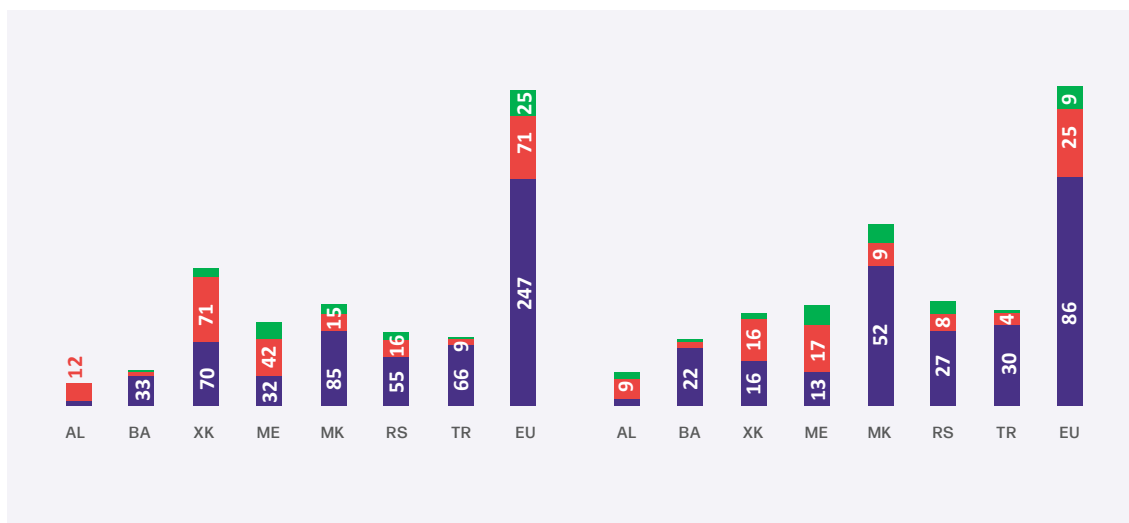
Figure 8 compares the total agricultural support from the governments of the seven EU pre-accession countries with the EU average.²² The differences in the budgetary support per ha among the countries are significant, ranging from EUR 32 and EUR 39 in Albania and Bosnia and Herzegovina, respectively, to EUR 150 in Kosovo.²³ Financial support per inhabitant varies from EUR 13 in Albania to EUR 68 in North Macedonia. The figures for Albania are significantly less than for all countries in the comparison, putting Albanian agro-food businesses (mainly farm producers) in a difficult competitive position and affecting the profitability and future prospects of the sector.

21. HS code 0401, Milk and cream; not concentrated, not containing added sugar or other sweetening matter; HS code 0402, Milk and cream; concentrated or containing added sugar or other sweetening matter; HS code 0403, Buttermilk, curdled milk and cream, yoghurt, kefir, fermented or acidified milk or cream, whether or not concentrated, containing added sugar, sweetening matter, flavoured or added fruit or cocoa.

22. https://seerural.org/wp-content/uploads/2021/09/wb_agricultural_policy_developments.pdf

23. While the amount of government support in the Western Balkan counties is much less than the EU average, some Western Balkan countries and Turkey are comparable to certain eastern EU member states: e.g., EUR 137 per ha in Latvia; EUR 175 in Lithuania; EUR 214 in Bulgaria; and EUR 218 in Romania (European Commission, 2020).

Figure 8 Total budgetary support per hectare (left; EUR) and total budgetary support per capita (right; EUR), 2017-2019



NOTE: blue, market and direct producer support measures; red, structural and rural development measures; green, other measures related to agriculture

Source: Martinovska Stojcheska, et al., 2021²⁴

24. <https://op.europa.eu/nl/publication-detail/-/publication/e918b054-ob93-11ec-adb1-01aa75ed71a1/language-en>

3.1 Enterprises in the agro-food sector

According to INSTAT in 2021, 48.4 percent of legal enterprises operating in Albania are registered as natural persons with Albanian ownership. The private sector in Albania is dominated by small and medium-sized enterprises (SMEs). Table 2 reports a general overview of enterprises in the country, classified by size and economic activity. The number of enterprises in the industry sector (including agro-processing) has decreased (by 6%), from 9,571 in 2020 to 8,991 in 2021. In addition, 68.5 percent of enterprises in the sector have 1–4 employees, with 5.7 percent categorised as large enterprises with more than 50 employees.

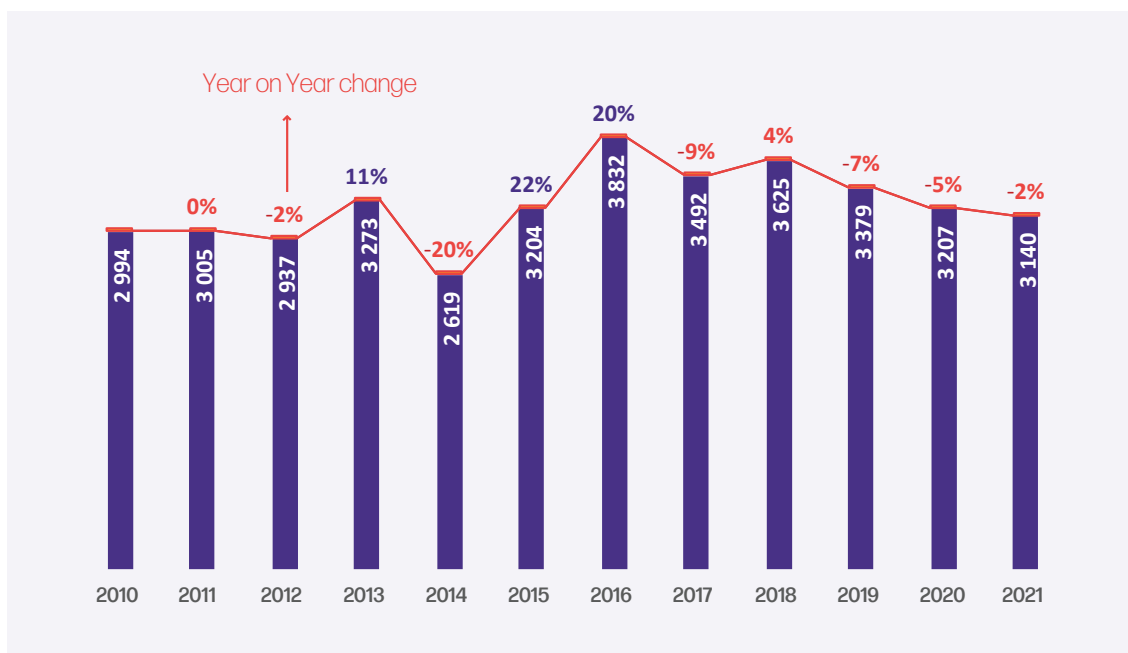
Table 2 Active legal enterprises, by size (no. of employees) and economic activity, 2020–2021

Economic Activity	No. of businesses, 2020					No. of businesses, 2021				
	Total	No. of employees				Total	No. of employees			
		1–4	5–9	10–49	50+		1–4	5–9	10–49	50+
Producers of goods	65,042	60,403	1,704	2,177	758	78,798	74,037	1,972	2,080	709
<i>farmers</i>	49,053	49,053	-	-	-	62,922	62,922	-	-	-
<i>agriculture, forestry and fishing</i>	1,358	1,186	86	74	12	1,354	1,187	91	66	10
Industry	9,571	6,714	1,042	1,282	533	8,991	6,162	1,098	1,222	509
Construction	5,060	3,450	576	821	213	5,531	3,766	783	792	190
Providers of services	101,344	89,369	5,879	4,875	1,221	102,751	90,444	6,275	4,782	1,250
Total	166,386	149,772	7,583	7,052	1,979	181,549	164,481	8,247	6,862	1,959

Source: INSTAT, Business Registry

Figure 9 shows the change in the number of enterprises in the agro-food industry since 2010. In 2021, there were some 3,140 active enterprises in the sector, accounting for 35.7 percent of all active enterprises in Albanian industry. However, there has been a decline since 2016, when the number peaked at 3,882.

Figure 9 Change in the number of agro-food enterprises, 2010-2021



Source: INSTAT, Business Registry

The vast majority (90%) of enterprises in the industry sector are owned by Albanians, with only 3.2 percent co-owned with foreign investors (Table 3).

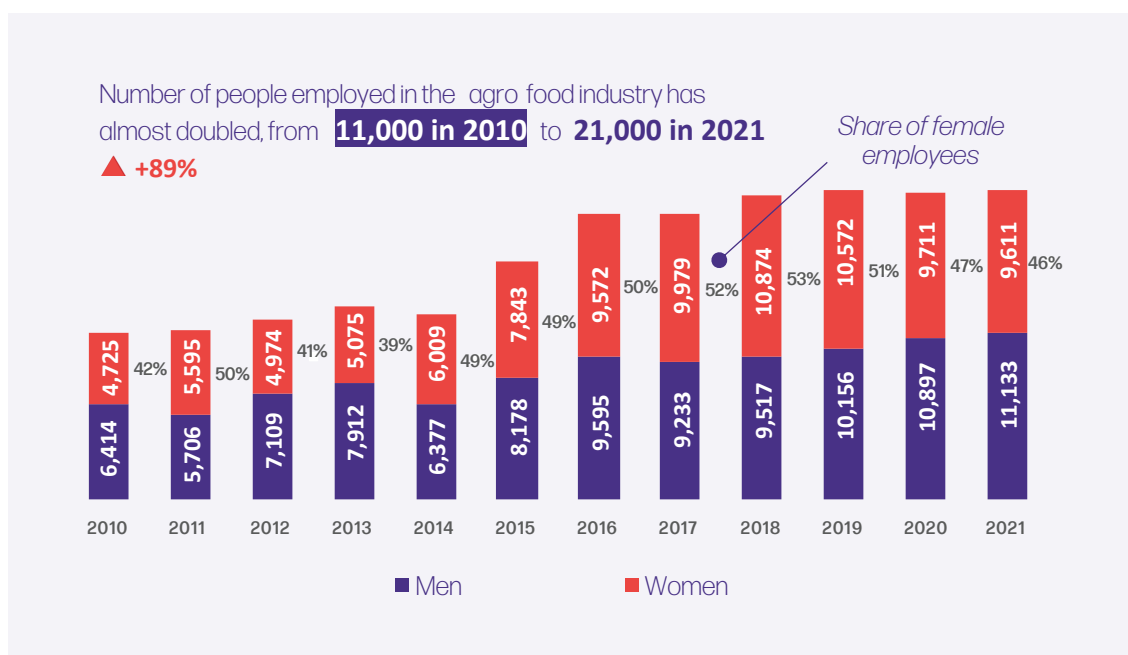
Table 3 Active legal enterprises, by ownership and economic activity, 2020-2021

Economic activity	2020				2021			
	Total	Albanian	Foreign	Joint	Total	Albanian	Foreign	Joint
Producers of goods	65,042	63,542	1,076	424	78,798	77,261	1,116	421
<i>farmers</i>	49,053	49,053	-	-	62,922	62,922	-	-
<i>agriculture, forestry and fishing</i>	1,358	1,293	36	29	1,354	1,276	45	33
Industry	9,571	8,675	602	294	8,991	8,106	597	288
Construction	5,060	4,521	438	101	5,531	4,957	474	100
Providers of services	101,344	96,809	3,357	1,178	102,751	97,653	4,134	964
Total	166,386	160,351	4,433	1,602	181,549	174,914	5,250	1,385

Source: INSTAT, Business Registry

Meanwhile, the number of people employed in the sector has doubled during the past decade (Figure 10). Whereas the proportion of women employees in the agro-food industry in 2010 was 42.4 percent, it increased to 53.3 percent (the highest level of the decade) in 2018, before falling again to 46 percent in 2021.

Figure 10 Total number of women and men employed by the agro-food industry, 2010-2021



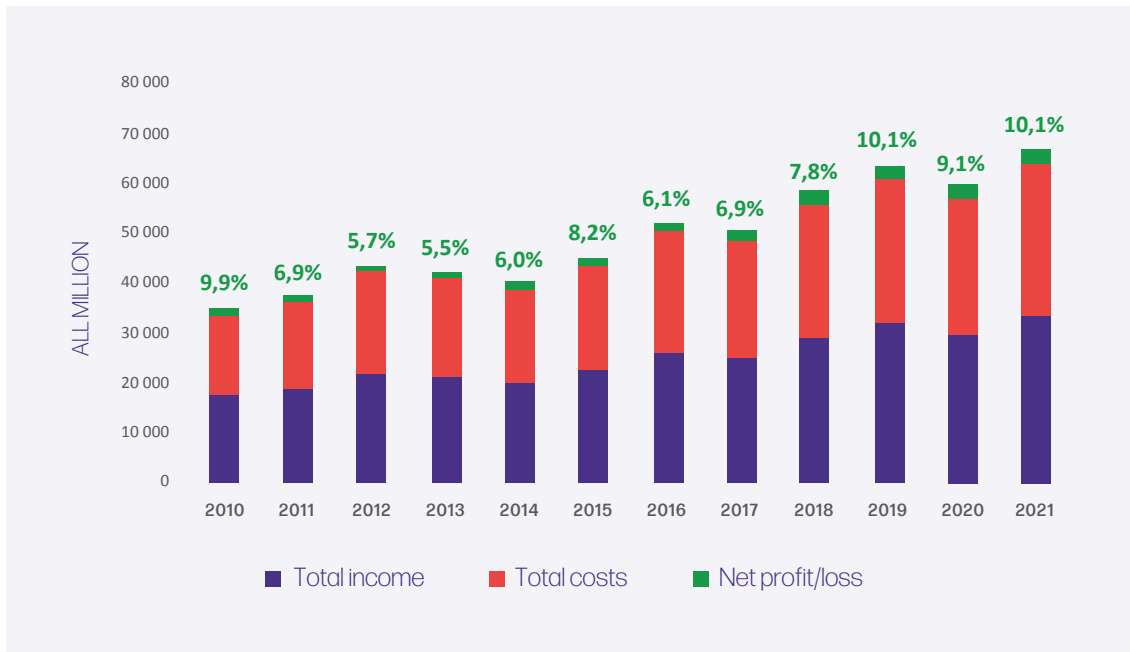
Source: INSTAT, Business Registry

3.2 Operations in the agro-food industry

During the past decade, an upward trend has been recorded for the income generated by the agro-food industry in Albania (Figure 11). In 2019, the net profit for the sector was the highest in that decade, at ALL 5,867 million (with a profit margin, of net profit to total income, of 10.1%).

In 2020, the Covid-19 pandemic caused a contraction in the global economy, impacting Albania and resulting in a reduction in the net profit to ALL 4,945 million (15.7% decline from 2019). Nevertheless, despite the pandemic, the agro-food industry sector was able to generate profits and did not experience any significant losses, though there are no data to measure the sustainability of the sector.

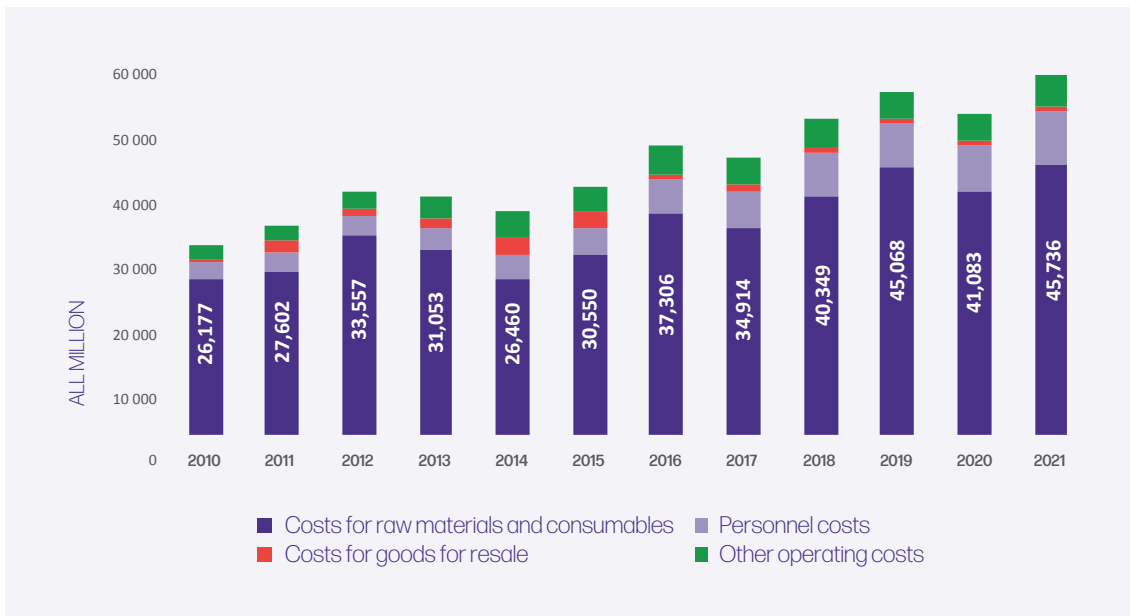
Figure 11 Incomes for the agro-food industry, 2010-2020



Source: INSTAT, Enterprise Survey

With regard to operational costs, the main expenses in the agro-food industry are for materials and equipment (Figure 12).

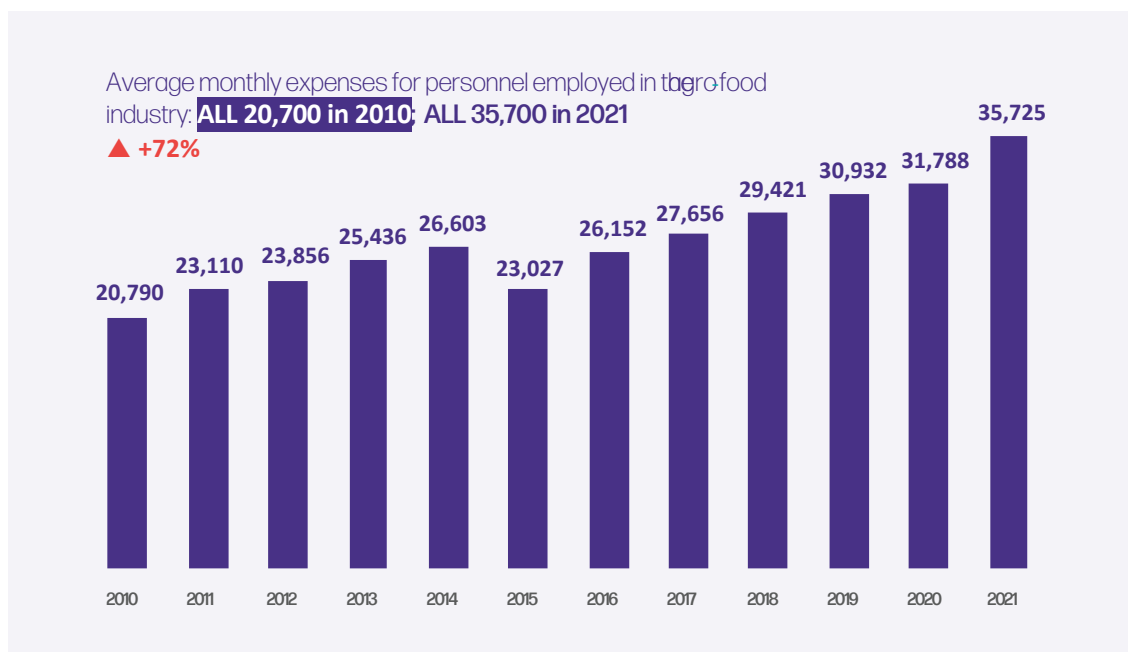
Figure 12 Categories of costs in agro-food industry, 2010-2021



Source: INSTAT, Enterprise Survey

Whereas the share of costs for materials and equipment in the total business costs has decreased, from 81.8 percent in 2010 to 75.5 percent in 2020, the share of personnel costs (wages, training, social insurance and bonuses) has increased, from 8.7 percent to 14.5 percent over that same period, seen in the 53 percent increase in such costs over the past decade, from ALL 20,790 in 2010 to ALL 31,788 in 2020.

Figure 13 Change in average personnel expenses in the agro-food industry, 2010-2021



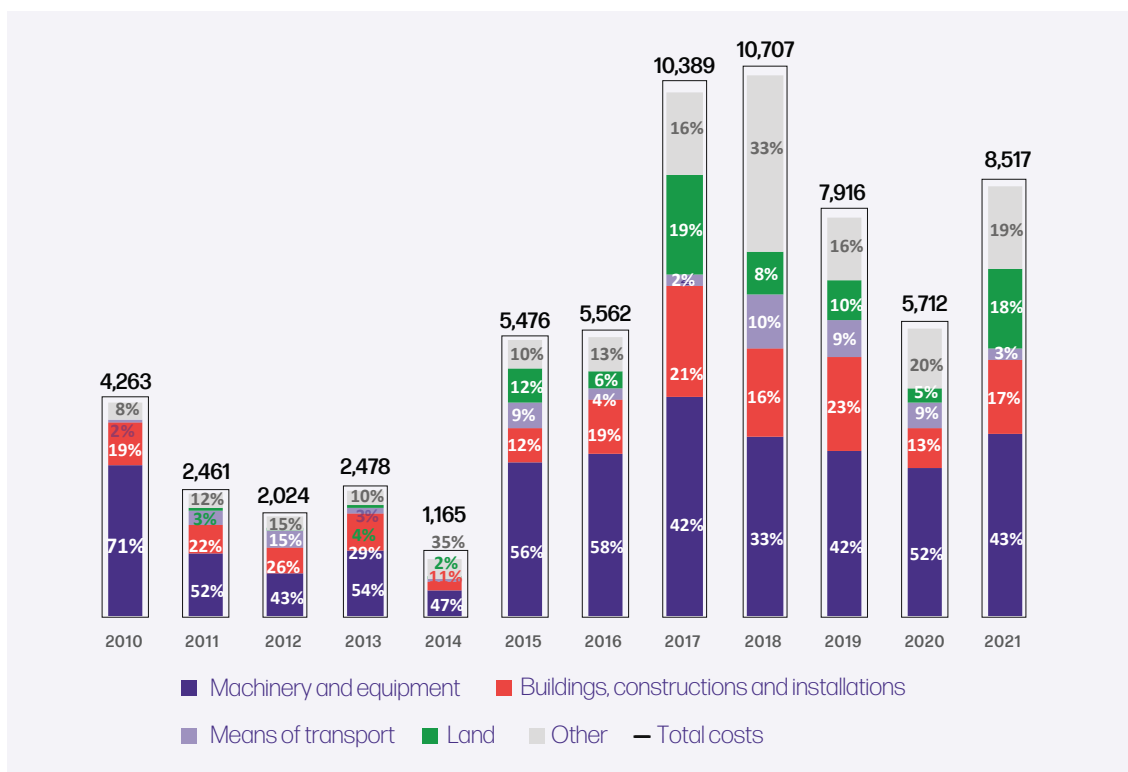
NOTE: Personnel expenses from Figure 13 divided by total employees at the end of the year from Figure 11

Source: INSTAT, Enterprise Survey

Finally, Figure 14 presents the investment made by agro-food enterprises during the past decade. Total investment in the sector declined between 2010 and 2014, reaching the lowest value for the decade, at ALL 1,165 million in 2014.

Subsequently, investment in the sector increased rapidly, reaching the highest level for the decade, at ALL 10,708 million in 2018. Since then, investment has been declining, reaching nearly half the value of 2018 in 2020 (ALL 5,712 million). Also, from 2018 to 2020, the three main investments in the agro-food industry have been machinery and equipment; buildings, constructions and installations; and transport.

Figure 14 Change in investment in the agro-food industry, 2010-2021



NOTE: Total costs reported in value above each bar

Source: INSTAT, Enterprise Survey

Regrettably, there is at present a lack of disaggregated data to facilitate separation of the agro-food industry into its constituent parts, identification of the various types of actors involved and assessment of their relative profitability. Absence of such data hinders the ability to discern potential disparities in performance across the various subdivisions, including those that are more the target of UN agencies' support. Consequently, tailored interventions aimed at enhancing specific segments cannot be effectively identified at this time.

4.

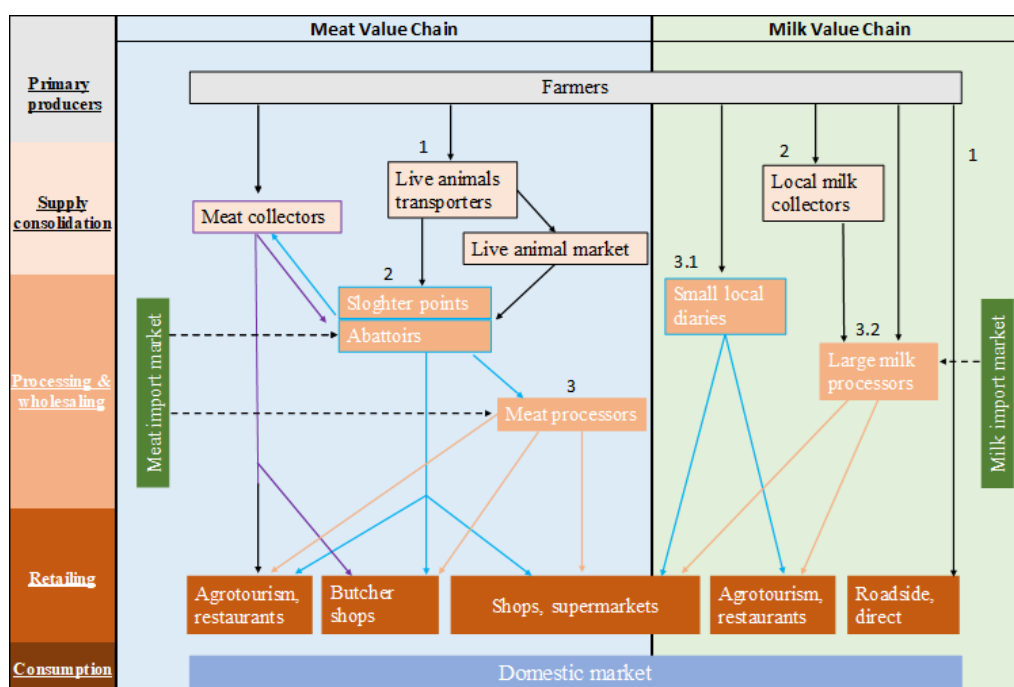
VALUE CHAIN ORGANISATION IN THE AGRO-PROCESSING SECTOR

This section reports how the value chains are organised in each of the sub-sectors of Albania’s agro-processing industry. A map of the value chain is provided for each sub-section of the report, including the stakeholders involved and the main marketing channels through which the products flow.

4.1 Milk value chain

Figure 15 shows four different channels through which meat and milk flow from cattle farmers to the end consumer or the import market (all channels start at the farm with a black arrow showing the product stream). The main stakeholders in the milk value chain are, in order of flow, dairy farmers, milk collectors, milk processors and dairy produce wholesalers and retailers. Each of the main levels of the chain are, in turn, discussed in Section 3 (dairy farmers), four (milk collectors and processors) and five (retail and end consumers).

Figure 15 Meat and milk value chain



ONE CHANNEL IS INFORMAL through which milk goes directly from the producer to the end consumer. This channel has various methods of operation, including:

- Ambulant vending in the main cities. In general, this method is used by small farmers living close to the city.
- Selling directly to the consumers’ homes. In this case, the farmer delivers the milk directly to the consumer’s home or to a specific place where their clients will pick it up.

- Selling directly to neighbouring farmers in a village. This route appears to have found wider use during the past year due to the fact that many farmers who own one or two cows have been selling their animals. Interviews with farmers show that it is more profitable to sell to neighbouring farmers who do not own cows than to processors.

A SECOND CHANNEL IS VIA AN INTERMEDIARY where the farmer sells the milk to a local collector, who consolidates the supply and then sells it on to a large processor. In general, this channel is used by farmers with fewer than ten cows and those who live far from a processor, such as in remote areas. This channel tends to operate informally and is prone to problems with milk quality and safety.

A THIRD, ALTERNATIVE, CHANNEL IS AN INTEGRATED CHANNEL where farmers sell directly to milk processors. However, there is a difference between selling to a local small processor and selling to a large milk processor. Local and small farmers are generally unable to produce large quantities of produce and to meet the higher standards of large processors. In addition, local processors lack the capacities to assist the farmers. On the other hand, large processors have attempted in previous years to integrate directly larger farmers (with more than 10 cows and which produce large quantities, e.g. 100 litres, of milk per day; for the example of Lufra, see Section 4) and provide them with assistance through veterinary services and installation of cooling tanks. Moreover, the channel from farmer to large milk processor tends to be more formal and the milk supply is of higher quality and standards. The integrated channel can be split further: 1, where the farmer supplies a small local dairy; and 2, where the farmer supplies a large milk processor.

4.2 Meat value chain

Figure 15 shows the main channels and stakeholders in the meat value chain, including cattle farmers, live animal transporters, meat collectors, the live animals market, slaughterhouses and slaughter points, meat processors and retail shops (butchers, restaurants and supermarkets). Three main channels exist for this chain: direct (purple line in Figure 15), local processing (blue line) and industrial processing (orange line).

The direct channel (1) has various methods of operation, including:

- Selling live animals directly to agrotourism business operators, either directly from farmer to the business or through an intermediary (e.g. meat collector). The intermediary transports the animals to the slaughterhouse and then delivers the slaughtered animal to the agrotourism agent.
- Selling directly to end consumers, e.g. when an end consumer buys a calf directly from a farmer for an occasion. However, this is a rare case.

- ↘ Selling directly to butchers in cities.
- ↘ Selling directly through the live animals market.

In the local processing channel (2), meat collectors and slaughterhouses buy live animals, either directly or through the live animals market, process the meat and sell it to the end consumer via the retail market.

The industrial meat processing channel (3) operates with much larger quantities than the other channels. Purchases are not made directly from small ruminant farmers but rather through a supply consolidator (e.g., meat collector or local slaughterhouse). Moreover, their main source of supply is not the domestic market, but the import market. During one FGD, one of the participants stated that fresh meat traded by industrial meat processors comes from the Netherlands, while the meat used for processed meat products (e.g., sausages, salami) comes from South America. Once the meat is processed, it is sold in supermarkets.

4.3 Fruits and vegetables value chain

The fruit and vegetable sector play a very important role, not only as an inherent culture among Albanian farmers, but also for consumption by the Albanian population. The sector benefit from favourable climatic conditions, which enable early production for several types of fruits and vegetables and create considerable export opportunities. Considering the large variety of fruits and vegetables, which make it impossible to develop a value chain map for each product, the focus here is only to discuss the greenhouse vegetable value chain and the apple value chain, but which are representative of the other fruit and vegetable chains.

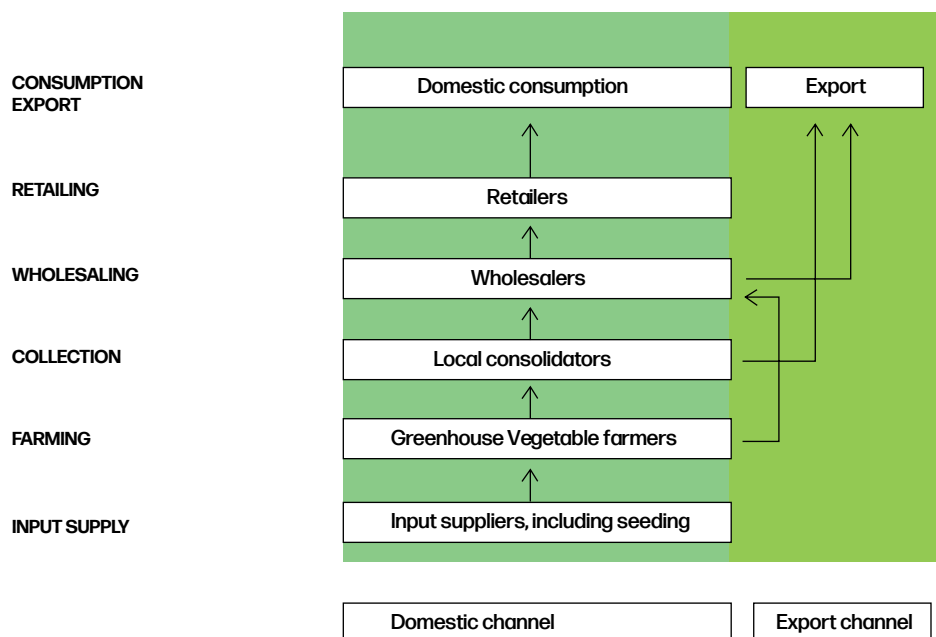
GREENHOUSE VEGETABLES

The four main categories of stakeholders in the greenhouse vegetable value chain are input suppliers, greenhouse producers, local consolidators and wholesalers. Figure 16 maps the greenhouse tomato and cucumber value chain stakeholders and the main channels through which these products flow from the farmer to the end consumer.

Input suppliers are an important stakeholder and represent a node in the greenhouse vegetable sector. While seeds are typically imported, there are several seedling producers, two of whom are large producers engaged in the export of fresh fruits and vegetables. These producers tend to develop closer relations with farmers by providing seedlings and buying their products, thus taking on an important coordinating role.

There are input suppliers, who conduct (field demonstration) experiments for adaptation of various vegetable cultivars.

Figure 16 Greenhouse vegetable value chain map



Source: Skreli and Imami, 2019²⁵

The number of greenhouse farmers in Albania has increased substantially over the last two decades and now exceeds 8,000 (Table 4). Whereas there are many farms (>5,000) with up to 0.20 ha of greenhouses each (with produce generally for own-consumption with surplus sold on the market), 2,744 farms have 0.20–0.50 ha each (considered viable farms) and 710 have more than 0.50 ha each (considered commercial farms with large greenhouses).

Table 4 Commercial farms with tomato and cucumber greenhouses in 2020

Greenhouse farm size	No.
up to 0.20 ha	5,255
0.20–0.50 ha	2,744
>0.50 ha)	710

Source: Skreli and Imami, 2019

Greenhouse vegetable production in Albania is a success story. There has been sufficient yield and, years ago, even surpluses, and it is the main category of exported horticulture or food products, including tomatoes and cucumbers.

25. <https://aatsf.com.al/wp-content/uploads/2020/04/6GreenHousecover-EN.pdf>

Greenhouse farmers use both heated and unheated greenhouses, with unheated greenhouses more prevalent than heated greenhouses for vegetable production as the latter are not profitable in Albania.²⁶

There are some 30 consolidators focused on greenhouse production, in the municipalities of Berat, Dimal, Divjaka, Fier, Kuçova and Lushnja. They collect the produce from farmers and export it (greenhouse vegetables are the only, or at least the main, exported or sold products among the consolidators) or sell it to wholesalers for distribution to domestic retailers. Local consolidators typically invest in storehouses and transport, though most lack cold storage, sorting, cleaning and packaging, with a few exceptions.

Large wholesalers are becoming a key factor in the greenhouse vegetable value chain for the domestic market. Although they do export fruits, the activity of these wholesalers is mainly focused on greenhouse vegetables.

APPLES

The main groups of stakeholders in the apple value chain are input suppliers, farmers, consolidators (cold storage operators) and wholesalers.

Input suppliers provide important support to the fruit sector. There are two categories of input suppliers: 1, seedling producers and suppliers, with some of the main seedling producers based in the Korça production cluster; and 2, others who sell fertilisers and pesticides, but which are also an important source of information and advice.

Three types of fruit seedling nurseries can be distinguished, based on size and the technology used:

- A. FAMILY PRODUCTION NURSERIES**, characterised by low cost and quality but competing in specific segments of the seedling market. This practice is mastered and applied by qualified employees who have worked for a long time in the production nurseries of centralised economies, but also by other staff who have mastered this profession while in emigration.

- B. SEMI-ORGANISED AND ORGANISED SEEDLING PRODUCTION NURSERIES**, which work with partially optimal and optimal parameters and exercise their activity within the recognised formal certification scheme. Such nurseries may be specialised in the production of seedlings of fruit trees, olives and citruses, but may also comprise mixed nurseries. These units are registered with the National Business Registration Centre and licensed by the structures of the Regional Agency of Veterinary and Plant Protection

26. Since in Albania there are no fiscal incentives such as subsidies or reduced taxes for fuel for greenhouse heating, the running of heated greenhouses is very costly and non-competitive compared to other countries in the region that have much lower fuel costs for agriculture-related uses, including heating.

Service and the State Entity for Seeds and Seedlings. In their annual practice, the latter and the inspectors in charge of implementing the legislation on seedling production conduct some annual tests, fill in a series of standard forms and, by the end of each agricultural year, provide the units with a certificate for seedling production. This presumes that the plant propagating material, seeds, seedlings, etc., are ready to be traded and planted in new orchards, or to be used for the production (propagation) of plants.

C. INDUSTRIAL PRODUCTION NURSERIES DO NOT ONLY FUNCTION AS IN-VIVO PRODUCTION GREENHOUSES but also as in-vitro breeding laboratories. The apple value chain includes six such units, specialised in performing delicate production operations and using contemporary high-quality techniques. As production units, they can compete in both domestic and foreign markets, and include greenhouses producing in-vivo seedlings (with fog producing sections) while the in-vitro production laboratories (buds and meristems) produce certified rootstocks for stone-fruit trees and vines. For certain species of commercial value and economic importance, seedling production techniques have advanced and created a separate sector.

Apple farmers are concentrated mainly in the Region of Korça, and to a lesser extent in the Region of Dibra. Most apple farms are small. Nevertheless about 500 farms are reported to have more than 1 ha of apple orchards each, an increase on previous years.²⁷ Table 5 reports the number of farms with more than 0.2 ha (which can be presumed to be oriented towards the market, though they are not necessarily economically viable).

Table 5 Apple and other pome fruit farms, 2020

Surface area (ha)	Number of farmers	Other pome fruits
0.2–0.5	7,601	3,137
0.6–1.0	1,766	231
1.1–2.0	420	31
2.1–5.0	52	1
>5.0	23	1

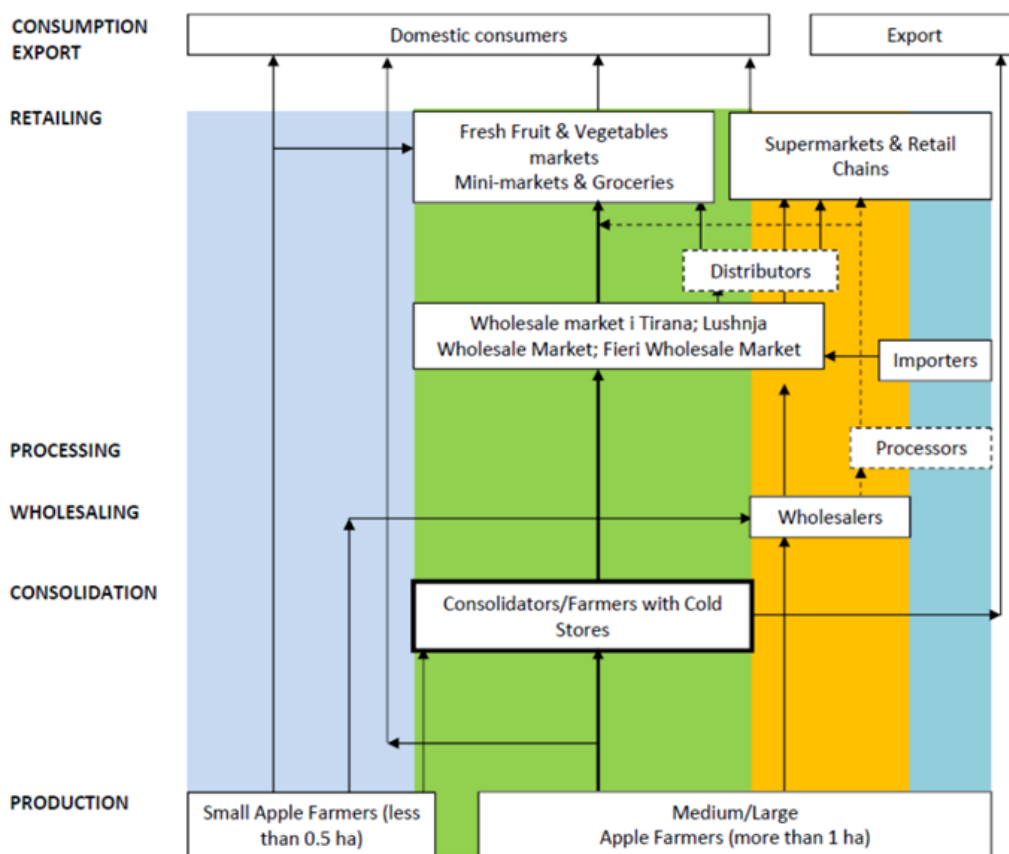
Source: Skreli & Imami, 2019²⁸

27. Skreli, E., Imami, D. (2019). Apple sector study. Technical report prepared for EBRD AASF.

28. <https://aatsf.com.al/wp-content/uploads/2020/04/applecover-EN.pdf>

Consolidators are usually medium to large-size farmers who have invested in cold storage facilities (Figure 17). Many cold storage owners in both Korça and Dibra, particularly the former, are farmers with storage capacities larger than required for the apple production of their own farms. They buy fruit from local producers and play a key role in facilitating access to the market of apple growers in the traditional market channels. While such consolidators are the leading stakeholder in the apple value chain, large wholesalers, such as Doni Fruits, may also be considered as apple value chain stakeholders; recently, they have shown a growing interest in apple export. These large wholesalers have invested in storage capacities, including cold storages, while new large investments are expected soon, and represent a focal point between medium–large apple growers and supermarket chains. Small–medium-sized wholesalers operate in the domestic market only, serving as a focal point between the consolidators and the retailers, of all kinds, and are equipped with small and simple transport facilities.

Figure 17 Apple value chain map



Source: Skreli and Imami, 2019²⁹

29. *ibid.* 45.

FRUIT AND VEGETABLE VALUE CHAIN COORDINATION

Better performing value chains are required to enable competition with imports, while higher standards are required to improve access to export markets, particularly the lucrative EU markets, which are very demanding as highlighted above. Standards and technical requirements, including traceability, can be achieved, improved and maintained only through efficient vertical and horizontal coordination.

In Albania, various forms of vertical coordination are noted, varying by sector, product and type of farmer. Spot market remains an important means of coordination in the horticulture sector. Regarding the type of agreements between farmers and buyers, previous studies show that written (formal) contracts are rather uncommon, while informal (verbal) agreements are widely used. Differences between sectors can be observed regarding the use and type of contracting and agreements. For some sectors and products (e.g., greenhouse tomatoes), agreements (written or verbal) are more common.

According to a study by ISETN (*Institute of Economic Studies and Knowledge Transfer*), there are four main reasons for such a lack of contractual relationships in Albania: i) contracting is not a standard when doing business,³⁰ ii) farmers do not perceive any benefits from contracts, iii) the buyers do not agree with contracting terms, and iv) the farmers do not trust the buyers.

Farmers' trust in the buyer and the information they provide are considered as a strong predictor for establishment of a contract in the greenhouse vegetables value chain. Again, the more information the buyer provides to the farmer about the market (e.g., sought-after varieties, product standards, prices, market potential), the more favourable the farmer's decision.³¹

Although apple farmers sell more often to previous buyers than to others, coordination between farmers and downstream stakeholders is weak. Though oral contracts are more common than written contracts, they do not always imply a well-established relationship. Value chain leadership is not consolidated (some anecdotal cases of people ready to take chain control are emerging). However, local consolidators are key in the value chain and likely to assume a leadership role. The recent massive investment in cold storage facilities has made apple cold storage operators a real factor that will, most probably, play a structuring role in the sector in the years to come.

Consolidators are also becoming a key factor in the tangerine value chain. Coordinated action led by consolidators has already been observed in the sector. Some consolidators have provided guidance to farmers with respect to tangerine cultivars demanded in the export market and, more importantly, on cultivar mixing in order to ensure a smooth

30. ISETN (2017). National Economic Potentials of Contract Farming and Agriculture Cooperation in Albania. Report prepared for GIZ.

31. *ibid.* 48.

supply. Visionary consolidators who target the EU market assign critical importance to the establishment of working relationships with farmers in order to procure high-quality fruits. In the case of vegetables (especially from the greenhouse) and watermelon (and melon), key stakeholders (e.g., Doni Fruits, Biti & Co. and AgroKoni) deal repeatedly with a core group of farmers. Doni Fruits, Hatia Group and Roland-2012 have Global Good Agricultural Practices (GAP) certificates for tomatoes and cucumbers as producers, and source their produce from 77 tomato farmers and 29 cucumber farmers (Skreli & Imami, 2019). Although some flexibility exists in the relationships with farmers (with some entering and exiting relationships with buyers), there is a core group with whom buyers have more stable relationships. The latter sell inputs to this group of farmers, sometimes allowing late payments, offering advice and technical information and purchasing the produce. In some cases, buyers also have concluded written contracts with the farmers, such as with Doni Fruits.

There are cases of input suppliers who have expanded their activity as collection points and exporters, as well as collection points that have engaged in the business of input provision. One reason behind this expanded activity is to collect debts from farmers in kind, through their produce. Some farmers who cannot pay for inputs deliver instead their produce (payment in kind). On the other hand, the provision of inputs from exporters is primarily aimed at complying with standards. Research into Albanian apple farms has shown that specialised farmers tend to be more inclined to engage in sustainable or long-term relationships with buyers.³²

Interestingly, farmers who tend to engage in longer relations with clients are also more likely to engage in some form of contracting. Thus, one might conclude that long-term relationships may serve as a pre-condition for informal contracting, given the need for establishing trust (through long-term relations), while informal contracts may serve as a substitute for formal contracts in the context of small farm size and lack of trust in law-enforcement institutions. Vertical coordination affects farm performance, including losses. Engaging in some form of long-term relationships with clients results in lower losses, while, conversely, spot market relations result in higher losses.³³

Traceability along the chain is still problematic due to the high fragmentation of primary producers and cultivation plots. Research into greenhouse value chain shows that farmers operating on the basis of contracts show higher levels of satisfaction with the trading relationship than do those selling on the spot market. On the other hand, farmers operating on the basis of contracts are under greater pressure with regard to product quality (i.e., greater buyers' influence on farmers' production practices to improve product quality): thus, farm contracting is an important tool to improve compliance with standards.³⁴

32. Gërdoçi, B., Skreli, E., Imami, D. (2016). Determinants of sustainable relationships in the Albanian apple production sector. *International Journal on Food System Dynamics*, 7(1), 50–65.

33. Imami, D., Zhllima, E., Viaggi, D., Bokelmann, W. (2013). Between weak markets and weak regulations: determinants of contracting in orchard farming in Albania. *Journal on Chain and Network Science*, 13(1), 37–46.

34. Keco, R., Xhoxhi, O., Skreli, E., Imami, D. (2019). To Contract or not Contract: Implications for Farmer–Buyer Trading Relation Performance. *International Journal on Food System Dynamics*, 10(2), 151–161.

THE FRUIT AND VEGETABLES PROCESSING INDUSTRIES

The fruit and vegetables processing industries in Albania are underdeveloped and structurally weak. In 2019, 29 operators were registered in the field of fruit and vegetable processing.³⁵ Most enterprises process both fruits and vegetables and provide a similar range of processed products, mainly pickles, sauces and jams. This product range targets low-end segments of demand, and local products are competitive. Albanian producers do not compete in the high-end market segments (e.g., high-quality products, frozen products, ready-to-eat meals) and in the market of semi-finished products used by other food industries.

A key issue for the processing industry is the availability of adequate input supplies. The difficulty in finding sufficient supplies of domestic products is gradually being overcome, as trade and contractual relations between growers, local traders and the processing industry are becoming more stable and consolidated.

4.4 Olive oil value chain

Figure 18 maps the olive oil value chain stakeholders and the main channels through which olives flow from farmers to end consumers. In most cases, the processors act mainly as service providers for the farmers, processing the olives into oil against cash payments (mostly in the range of ALL 800–1,000/100 kg) or in-kind compensation (an agreed quantity of olive oil is retained by the processor). Some of these processors sell olive oil: e.g., they buy it from farmers at ALL 400/litre and sell it for ALL 500 or 600/litre. These processors have no direct links to retailers or supermarkets and mostly sell their own olive oil directly to households and consumers by visiting their villages, and to bottling companies, small shops and restaurants.

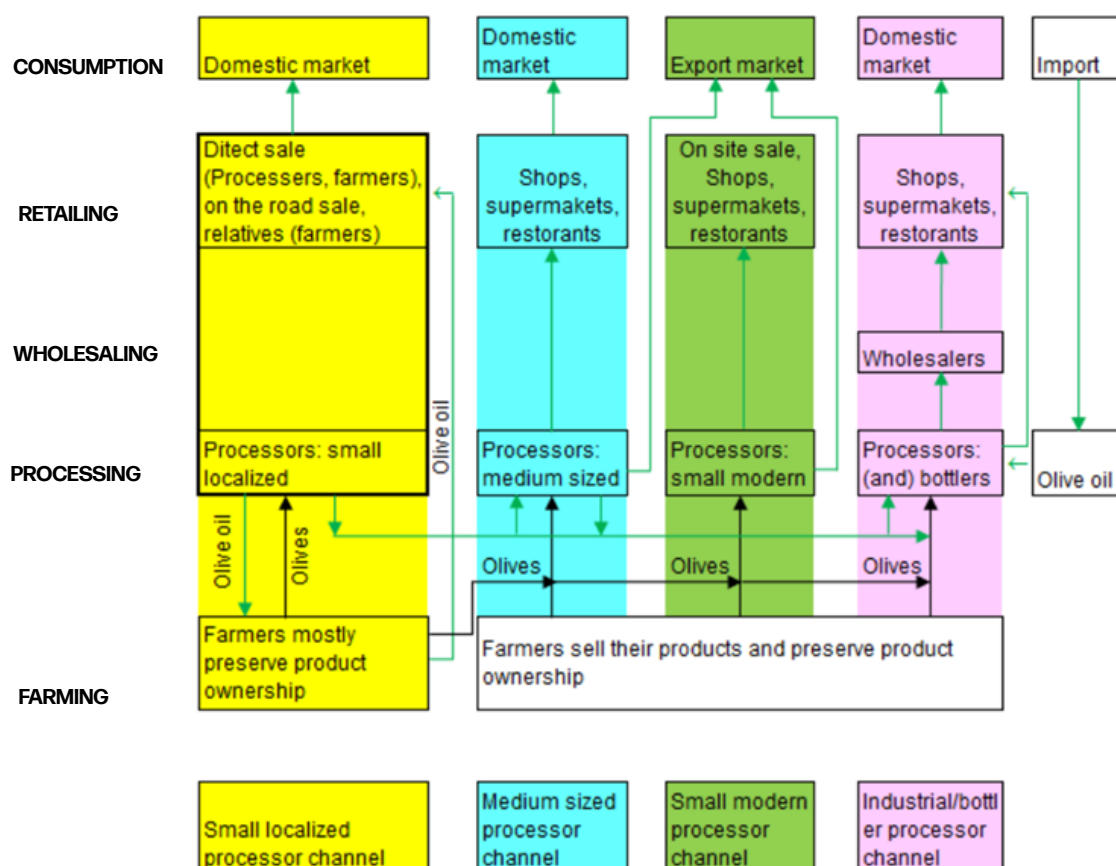
The main business for large olive oil processors and bottlers consists in supplying formal trade channels (shops and supermarket chains) with branded olive oil. However, these processors also provide oil milling services to farmers. Larger olive oil processors and bottlers procure the oil from small, localised processors and medium-size processors, but also directly from the farmers. The bottlers also import large quantities of olive oil, and have a well-established sales force and distribute directly to tens or hundreds of retail outlets, wholesale markets and restaurants all across the country. Each has several delivery vans with a driver, and a salesperson. The marketing costs of this category of processors are therefore quite high.

High-quality olive oil processors tend to avoid in-kind payment to preserve the quality of their own olive oil (by not mixing it). In this channel, the largest part of the sales is made directly to households—in tourism areas, such as the south coast, and to local and foreign

35. <https://aatsf.com.al/wp-content/uploads/2020/04/applecover-EN.pdf>

tourists who buy large amounts— so that their marketing costs are kept very low. The flow of information among actors in the chain is limited. Only in a few cases, particularly in small modern processors' channels, are farmers advised by processors, especially with regard to harvesting and post-harvesting activities, particularly for organic olive oil. Market information is, in general, scarce.

Figure 18 Olive oil value chain map



Source: Skreli and Imami, 2019³⁶

The financial relationship between farmers and olive oil processors is simple: farmers pay a fee that may be either in kind (olive oil) or in cash for the service provided by processors. In cases where processors buy olives from farmers they usually pay within a short period, often obtaining loans from banks to cover the immediate costs.

Given that the olive oil processing industry is designed as a service-based activity, in which processors provide oil processing to farmers and financial transactions are overwhelmingly on-the-spot payments, chain governance (organisation) is somewhat missing or weak.

36. <https://aasf.com.al/wp-content/uploads/2020/04/olive-Oilcover-EN.pdf>

Nevertheless, some leaders in the chain have established long-standing relationships with farmers, especially for high-quality olive oil production, while others have invested in the olive groves.

Meanwhile, most urban dwellers buy olive oil directly from the producers (farmers or factories) or in mini-markets and traditional retail outlets. Imported olive oil is mainly sold through supermarkets.

Restaurants and other catering outlets often buy the cheapest olive oil. Limited purchases of higher-quality olive oil are made by high-end restaurants. In the past, HoReCa was able to procure olive oil from various sources, but increasing formalisation suggests that they will be less likely to buy from farmers. Restaurants that are not interested in using high-quality olive oil may buy imported oil purchased formally relatively cheaply. Retail shops and green markets are the main market channels in rural areas where there is no olive oil production.

Two interesting trends have emerged over the years, with implications for the supply chain:

- Some households or groups of households come together, buy olives and bring them to the factory on the same day in order to meet their needs for olive oil for the whole year.
- Some farmers harvest olives in southern Albania or in Greece and are paid in kind (e.g., half of the oil produced from the processed olives). The quantity of olive oil received as a payment is often more than they need for their families and they sell part to various buyers.

4.5 Crops, flour and dough products

In Albania's agricultural landscape, fodder crops are the most prominent among arable crops, occupying 51% of the land, while other crop varieties account for 35%. In the cereal category, wheat and maize are the primary crops, collectively covering 89% of the cereal cultivation area. Over the past decade, there has been a notable shift in cereal production: wheat has seen a decline of approximately 21%, whereas maize production has more than doubled in the same period.

However, these trends in grain production are still insufficient to meet Albania's domestic demand, leading to a consistent structural trade deficit that is likely to persist. In parallel, the processing industry, especially in flour production, is on the rise. This sector is heavily dependent on imported wheat to meet the local market's needs. The flour market is predominantly controlled by 4 to 5 major milling companies, which hold about two-thirds of the market share. Interestingly, two of these mills are also involved in producing pasta. Bakeries and pastry shops are the main consumers of flour in the processing industry and are a common feature throughout the entire value chain. However, the country has a relatively small number of major cereal manufacturers, mainly focused on producing biscuits, cakes, and croissants. Geographically, wheat production in Albania is concentrated in three key regions: Fier (27.2%), Korça (17.4%), and Elbasan (17%). These regions collectively contribute 62% of Albania's total wheat production.

Cereal production in Albania remains insufficient (it is much more costly to produce wheat in Albania than import it) to meet the demand of the processing industry, increasing the vulnerability of the industry (especially small and medium-sized operators) to fluctuations in grain prices in regional markets. At the processing level, the flour production industry is stable and has appropriate technology. Meanwhile, there are many opportunities for product diversification in the production of bread and pasta, as well as confectionary.

5.

SWOT ANALYSIS OF THE AGRO-PROCESSING INDUSTRY

Based on the information provided in Section 3 Overview of the agro-processing industry and Section 4 Value chain organisation in the agro-processing sector (developed from secondary data analysis and previous reports on the agro-food sector) and the results from the FGDs, a SWOT analysis was conducted for the agro-processing sector that attempts to make reference also to the SDGs (see Table 6). Where an SDG is positioned in an element of Strength or Opportunity, it means that the element contributes positively to the achievement of that SDG. On the other hand, if an SDG is associated with a Weakness or Threat, it means that the element contributes negatively to the achievement of the SDG.

Table 6 SWOT analysis of the whole agro-processing industry

STRENGTHS
<ol style="list-style-type: none"> 1. Support to vulnerable groups through provision of company products, financial support or charity activities (SDG 1, 2) 2. Ensuring decent working conditions and opportunities for career growth (SDG 8) 3. Provision of health checks for employees on a regular basis (SDG 3) 4. Investing in the development of human resources through continuous training programmes (SDG 4, 8) 5. Promoting gender equality by fostering equal opportunities and treatment for all employees (SDG 5, 10) 6. Ensuring clear and fair employment contracts that outline the rights and obligations of employees (SDG 8) 7. Demonstrating commitment to environmental protection through green investments and practices such as wastewater treatment (SDG 6, 7, 12, 13, 14, 15) 8. Use of EU-certified cleaning materials and chemicals that are environmentally friendly (SDG 6) 9. Benefiting from the proximity of rich hydrographic water sources to residential areas, allowing easy access for agro-processors (SDG 6, 12) 10. Embracing renewable resources by increasing investments in technologies such as photovoltaic panels and electric vehicles for transport (SDG 7, 13). 11. Contributing to sustainable cities and rural communities by reducing gas emissions, minimising noise pollution in production facilities and surroundings, utilising biodegradable packaging, implementing effective waste treatment measures and creating green areas around establishments (SDG 11, 15) 12. Large Food Business Operators (FBOs) align their production systems with the European Green Deal (EGD), by implementing sustainable practices, technologies and initiatives to minimise environmental impact and promote resource efficiency (SDG 8, 12, 13, 15)
WEAKNESSES
<ol style="list-style-type: none"> 1. Scarcity of labour force due to mass emigration, particularly from rural areas: The agro-processing sector faces challenges in finding an adequate labour force, hampering the sector's growth potential and negatively impacting the achievement of SDG 8. 2. High production costs and low labour productivity: The agro-processing sector struggles with high costs and low productivity, affecting its competitiveness and hindering sustainable economic growth (SDG 8). 3. Corruption, informality and lack of an enabling environment create unfair competition and hamper sector development: Such challenges, e.g., related to VAT in the milk sector, contribute to unfair competition and impede the sector's progress, undermining achievement of SDGs 8 and 16. 4. Limited awareness of good agricultural practices and inadequate control by government institutions: Insufficient knowledge of farmers regarding good agricultural practices and inadequate control by government institutions result in the indiscriminate use of pesticides, posing significant risks to human health and the environment, impacting progress towards SDGs 3, 12, 15 and 16.

5. Lack of common land and water analysis practices among Albanian farmers leads to excessive pollution levels, mismanagement in the use of resources and inefficiencies: The absence of widespread land and water analysis practices among Albanian farmers contributes to excessive pollution levels, undermining efforts to achieve SDGs 12, 15 and 16.
6. Limited or no stakeholder unions (e.g., among farmers and workers) and national associations: The absence or limited presence of stakeholder unions and national associations in the sector hinders collective bargaining and effective representation, affecting progress towards SDGs 8 and 16.
7. Poor waste management technology and practices: Inadequate waste management technology and practices within the sector contribute to environmental pollution, negatively impacting SDGs 6 and 12.
8. Lack of investments in milk collection systems and storage rooms with controlled temperatures for fruits: Insufficient investments in milk collection systems, particularly in the cold chain, and the absence of storage rooms with controlled temperatures for fruits limit the sector's ability to meet quality and safety standards, hindering progress towards SDGs 9 and 12.
9. Inadequate knowledge of animal welfare and the use of medicines with harmful side-effects: Limited awareness and knowledge of animal welfare and the appropriate use of medicines in the agro-processing sector can negatively impact the quality of meat, milk and by-products, affecting progress towards SDGs 3, 4 and 12.
10. Lack of awareness of national and EU standards and poor compliance with standards by most rural farmers and SMEs: Many rural farmers and SMEs lack awareness of national and EU standards, leading to poor compliance, inhibiting the sector's ability to meet quality and safety requirements, impeding progress towards SDGs 4 and 12.
11. Limited financial support to incentivise investment in alternative energy sources: Limited financial support hampers the sector's ability to transition to sustainable and renewable energy practices, contributing negatively to SDG 13 (Climate Action). Without adequate financial incentives, businesses in the sector may continue relying on conventional energy sources, hindering progress towards reducing greenhouse gas (GHG) emissions and combating climate change.
12. Inadequate government focus on the management of natural resources (i.e., water, forest, pastures): Lack of attention and effective management hinders progress towards multiple SDGs, including SDG 6 (Clean Water and Sanitation), SDG 14 (Life Below Water), SDG 15 (Life on Land), and SDG 16 (Peace, Justice and Strong Institutions). Inadequate resource management practices can lead to overexploitation, pollution and deforestation, negatively impacting biodiversity, water quality and the long-term sustainability of the sector.
13. Weak capacities and controls by the National Food Authority and other official control institutions: Lack of robust oversight and enforcement hampers the sector's ability to ensure food safety standards, quality control and compliance with regulations, undermining consumer confidence, hindering market access and posing risks to public health. Addressing these weaknesses is crucial for achieving the SDGs related to food security (SDG 2) and good health and well-being (SDG 3). Additionally, strengthening the capacities of regulatory bodies can contribute to SDG 16 (Peace, Justice, and Strong Institutions) by ensuring effective governance and enforcement mechanisms.

OPPORTUNITIES

1. Grant schemes for investments by the EU and other donors for sector development (e.g., Instrument for Pre-Accession Assistance, IPA, IPARD): The agro-processing sector in Albania has opportunities for growth and development through grant schemes offered by the EU and other donors. By leveraging such schemes, the sector can enhance its competitiveness, adopt sustainable practices and contribute to inclusive economic development (SDG 7, 8, 9, 12, 13, 14, 15, 17).
2. New opportunities and benefits from external expertise, technical assistance and training provided by donor projects: Donor projects, including those implemented by organisations such as GIZ, offer opportunities to Albania's agro-processing sector, such as for enhanced knowledge, skills and capacities, positively impacting SDGs 4 and 8. Access to specialised training programmes and expert advice can improve production processes, product quality and overall operational efficiency, leading to increased competitiveness in domestic and international markets.

3. Increasing consumer demand for local products and raising awareness about quality standards: The agro-processing sector in Albania can capitalise on the growing consumer demand for local products and the increasing emphasis on quality standards, presenting an opportunity to align with SDG 12. By promoting locally sourced and produced goods, the sector can contribute to sustainable consumption patterns, support local farmers and reduce the carbon footprint associated with long-distance imports. Raising awareness of quality standards and certifications can also enhance consumer trust and confidence, leading to increased market share and improved competitiveness.
4. New investments in facilities, improved technologies for animal and plant products and water-efficient packaging materials in compliance with the EGD and blue economy: The sector has opportunities to attract new investments for infrastructure development and adoption of improved technologies, including investments in facilities, machinery and equipment for processing animal and plant products, as well as the adoption of water-efficient packaging materials. Embracing these opportunities aligns with the EGD and the blue economy, contributing positively to SDGs 7, 8, 9, and 12. By upgrading its operations, the sector can enhance energy efficiency, reduce waste and improve overall sustainability, thereby enhancing competitiveness and market positioning.

THREATS

1. Increase in price of raw materials for production, short-term price fluctuations from foreign suppliers influenced by the geopolitical (war in Ukraine) and post-Covid-19 situation: The agro-processing sector in Albania faces the risk of increased raw materials prices due to various factors such as global geopolitical situations and the post-Covid-19 landscape. Short-term price fluctuations can negatively impact the profitability and cost-effectiveness of production processes. Higher input costs can strain profit margins, limit access to affordable and nutritious food, hinder economic growth and destabilise supply chains. Mitigating this risk requires proactive monitoring of global market trends, diversification of suppliers and exploration of alternative sourcing options to maintain price stability and ensure the sector's resilience (SDG 1, 2, 8, 16).
2. Domestic raw materials do not meet the quality and quantity requirements of processors and exporters: The sector faces the risk that domestic raw materials may not meet the quality and quantity standards demanded by processors and exporters, hampering competitiveness and limiting the sector's ability to meet market demands. Insufficient availability or substandard quality of local raw materials may lead to higher production costs, compromised product quality and reduced market access. Addressing this risk requires investments in agricultural practices, training programmes for farmers and collaborations between the sector and local producers to improve the quality and quantity of raw materials (SDG 2, 8, 12, 15).
3. Increased competition of imported products with a good value-to-quality ratio: The sector faces the risk of increased competition from imported products offering good value for money, attracting consumers. If imported products dominate the market due to competitive pricing and perceived quality, it can impact the sales and market share of local agro-processed goods. To mitigate this risk, the sector should focus on enhancing product quality, adopt efficient production processes, promote local sourcing and production, and effectively communicate the unique value of locally processed products (SDG 1, 2, 8).
4. Negative impact of climate change on agriculture, livestock, biodiversity and human resources: The sector in Albania is exposed to the risks associated with climate change. Induced events such as extreme weather events, droughts and shifts in growing seasons can disrupt agricultural production, compromise the availability and quality of raw materials and threaten the livelihoods of farmers and rural communities. To address this risk, the sector should invest in climate-resilient practices, sustainable farming techniques and resource-efficient technologies, while also advocating for broader climate action and adaptation measures at the national level (SDG 12, 13).
5. Pollution from informal urban development in the vicinity of water sources: The sector faces the risk of pollution from informal urban development in the vicinity of water sources. Uncontrolled urban expansion, improper waste management and the discharge of pollutants into water bodies contaminate water sources, jeopardising the quality and safety of water used in agro-processing activities. Mitigating this risk requires effective enforcement of environmental regulations, sustainable urban planning and collaboration between relevant stakeholders to ensure the protection and preservation of water resources (SDG 6).

6.

OVERALL SDG ASSESSMENT AND DYNAMICS IN ALBANIA

6.1 National Policy, Strategy and Institutional Architecture for SDG Implementation

Albania has taken significant steps to establish a robust national policy, strategy and institutional architecture for implementation of the SDGs. These efforts aim to promote coordination, monitoring and effective governance across sectors and stakeholders. Key elements of the national framework include the following:

- 1. INTER-MINISTERIAL COMMITTEE AND PARLIAMENTARY RESOLUTION³⁷:** The Inter-Ministerial Committee on the SDGs was established in 2017, with the deputy prime minister serving as its chair. The committee includes representatives from development partners, civil society, academics and the private sector, ensuring multi-stakeholder engagement. In December 2017, Parliament unanimously approved a resolution³⁸ committing to the promotion, implementation and monitoring of the 2030 Agenda and the SDGs, demonstrating strong political commitment at the national level.
- 2. INTEGRATION INTO NATIONAL STRATEGIES:** The SDGs have been integrated into key national strategies, including the National Strategy for Development and Integration and the National Statistical Programme. The inclusion of the SDGs in these strategic documents ensures alignment and coherence with national development priorities. The new National Strategy for Development and European Integration for the period 2021–2030 further reinforces the long-term commitment to SDG implementation.
- 3. INSTITUTIONAL COLLABORATION:** An inter-institutional working group has been established to facilitate collaboration among various institutions for the achievement of the SDGs. This collaboration allows for coordinated efforts, knowledge sharing and synergies among different stakeholders involved in SDG implementation.
- 4. UN SUPPORT AND VOLUNTARY NATIONAL REVIEW (VNR):** UNDP has provided support to Albania for preparation of its VNR of the SDGs.³⁹ The Review serves as a comprehensive assessment of the country's progress towards the SDGs and was presented by the deputy prime minister at the 2018 high-level political forum. This review process enhances accountability and transparency in tracking SDG progress.
- 5. SDG ACCELERATION FUND:** In collaboration with the UN and the Government of Albania, the Albania SDG Acceleration Fund has been established. The government has committed to an annual contribution of USD 2 million to the Fund, with additional matching funds sought from partners. The Fund supports projects in

37. <https://www.un.org.al/news/inter-ministerial-committee-sdgs-established>

38. <https://albania.un.org/en/108583-albanian-parliament-un-albania-and-ipu-promote-role-legislative-implementation-sdgs>

39. <http://www.un.org.al/publications/voluntary-national-review-sustainable-development-goals>

key areas related to governance, social cohesion, environment, climate change, economy, labour and agriculture.

- 6. DATA MONITORING AND REPORTING:** Efforts have been made to strengthen data availability and reporting on the SDGs. INSTAT has launched a dashboard of SDG data, providing a centralised platform for monitoring and reporting progress. Additionally, capacity assessments and support have been provided to INSTAT to enhance its monitoring and reporting capabilities.
- 7. EVALUATION AND PROJECTIONS:** Progress towards the SDGs is evaluated through various methods, including the Sustainable Development Report (SDR), macroeconomic projections and national data. These evaluations enable comparisons, projections and identification of areas that require more focus and policy attention. The analysis also incorporates a human rights and Leave No One Behind (LNOB) perspective to ensure inclusivity and address vulnerabilities.

Albania's comprehensive national policy, strategy and institutional architecture for SDG implementation demonstrate a strong commitment to sustainable development. The involvement of multiple stakeholders, integration into national strategies, institutional collaboration and data monitoring mechanisms provide a solid foundation for achieving the SDGs in the country. Continued efforts in implementing and monitoring the SDGs will be crucial to ensuring progress and addressing challenges along the way.

6.2 Existing financing mechanisms for SDGs

The main financing mechanism in place to support implementation of the SDGs is the Albania SDG Acceleration Fund. As outlined above, the government, in collaboration with the UN, established this Fund, committing to an annual contribution of USD 2 million in the process. Additionally, efforts are being made to secure flexible matching funds from other partners. As of 2022, the Fund has received contributions from 16 partners, totalling USD 65,029,064⁴⁰ since 2007. The Fund supports projects in the areas of governance and rule of law, social cohesion, environment and climate change, and economy, labour and agriculture.

40. <https://mptf.undp.org/fund/al100>

6.3 Progress towards the 2030 Agenda and the SDGs

Progress towards the 2030 Agenda and the SDGs in the country is evaluated in several ways with the aim of enabling (i) comparison of the country’s position to others, (ii) provision of macro-economic SDG projections, and (iii) utilisation of all nationally available data and their disaggregation. To address the first evaluation, an overview of Albania’s progress with the SDGs through the lens of the SDR 2022 is provided. To address the second assessment, internationally comparable macro data for SDG-by-SDG projections for the country up to 2030 are utilised, and finally, for the third evaluation, international benchmarking and projections are supplemented with additional data from the SDG Country Profile for Albania of the United Nations Statistics Division, as well as national data based on the national SDG report and INSTAT, as well as the disaggregated data that are available. Each SDG snapshot also evaluates the available data and connects them to human rights and vulnerable groups through the LNOB lens.⁴¹ Good data and data availability are key in examining SDG indicators progress. Figure 19 considers the measure of data availability for at least one year since 2015, by goal and indicator (average in %). Figure 19 shows that the largest data gaps exist with SDGs 11, 12 and 16, which, in terms of data-related efforts, should receive more focus. In addition, by also taking proxy indicators from SDR 2022 on board, we observe that only four percent of data is missing for a complete set needed for calculating the SDG Index for the latest year. (Dynamically or with time, data gaps are of course larger.)

Figure 19 Official SDG indicator data availability for at least one year since 2015⁴²

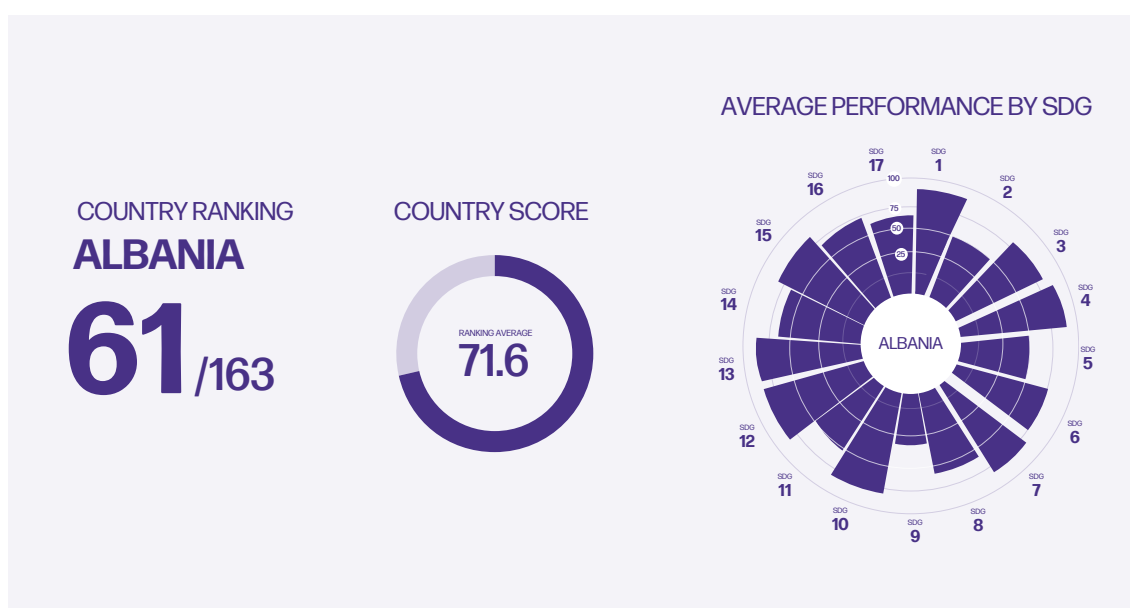


41. The LNOB lens is a key principle and approach adopted by the UN to ensure that the SDGs are achieved in a way that prioritises the needs and rights of the most marginalised and vulnerable populations. It recognises that development efforts must address the specific challenges faced by disadvantaged groups to achieve sustainable and inclusive development.

42. <https://unstats.un.org/sdgs/dataportal/analytics/DataAvailability>

Figure 20 provides a snapshot from SDR 2022, which ranks and scores 163 countries based on a composite score, estimating their achievement of the 17 SDGs. The SDR tracks official SDG indicators and carefully selected proxy indicators, specifying whether a given indicator and SDG are on track or whether challenges, significant challenges or major challenges remain. It shows that, globally, with a score of 71.6, Albania ranks 61st out of 163 countries, three places higher than in SDR 2021. Particularly challenging are SDGs 2, 5, 9 and 14, while there is a particularly good performance with SDGs 1 (on absolute extreme poverty; not overall relative poverty, where Albania continues to face challenges), 3, 4, 12 and 13.

Figure 20 Sustainable Development Report 2022, Albania snapshot⁴³



Lastly, Figure 21 draws on the online Resident Coordinator’s Office–UN Country Team (RCO-UNCT) Economist Toolkit⁴⁴, which applies the Nearest Neighbours (NN) methodology to identify which countries in 2010 were in the most similar position to Albania in 2020, across all 17 SDGs. The NN methodology determines the top and bottom performers out of the NNs, indicating a good policy mix or bad policy mix for the period 2010–2020 and uses the annualised mean growth rates for projecting an upper and lower limit for the SDG Index score for Albania from 2020 to 2030, as well as the country’s historical average. The case of a poor or inferior policy mix (red dashed line in Figure 21) identified from the bottom five NN policies also corresponds to the consequences of the impact of risks identified in the UN Albania Common Country Analysis (CCA),⁴⁵ hampering achievement of the SDGs and represented by the negative projections of SDG achievements in every SDG under this Section.

43. <https://www.sdgindex.org/>

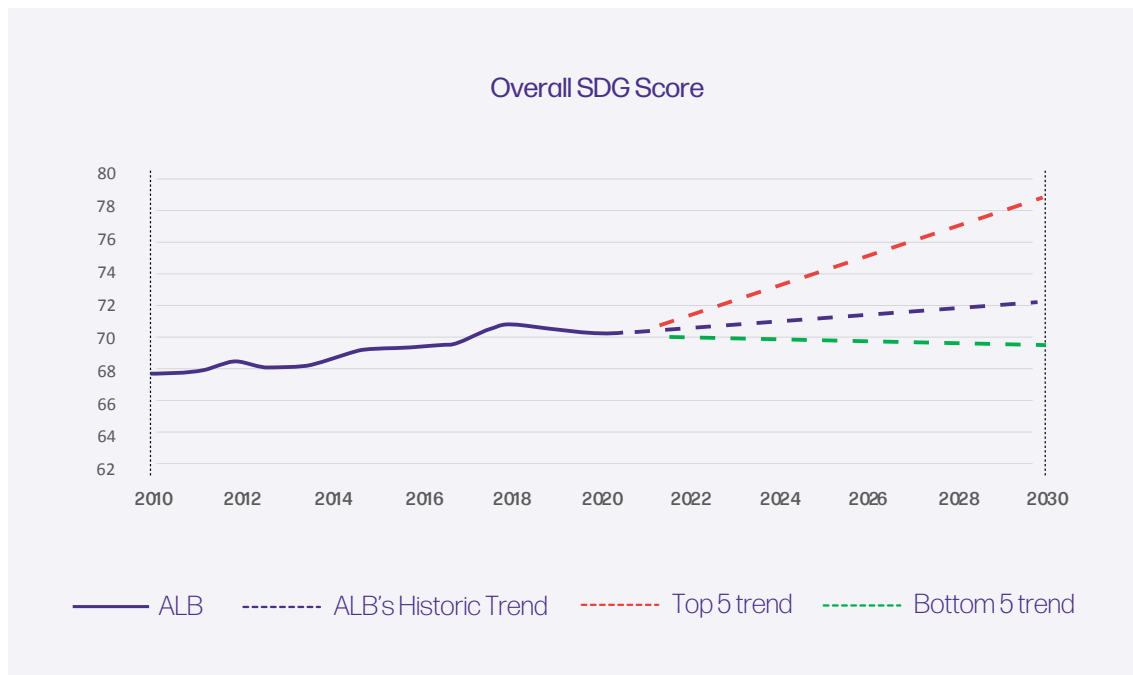
44. Hamilton and Kuncic (2021) RCO-UNCT Economist Toolkit (UPDATE 2.0), <https://saudi-arabia.un.org/en/166602-rcu-unct-economist-toolkit-update-20-december-2021>

45. <https://albania.un.org/en/111493-albania-common-country-analysis-2020>

On the upside of the projections (blue dashed line in Figure 21), if Albania were to follow a similar policy mix as the top five NNs across the SDGs, it would rank among the top 25 countries using the 2021 methodology and rankings of the SDR, i.e. about 40 places higher. The SDG evaluations 1–17 for Albania provide macro-economic projections⁴⁶ for each SDG, evaluating them based on data availability, human rights and the principle of LNOB. This evaluation identifies the most vulnerable groups, considering various sources of vulnerabilities, as determined by international human rights mechanisms⁴⁷ and other data-driven sources.

Moreover, since the CCA examines the probability, impact and priority of existing, emerging and future risks of a national, cross-border and regional nature on a country’s development trajectory, particularly its impact on those left furthest behind, the SDG-by-SDG forecasts in Section 9 can also serve as early warning indicators and innovative data sources to inform the UN and government preparedness and sound the alarm when the country is far off its potential best track in terms of sustainable development.

Figure 21 SDG index projection (overall SDG score) for Albania



Source: Updated UN Albania CCA, 2022. ALB = Albania

46. Hamilton and Kuncic (2021) RCO-UNCT Economist Toolkit (UPDATE 2.0), <https://saudi Arabia.un.org/en/166602-rcu-unct-economist-toolkit-update-20-december-2021>

47. *ibid.*; Hamilton and Kuncic (2021) Quantitative Analysis of Human Rights and Vulnerable Groups for 197 Countries, <https://saudi Arabia.un.org/en/166603-quantitative-analysis-human-rights-and-vulnerable-groups-197-countries>

7.

CASE STUDIES OF BUSINESS PRACTICES ALIGNED WITH SDGs

The present report examines several companies as case studies of business practices aligned with the SDGs. The selected companies include Fix (meat), Doni Foods (fruit and vegetables), Albamilk (dairy) and Musai Olive (olive oil), chosen for their commitment to the SDGs, integration of the Goals into their business practices and strategies, impact on sustainable development (e.g., poverty alleviation, food security, sustainable agriculture, environmental conservation, gender equality and social inclusion), innovation and best practices (e.g., technological advancements, efficient resource management and waste reduction).

Qualitative case studies are important in exploring the factors that enable or hinder companies in integrating fully the SDGs into their business objectives. The case studies outlined here provide insights into how agro-processors in Albania pursue value creation and SDG alignment. Four aspects of business are analysed: purpose (why?), strategy (what?), innovation (how?) and impact (where?).⁴⁸

For example, the purpose of Doni Fruits is to meet and exceed customer needs and expectations both within Albania and internationally, with a strong focus on promoting biodiversity, effective waste treatment and management, and enhancing farmer awareness on good agricultural practices. Additionally, the company is dedicated to continually innovating in its products, processes, and management to anchor its strategy in sustainable business practices..

Innovation requires organisational engagement and restructuring to nurture aspirations and execute actions. Doni Fruits' experimentation with red worms to produce organic waste, Fix's creation of pellets from cardboard packaging to heat water for processing lines, and Alba Milk's production of specialty cheeses demonstrate innovative approaches in their respective industries.

The far-reaching implications, or impact, of these innovations significantly shape and influence the country's ability to successfully achieve its SDG targets. Fix implemented an improved traceability system to trace products throughout the production chain, aligning with their sustainable value creation process driven by the motto: *Good for you; good for the planet*. Doni Fruits focus on sustainable value chain development and apply certification processes as a key tool for exporting to EU markets, supported by human resource training initiatives in cooperation with Risi Albania.

In summary, these case studies highlight the companies' commitment to the SDGs, integration of the SDGs into their strategies, innovation in their industries, and the impact on wider society achieved through their efforts.

48. For additional insights regarding the journey from Purpose to Impact see C. Busco (2022), Purpose to Impact, AICPA-CIMA research report, London.

7.1 Fix Company, located in Korça Region

Originally established as a company trading spices and food additives from 1992 to 2002, Fix transitioned into a meat processing and sausage production company under the Fix brand in 2003. The company's purpose is to become a leader in the meat processing and sausage production industry while offering high-quality products accessible to all social groups. Over the years, the company has expanded its premises, from 1,000m² in 2008 to 5,000m² in 2023 with sustainability at the forefront, creating employment opportunities with good working conditions (SDG 8). By prioritising the well-being and welfare of its workforce, the company contributes to a positive work environment and fosters a sense of dedication and loyalty among its employees.

As part of its commitment to helping people in need, Fix supports families of law enforcement officers killed in the line of duty, children with Down Syndrome, local families and those living in poverty. The company provides free school supplies for children of employees and one free meal per day for its employees. It also offered enhanced health assistance during the pandemic and provides regular annual salary increases to ensure (at least) a living wage for its employees. The impact of Fix's initiatives is notable in various areas, while prioritising the health and well-being of its employees (SDG 1, 3).

In terms of strategy, the company focuses on producing high-quality products while observing environmental protection policies, waste management and water treatment. Fix has invested in a water treatment plant and plans to double its capacity. It also utilises cardboard waste from raw materials to produce pellets for heating water. These investments and actions demonstrate the company's commitment to circular economy principles and environmental sustainability (SDG 10, 11, 12, 13, 14, 15; Global Agenda, GA, 46). For innovation, Fix has a Research and Development department that introduces innovative technologies and develops new products. The company has invested in a product quality control laboratory. Currently, it is seeking certification for the C€ marking, indicating compliance with European standards (SDG 4, 5, 8).

Furthermore, Fix seeks to strengthen its positive image both within the country and throughout the region. It has made investments in human resources, including a network of technologists who provide expertise, and also has staff members specialised in the use of the German CSB traceability system, which tracks products from origin. Fix has engaged with MARD to invest in a farm that will supply small animals, primarily goats, to ensure a secure supply chain (SDG 4, 5, 16, 17; GA 45). Unlike many large processors that rely on imported meat for operations, Fix takes a proactive approach by sourcing its supplies domestically. This showcases the company's strong commitment to the development of the small ruminant sector within Albania. By supporting and promoting local producers, the company not only strengthens the domestic agricultural economy but also contributes to the sustainability and growth of the small ruminant industry.

In summary, Fix's purpose is to become a leading meat processing and sausage production company, while its strategy focuses on high-quality products, environmental protection and waste management. The company demonstrates innovation through research and development and investments in systems and laboratories. Fix's impact is observed in its contribution to employment, poverty reduction among employees and commitment to employee well-being. Lastly, Fix strives to project a positive image through its investments in human resources and supply chain management.

7.2 Doni Fruits, located in Lushnje Region

Doni Fruits has been operating since 1958 in Kosovo, Macedonia and Albania, but since 2013, it has focused exclusively in Albania, specialising in the collection and export of fruits and vegetables. The company's vision is to expand its foreign market, anticipating a 40 percent growth, while also entering the domestic market through supermarkets in Albania and North Macedonia.

Doni Fruits has contracts with 28 countries worldwide and exports 45 products, eleven of which are Global GAP certified. The company partners with 52 registered farms under 3-year contracts to ensure a stable supply of fruits and vegetables. Additionally, it aims to increase storage and processing capacities, supported by IPARD with EUR 900,000.

From the beginning, Doni Fruits adopted in Albania innovative approaches to streamlining customs procedures by constructing a customs warehouse on-site. The company employs a red worm processing technique to manage organic waste from non-trade products, demonstrating its commitment to waste management and environmental sustainability (SDG 9, 11; GA 45, 46). Furthermore, Doni Fruits invests in digitalised greenhouses, implements traceability systems, and collaborates with farmers to improve product quality (SDG 9, 12, 15). Doni Fruits is committed to reducing poverty and supporting rural communities where it operates. During disasters, including floods, the company provides free aid and food to those in need. It cooperates with a Food Bank to distribute second-quality products for free that are not suitable for export. Moreover, Doni Fruits plays a role in empowering communities by engaging Roma and Egyptians in leek production and provides them with training opportunities (SDG 1, 2). The company's employees comprise about 70 percent women, many of whom have been trained in packaging. It has also hired women from Nepal and ensured their representation and rights through a workers' council functioning as a trade union (SDG 5).

In terms of sustainable development, Doni Fruits utilises various systems to assess the quality of their fruits, and invests in creating good working conditions (i.e., safety and health in the work environment), adhering to safety regulations and implementing measures to

prevent accidents and injuries. It provides at least a living wage, offers training programmes and opportunities for skills development to enhance employee knowledge, and provides clean and comfortable facilities for employees. The company has plans to invest in a photovoltaic system in 2023 to incorporate renewable energy into their operations. Its focus on innovation, soil and water protection, and product quality improvement also contributes to sustainable practices (SDG 7, 12, 16).

Doni Fruits actively participates in international fairs, supports establishment of the farmers' academy and recognises the challenges faced by the sector, such as product quality, competition, farmer focus on quality standards, and farmer certification. The company highlights the importance of Global GAP certification for export to EU markets, anticipating that it will become a requirement.

In summary, Doni Fruits' purpose is to expand its market presence while entering the domestic market through supermarkets. Its strategy involves international contracts, Global GAP certification and partnerships with registered farms. The company demonstrates innovation through streamlined customs procedures, waste management techniques and investments in digitalised greenhouses and traceability systems. Doni Fruits' impact is observed in poverty reduction efforts, community engagement, employment opportunities for women, and its commitment to sustainable development.

7.3 Albamilk located in Shkodra Region

Albamilk is an agro-processor operating as an SME in the area in and around Shkodra, focusing on milk processing and the production of speciality cheeses such as mozzarella, scarmoza and burrata. The company's primary market includes the surrounding area, as well as Albania's restaurants, adapting its products to domestic demand. With an annual turnover of EUR 1.5 million, Albamilk aims to contribute to poverty reduction and address hunger (SDG 1, 2) through its small-scale initiatives (i.e., buying the production of 200 small farmers and providing technical assistance when needed) and support for employees (e.g., in time of need it provides financial assistance).

Albamilk is an active member of the Association of Milk Producers and Processors. The company, along with the association, faces various challenges, such as a higher level of VAT than neighbouring or EU countries (20% compared to 7–8% in some EU countries), differing VAT for purchased milk supplies (from farmers it is at 6%, and for sold products, 20%) and a lack of subsidies from the state. IPQ has proposed a scheme to subsidise farmers 'per litre of milk' rather than 'per head of cattle' (payment from the former provides better integration between farmers and processors, while farmers would also get much more subsidy or support than the current per head payment). Albamilk acknowledges the challenges in

the cold chain infrastructure, including lack of information, containers or equipment for farmers to control and store fresh milk prior to distribution to dairies for processing. The company also sources milk from small farms with 5–50 head of cattle. However, the VAT discrepancy between milk supplied by large farmers and the end product sold adversely affects Albamilk's revenues. To address this, a revision of the VAT rate is necessary, aligning with regional and EU practices, where lower rates are applied to milk purchases.

Albamilk prioritises the health and well-being of its employees, implementing measures to protect them despite being an SME with limited resources. The company uses decantation pits for water treatment and relies on caustic soda approved by the EU for cleaning purposes in the dairy industry. However, the costs associated with cleaning the processing plant are high. Albamilk plans to invest in water treatment infrastructure with a capacity of 4 litres per second, demonstrating its commitment to sustainable practices. The company's owner has articulated the company's strategy as *Good for you; good for the planet*, aligning with SDGs 11, 12, 13, 14 and 15.

Albamilk's impact is observed in multiple areas. Its purchase of milk from 200 families contributes to increasing their income, positively influencing poverty reduction and addressing hunger. Additionally, its presence in the local market and the employment opportunities it provides, particularly for women, contribute to economic growth and gender equality (SDGs 1, 2, 5, 8). The company has undertaken tree-planting initiatives, evident in the trees planted along the entrance road to its premises, furthering its commitment to environmental sustainability. Regular inspections by environmental authorities demonstrate Albamilk's adherence to environmental standards and the company's contribution to SDG 14. Albamilk recognises that integration into the EU and the open Balkans (i.e., the processes of aligning with EU standards and regulations and participating in regional economic integration initiatives) would provide favourable conditions for its business operations. By adhering to EU standards and regulations, Albamilk aims to enhance product quality, ensure food safety and gain access to larger markets. The company believes that compliance with these standards is crucial for long-term sustainability and competitiveness in the agro-processing sector.

Furthermore, Albamilk advocates for the support and promotion of local products and traditional production methods. By preserving and celebrating local food heritage, the company aims to contribute to cultural sustainability and the preservation of traditional knowledge and practices. Albamilk recognises that by valuing and investing in local products, it can not only meet consumer demand but also promote economic development and strengthen the social fabric of the community.

In conclusion, Albamilk, as an agro-processor, is driven by a clear purpose to reduce poverty, address hunger, protect employee well-being and promote sustainable practices. The company's strategy involves small-scale initiatives, providing support for employees

and sourcing milk from local farmers. Albamilk seeks to innovate through investments in water treatment infrastructure and adoption of sustainable cleaning practices. The impact of its efforts can be seen in increased incomes for farmers, job creation, environmental conservation and potential growth opportunities through EU integration. By aligning its business practices with the SDGs, Albamilk aims to contribute positively to the social, economic and environmental dimensions of sustainable development in Shkodra and beyond.

7.4 Musai olive oil located in Vlora Region

Musai Oil, an SME located in the Region of Vlora, stands out as a prime example of a company committed to sustainable business practices aligned with the SDGs. With a primary focus on producing high-quality olive oil, the company goes above and beyond to support its employees, local farmers and the community at large.

The core purpose of Musai Oil is rooted in its dedication to sustainable development and addressing social and environmental challenges. One aspect of its strategy revolves around providing support for employees, ensuring they can overcome work-related obstacles and thrive in their roles. Additionally, the company extends its assistance beyond the workplace, reaching out to families in need and actively engaging with investors and donors to enhance the well-being and living conditions of the community (SDG 1, 2, 3).

As an olive oil processor, Musai Oil heavily relies on farmers as its primary suppliers. Although there are no formal contracts, the company adopts a quality-based approach when purchasing olives. By establishing and maintaining strict standards and ensuring the production of high-quality produce, Musai Oil plays a significant role in empowering farmers to increase their income (through providing assistance and fair prices) while at the same time working to combat olive tree viruses (SDG 2, 3).

Water plays a vital role in olive oil production, and Musai Oil recognises the importance of responsible water management. The company sources water from the aqueduct network and places a strong emphasis on water quality. To further its commitment to environmental sustainability, Musai Oil plans to install solar panels, aiming to reduce its carbon footprint and contribute to SDGs 6 and 7. Such initiatives demonstrate its dedication to preserving natural resources.

In its quest for sustainability, Musai Oil actively addresses waste management. The company deals with various types of waste, including solid waste, vegetative waste and wastewater. Solid waste is sent for drying and subsequently repurposed as heating fuel. Additionally, Musai Oil plans to invest in a water treatment plant to enhance operational efficiency and

minimise its environmental impact. These endeavours align with SDGs 11, 12, 13, 14 and 15. Innovation serves as a crucial pillar for Musai Oil's success in the industry. The company has made notable investments in energy-efficient production lines, significantly reducing its energy consumption and promoting sustainable practices.

By embracing these advancements, Musai Oil aligns with SDGs 9, 10 and 12. Additionally, the company explores and adapts new olive cultivars that are better suited for the local climate and ecosystem. This innovative approach falls in line with SDG 9, fostering sustainable agricultural practices.

The impact of Musai Oil's sustainable operations extends beyond the boundaries of the company itself. Economically, it has made substantial strides in supporting its workforce through a 50 percent increase in workers' salaries. Furthermore, the company actively supports local farmers, helping them achieve higher incomes and ensuring the availability of quality olive oil on the market.

By prioritising environmental stewardship, Musai Oil aims to minimise its environmental impact, while its dedication to wastewater management, pollution prevention and climate protection align directly with SDGs 13, 14 and 15. Furthermore, the company's commitment to complying with international standards and certifications has a positive market impact. By ensuring fair marketing practices and promoting the quality and safety of its products, Musai Oil supports SDG 12.

Collaboration with regulatory bodies, such as the National Food Authority, is vital to the company's operations. It acknowledges the importance of such entities in preventing the marketing of poor quality olive oil in restaurants and supermarkets. Musai Oil emphasises the need for fair competition and supports measures to protect the domestic olive oil trade from imported oils, contributing to SDG 16.

To enhance its production capabilities, Musai Oil recognises the need for investments in storage tanks. Additionally, it values business certifications according to international standards, solidifying its commitment to quality and responsible practices. These efforts align with SDGs 12 and 17, showcasing the company's dedication to sustainable business operations.

Musai Oil's purpose-driven approach, strategic focus on sustainability, commitment to innovation, and the resulting impact on poverty reduction, sustainable agriculture, employee well-being, water management, waste reduction and the promotion of high-quality olive oil, demonstrate the company's efforts to contribute to the SDGs. By driving economic growth, preserving the environment and supporting the development of Vlorë Region and beyond, Musai Oil serves as an inspiring example of a sustainable olive oil processor in Albania.

8.

BUSINESS PRACTICES ALIGNED WITH THE SDGs AND THE EUROPEAN GREEN DEAL

This Section provides the main findings from the qualitative research, namely from six FGDs in six different sub-sectors of the agro-processing industry and ten KIIs with key agro-food value chain stakeholders. Sub-section 8.1 outlines business practices employed by the agro-processing sector in Albania that are aligned with the SDGs, while sub-section 8.2 focuses on the alignment with the European Green Deal. The last sub-section 8.3 concludes with a brief outline of SDG-aligned business practices employed in other countries.

8.1 Albanian agro-processing sector alignment with the SDGs



The FGDs highlighted the mass emigration taking place from rural areas and that there is a need to draft a development strategy for rural areas to curb labour emigration. Moreover, participants in the FGDs highlighted that farmers are the most vulnerable community group. There has been a decrease in the amount of animal breeding due to a lack of subsidies. *This is one of the challenges that the sector must face before joining the EU, along with the following:*

- ✎ It is extremely difficult to find full- and part-time workers, regardless of their financial needs.
- ✎ The olive oil sector has a great need for seasonal workers.
- ✎ There is a need for better coordination with local governments for the collection and distribution of unsold products (e.g., bread) at the end of the day, or close to expiry date, and their provision to social centres and vulnerable communities.
- ✎ Improved social and economic policies should be developed for regions with little development to prevent the movement of the population to urban areas.

The agro-processors that were part of the FGDs claimed to have employed a series of practices in attempting to address SDG 1, including the following:

- ✎ Employment of local communities.
- ✎ Infrastructure construction (e.g., roads, bridges, schools) in collaboration with central and local governments, contributing directly to poverty reduction by creating employment opportunities and enhancing local livelihoods.
- ✎ Support for vulnerable groups, pensioners, orphanages, among others, through the provision of company products, financing and charity activities.

It should be noted that Albania's social care and protection systems provide insufficient protection from poverty shocks. In 2020, Albania allocated about 29 percent of its total

budget to social protection. The Law on Social Assistance, adopted in 2021, aims to increase the targeting of poor families and children by increasing the amount of cash assistance. Cash transfers comprise about 95 percent of the social protection sector's total budget. In 2021, the Social Fund disbursed EUR 1.5 million to 16 municipalities. The number of social care services increased in 2020 to 339 from 229 in 2019.⁴⁹ Access to public services, including social health, employment and vocational education and specialised services in the area of disability for people with disabilities, remains limited.



END HUNGER, ACHIEVE FOOD SECURITY AND IMPROVED NUTRITION AND PROMOTE SUSTAINABLE AGRICULTURE

FGD results show that:

- ✎ There is a lack of subsidies for farmers for animal breeding and welfare.
- ✎ Informality is negatively affecting milk production, quality and safety standards.
- ✎ Planning of agricultural products regionally (where they have the greatest potential) and cooperation among farmers will reduce costs, poverty and waste, and protect the environment.
- ✎ Strengthening of regional extension services, provision of professional training to farmers and promotion of cooperation should be the core elements for the sustainable development of rural areas.
- ✎ Stimulation of traditional production, hurdle technologies in rural areas, the 'slow food' movement and coordination with local government for collecting left-over products (those remaining on the shelves at the end of the day or close to expiry) will reduce poverty, hunger and food waste.
- ✎ Job opportunities for young people are limited in rural areas. Enterprises should expand their activity for the employment and motivation of young people, to attract them to remain in Albania.

Some of the practices employed by FGD participants in attempting to address SDG 2 involved the following:

- ✎ Provision of support from exporters to farmers who lack the financial resources to initiate production, through providing seedlings and other agricultural inputs at the beginning of the growing season (reimbursement is made once the farmers sell their produce to the exporters providing the support).
- ✎ Provision of support to farmers with Global GAP certification (e.g., technical assistance for implementation and, in some cases, financial support to pay for the certification) as a way to access EU markets.

49. Commission Staff Working Document, Albania 2022 Report, 93–94.

- Use of paperboard packing materials following the requirements of EU importers, despite the expense.
- Coordination between exporters seeking first-grade quality and processors seeking second- or third-grade quality to reduce food losses and waste and to offer farmers a good price for their produce.
- Vertical integration of processors higher up in the value chain (i.e., in the production process) as a means to secure safe and high-quality supplies.
- Provision of technical assistance and other services (animal quarantine, information, financial services) to farmers for them to develop further their businesses, as a win-win strategy for the development of the sector.
- Provision of payments and financial assistance in addition to social assistance to people in need.

Lastly, **agricultural** activity is challenged by increased transport and production costs, limited labour availability and financial constraints (limited capital of SMEs coupled with high-interest bank loan rates and lack of government support), making adoption of new technologies considerably difficult. The **agro-food sector** in Albania is, in general, facing challenges in establishing market institutions, improving the efficiency of distribution channels, meeting national and international quality and food safety standards and building administrative capacities to support these processes.



The FGDs revealed the following:

- SMEs need more financial support to improve the working conditions for employees: i.e., financial resources from public sources or donor organisations can provide SMEs with the means to implement changes that positively impact working conditions. This could include investments in infrastructure, equipment, training programmes and safety measures that can create a safer and more conducive working environment.
- Official food inspection bodies should carry out their duties with responsibility and competence, to the benefit of the consumers' health.
- Occupational safety in primary production is associated strongly with the utilisation of Plant Protection Products (PPP).
- Awareness raising and training of farmers are essential for safety issues and protection of consumer health.
- Correct implementation of cleaning and sanitation to ensure safety standards.

Practices that are aligned with SDG 3 include the following:

- Companies offer their employees annual check-ups and coverage of expenses in case of illness. During Covid-19, all medical expenses were covered.
- Annual leave is planned for two different times of the year, with two weeks each (28 days in total).
- Some companies operate under the ISO 45001 standard, which includes working conditions and welfare.



ENSURE INCLUSIVE AND EQUITABLE QUALITY EDUCATION AND PROMOTE LIFELONG LEARNING OPPORTUNITIES FOR ALL

FGDs outlined the following:

- There is insufficient awareness among local consumers of the products on the market.
- Collaboration between private companies and education institutions and active participation in decision making is decisive for a sustainable future.
- Improvement of study programmes oriented towards contemporary practical knowledge of the agro-food sector and market policy and demand will increase interest and cooperation between educational institutions and private businesses.
- On-site experiments organised by higher education institutions and FBOs will assist young people to put their knowledge into practice.
- In collaboration with vocational high schools and universities, FBOs can provide Vocational Education and Training programmes with short-term courses helping enhance the knowledge and performance of employees in the workplace.
- On-the-job training and qualifications improve the performance of employees.
- FBOs can provide human resources to be engaged in curriculum preparation boards in higher education institutions in Albania.



ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN AND GIRLS

All participants in the FGDs claimed that there is no discrimination between men and women with regard to payments. Any differences are the result of differences in qualifications, performance or hierarchical position. Meanwhile, they pointed out, the agro-food sector employs more women than men. Nevertheless, irrespective of these observations of the FGD participants, there is still room for improvement in terms of gender equality in both the workplace and the community.



ENSURE AVAILABILITY AND SUSTAINABLE MANAGEMENT OF WATER AND SANITATION FOR ALL

The FGDs highlighted that some sub-sectors of the agro-processing industry face challenges with wastewater treatment and the application of sustainable production practices. This is particularly relevant for SMEs that lack the necessary capital to invest in wastewater treatment systems and have limited know-how and human resources. Thus, financial support for modern technologies and waste treatment is required. Furthermore, agricultural production and arable lands in Albania are affected by waste treatment processes such as incineration.

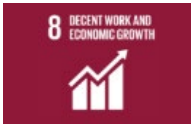
Meanwhile, large FBOs use commercial cleaning and sanitising agents that reduce the level of microbiological and chemical risk. Companies processing potable water (the largest companies participating in the FGDs) are committed to using the most efficient water treatment technology. Chemicals and detergents allowed and recommended by the EU are used in the washing systems. Appropriate amounts of chemicals are determined and kept closed in a separate isolated environment. A water treatment plant ensures that the water discharged into the environment is clean and is sanctioned and certified by ISO standards.



ENSURE ACCESS TO AFFORDABLE, RELIABLE, SUSTAINABLE AND MODERN ENERGY FOR ALL

Agro-processors participating in the FGDs claim to have started installing photovoltaic systems, with some claiming that these systems cover 40 percent of their needs, and others, up to 80 percent. Those who have not installed such systems (or have their needs partially covered) are planning to increase energy production from renewable energy sources, primarily solar energy. However, in all FGDs it emerged that to encourage more investments in solar energy the law should be amended so that the amount of energy obtained from the photovoltaic system can be calculated and the difference in energy in kW hours compensated by the electricity meter. The evaluation should be done in intervals of 6–12 months and not every month as is done currently.

In addition, bakeries that lack the space to install solar panels suggested that the law should consider the production of energy by the company from somewhere else (in an area where land is cheap) and this energy should be compensated for in the energy consumption of the company. Limited space in many city-based bakeries has prompted some to invest in cost-effective water heating panels, which require less space than solar panels. This approach has proven practical since heated water is a vital requirement for nearly all the appliances used, consequently, helping to save electricity.



PROMOTE SUSTAINED, INCLUSIVE AND SUSTAINABLE ECONOMIC GROWTH, FULL AND PRODUCTIVE EMPLOYMENT AND DECENT WORK FOR ALL

Agro-processors agree that there is a skills mismatch between the demand and what the market has to offer. FGD participants claimed that there is no discrimination in the employment of different population groups. Moreover, one exporter of fruits and vegetables outlined how the company had expanded its activity to a village with Roma and Egyptian communities and engaged them in leek production, stating that it has been a successful collaboration over the past three years and helped and motivated the community by showing them how to properly use their land and skills.

In line with SDG 8, the companies participating in the FGDs prioritise an annual revision of salaries, aiming to ensure that employees receive at least a living wage. In 2022, all employees within the companies experienced substantial salary increases, ranging from 35 to 50 percent. These salary adjustments aim to improve the workers' income levels, contribute to reducing income inequality and promote fair compensation practices within the companies.

Furthermore, in support of sustainable agricultural practices and fair trade, milk processors have taken steps to enhance the economic well-being of farmers. In 2022, they increased significantly the prices offered to farmers for their produce. The increase in milk prices aims at promoting the economic empowerment of farmers, supporting their livelihoods and fostering a more equitable and sustainable dairy industry.

Lastly, all FGD participants unanimously expressed that there is a lack of a labour force and that the interest of young people in production work is limited. This situation is attributed primarily to mass emigration and a culture that has been nurtured in Albania over the past two decades that promotes rapid enrichment.

Eurostat data show that wages in Albania are the lowest in the region and this is the main reason encouraging families to emigrate.⁵⁰ One participant pointed out that even highly qualified people are leaving the country. However, in their case, the main reason is not the level of income, but rather the lack of access to quality basic services (e.g., health and education) and the lack of opportunities to ensure a better life for their children.

50. https://ec.europa.eu/eurostat/databrowser/view/EARN_SES18_20__custom_4623116/default/table?lang=en



BUILD RESILIENT INFRASTRUCTURE, PROMOTE INCLUSIVE AND SUSTAINABLE INDUSTRIALISATION AND FOSTER INNOVATION

The agro-processors (particularly large established ones) who participated in the FGDs claimed that they had invested in the latest production technology. Large agro-processors have an R&D department that focuses primarily on new product development and improvement of existing products. Some stated that they have invested in more efficient equipment and vehicles that emit less CO₂ and NO_x. One participant pointed out that the investment in ovens for smoking meat using liquid substances, reducing carbon emissions, was made for cost efficiency but also improved product quality. During the FGDs, it emerged that one of the problems faced by the sector is the prevalence of plastic packaging. Participants claimed that this is part of the consumer culture and is very difficult to change without large awareness-raising campaigns. However, there are initiatives to reduce the amount of plastic used in packaging: one company said that its sauce box packaging had 50 percent less plastic than previously, and that the aim is to use biodegradable packaging and reduce packing costs. Based on their observations, it seems that consumers are increasing their purchases of packed cheese. However, the sale of cheese in an open container is commonplace, even though it contravenes food safety regulations, which dictate that such cheese should not be sold beyond the vicinity of the centre of production.



REDUCE INEQUALITY WITHIN AND AMONG COUNTRIES

All FGD participants pointed out that there is no functioning workers' union in Albania. Also, they claimed that there is no inequality in employment and that the ratio between maximum wage (e.g., ALL 120,000) and minimum wage (e.g., ALL 40,000) is about three to one. Moreover, milk processors raised the issue of VAT during their FGD. They highlighted that the biggest problem they have is the system of taxation of the raw material and of the end product, where milk supplies are bought from farmers with six percent tax, while the amount applied to the end product is 20 percent. This difference in VAT between sales and purchase is a considerable issue that affects profits. In addition, VAT in Albania in this sector is very high compared to other countries in the region.

SDG 11 is not in the scope of work, therefore it is omitted.

Meat processors participating in the FGD highlighted that reversing the logistics of production takes considerable time. Better coordination among retailers and meat processors is required for the return of expired products, which also incur added disposal costs. Such costs and product losses might be reduced with better integration of systems of the various companies and government agencies. On the consumer side, more awareness is needed, as there is prejudice about products approaching their expiry date or with a best-before label offered at a reduced price. On the agricultural production side, the use of pesticides by farmers without criteria results in products that can be damaging to human health and the environment. Products with high residue levels cannot be exported. One exporter said that in 2022, about 150 tons of watermelons were dumped due to the high residue level.

The fruit and vegetable exporters at the FGD claimed to be working closely with their farm suppliers to adopt Global GAP certification, which will not only allow them to export but constitute a standard that protects the environment. In addition, they claim to have introduced environmentally friendly practices, such as bee pollination, biological warfare in greenhouse production, processing of waste with Californian worms and converting it into organic fertiliser, and digitalisation of greenhouses. However, the scale of such initiatives is very small compared to the entire Albanian agricultural sector. Based on the FGD, gaps remain in implementation of quality standards. In particular, olive oil retained by farmers is not stored in appropriate containers nor under the correct conditions to preserve its quality and characteristics (e.g., low acidity). Olive oil is commonly stored and sold in used, plastic bottles and exposed to high temperatures and sunshine (though, according to interviews, there have been improvements, with more and more farmers tending to store and sell olive oil in new plastic bottles).

FGD participants expressed some concerns about the dilution of olive oil. One pointed out that he was asked by one bottler to mix in peanut oil at his premises. In another situation, a farmer was collecting vegetative wastewater to mix it with other vegetable or peanut oil, to give it the flavour and colour of olive oil (NB, this case was reported as an exception).

Lastly, companies processing potable water are very interested in the closed production cycle model and in enabling management of the collection of plastic bottles at a time when companies are not allowed to recycle their bottles. This situation creates higher procurement costs for the companies.



TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS

The sub-sections above on other SDGs (e.g., 6, 9, 12) outline some of the initiatives of the agro-processing sector to reduce its impact on climate change, including:

- New ovens employing liquid substances for the smoking process, leading to a reduction in carbon emissions.
- Investments in photovoltaic systems.
- Investments in cleaner and more efficient transport operations and carbon capture and storage technology.
- Reduction in the amount of plastic in packaging.
- Switching to combustible fuels with lower CO₂ emissions.
- Implementation of good agricultural practices that are more environmentally friendly.



CONSERVE AND SUSTAINABLY USE THE OCEANS, SEAS AND MARINE RESOURCES FOR SUSTAINABLE DEVELOPMENT

The discussions above on other SDGs (e.g., 6, 9, 12) point to some agro-processing initiatives to reduce the pollution of rivers, seas and marine resources, such as investments in wastewater treatment. However, as mentioned above, such systems are very costly and SMEs lack the capital for investments. During the FGDs, some agro-processors expressed interest in investing in such systems if there were to be a financial support scheme.



PROTECT, RESTORE AND PROMOTE SUSTAINABLE USE OF TERRESTRIAL ECOSYSTEMS, SUSTAINABLY MANAGE FORESTS, COMBAT DESERTIFICATION, AND HALT AND REVERSE LAND DEGRADATION AND HALT BIODIVERSITY LOSS

Water and air pollution, land degradation, biodiversity loss and waste management are major environmental challenges. Rapid urbanisation and increasing demand for natural resources have led to increasing depletion and degradation. Waste management is inadequate and, according to agro-processors, related closely to compliance with environmental permits and non-enforcement of the law equally for all FBOs.

Agro-processors in the FGDs emphasised that, based on the legal framework and environmental permitting, discharge waters must not be polluting. All participants claimed to monitor their discharged waters. They also stated to be checked by government authorities for compliance. Furthermore, they claimed that it is not the large corporations that pose a risk, but rather the small and informal enterprises, which often remain unchecked and may engage in corrupt practices to evade compliance, leading to unfair competition and higher costs for those that comply with environmental permits.

Meat processors pointed out that they face added disposal costs for slaughterhouse waste (e.g. blood, skin organic manure) that in the EU is reprocessed and converted into other products or regrouped and sold to other companies.

Based on the FGD participants, land and water analysis is not a common practice for Albanian farmers, resulting in excessive levels of pollution of land and water due to general fertilisation practices. Were land analysis to be undertaken, a better picture of the status of macro and micro elements in the land would be obtained, better guiding fertilisation practices, resulting in lower levels of land and water pollution.

Meanwhile, some agricultural producers are trying to convert to organic production. Many are also trying to implement integrated pest management. Such initiatives help in the protection and conservation of biodiversity. Moreover, some participants stated that to improve the environment, they have planted a considerable number of trees in the vicinity of their processing plants.



PROMOTE PEACEFUL AND INCLUSIVE SOCIETIES FOR SUSTAINABLE DEVELOPMENT, PROVIDE ACCESS TO JUSTICE FOR ALL AND BUILD EFFECTIVE, ACCOUNTABLE AND INCLUSIVE INSTITUTIONS AT ALL LEVELS

Agro-processors participating in the FGDs claim that corruption is a considerable problem for formalised business, as it creates unfair competition. They point out that the veterinary system faces significant challenges in functioning effectively, primarily due to political interference, including non-functioning institutions, corruption and employment of unqualified people. Interference hinders the proper functioning of the system, compromising its ability to provide essential veterinary services and uphold key principles of justice and accountability. A similar claim is made for the National Food Authority, which, by not functioning properly, hampers fair competition and jeopardises food safety.

Some of the FGD agro-processors have benefited from IPARD schemes. Nevertheless, they have expressed concerns regarding the accessibility of these support schemes, attributing some of these challenges to potential inefficiencies or irregularities within the Agency of Rural Development and Agriculture.

8.2 Agro-processing sector alignment with the SDGs in EU countries

The agro-processing sector in EU countries has been implementing various business practices aligned with the SDGs. Some key practices are summarised below.

SUSTAINABLE FARMING PRACTICES: Agro-processors are adopting sustainable farming methods, such as organic farming, precision agriculture and integrated pest management, to reduce their environmental impact and promote biodiversity (SDG 2, 12, 15). For example, the EU's Common Agricultural Policy (CAP) supports sustainable farming practices through various financial incentives and programmes.⁵¹

REDUCING FOOD WASTE: Agro-processors are working to reduce food waste throughout the supply chain, from production to consumption (SDG 12). The EU has set a target to halve per capita food waste at the retail and consumer levels by 2030.⁵² Initiatives such as the EU Platform on Food Losses and Food Waste help stakeholders collaborate and share best practices to achieve this goal.⁵³

CLIMATE-SMART AGRICULTURE: Agro-processors are adopting climate-smart agriculture practices to increase productivity, enhance resilience and reduce GHG emissions (SDG 13). The European Commission's Horizon 2020 programme has funded several projects, such as the FACCE-JPI initiative, focused on climate-smart agriculture.⁵⁴

51. European Commission. (n.d.). Common Agricultural Policy. Retrieved from https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/cap-glance_en

52. European Commission. (2015). Closing the loop: An EU action plan for the Circular Economy. Retrieved from <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52015DC0614>

53. European Commission. (n.d.). EU Platform on Food Losses and Food Waste. Retrieved from https://ec.europa.eu/food/safety/food_waste/eu_actions/eu-platform_en

54. FACCE-JPI. (n.d.). Joint Programming Initiative on Agriculture, Food Security and Climate Change. Retrieved from <https://www.faccejpi.net/>

PROMOTING GENDER EQUALITY: Agro-processors are working to promote gender equality in the sector by providing equal opportunities for women and men (SDG 5). The European Institute for Gender Equality supports this goal by providing data and resources to help agro-businesses develop gender-sensitive policies and practices.⁵⁵

SUPPORTING SMALL-SCALE FARMERS: Agro-processors are collaborating with small-scale farmers to improve their access to resources, knowledge and markets (SDG 1, 8). The EU's CAP includes measures to support small-scale farmers, such as the Small Farmers Scheme and the European Innovation Partnership for Agricultural Productivity and Sustainability (EIP-AGRI).⁵⁶

RESPONSIBLE SOURCING: Agro-processors are implementing responsible sourcing practices to ensure that their supply chains are sustainable and ethical (SDG 12). The EU's Farm to Fork Strategy encourages businesses to source sustainably produced food and reduce their environmental footprint.⁵⁷

WATER MANAGEMENT AND CONSERVATION: Agro-processors are implementing water-saving technologies and practices to reduce water consumption and protect water resources (SDG 6). The EU's Water Framework Directive and the Blueprint to Safeguard Europe's Water Resources promote sustainable water management in agriculture.⁵⁸

PROMOTING AGROFORESTRY: Agroforestry, which combines agriculture and forestry, is being promoted to enhance biodiversity, improve soil health and sequester carbon (SDG 13, 15). The European Agroforestry Federation (EURAF) supports the development and implementation of agroforestry practices in Europe.⁵⁹

ENCOURAGING CIRCULAR ECONOMY PRINCIPLES: Agro-processors are adopting circular economy principles to minimise waste, reduce resource consumption and create value from by-products (SDG 12). The EU's Circular Economy Action Plan provides a framework for businesses to transition towards a more circular model.⁶⁰

55. European Institute for Gender Equality. (n.d.). Gender Equality in Agriculture. Retrieved from <https://eige.europa.eu/gender-mainstreaming/policy-areas/agriculture>

56. European Commission. (n.d.). European Innovation Partnership for Agricultural Productivity and Sustainability (EIP-AGRI). Retrieved from <https://ec.europa.eu/eip/agriculture/en>

57. European Commission. (2020). Farm to Fork Strategy. Retrieved from https://ec.europa.eu/food/sites/food/files/safety/docs/f2f_action-plan_2020_strategy-info_en.pdf

58. European Commission. (n.d.). Water Framework Directive. Retrieved from https://ec.europa.eu/environment/water/water-framework/index_en.html

59. European Agroforestry Federation. (n.d.). About EURAF. Retrieved from http://www.agroforestry.eu/about_us

60. European Commission. (2020). Circular Economy Action Plan. Retrieved from <https://ec.europa.eu/environment/circular-economy/>

SUPPORTING RURAL DEVELOPMENT: Agro-processors are contributing to rural development by creating jobs, investing in infrastructure, and supporting local communities (SDG 8, 11). The EU's Rural Development Policy supports these efforts through various funding programmes and initiatives.⁶¹

8.3 Albanian agro-processing sector alignment with European Green Deal

The EGD comprises a comprehensive set of policy initiatives and targets introduced by the European Commission in December 2019, with the aim of making the EU climate-neutral by 2050.

The EGD encompasses a range of policy areas, including energy, transport, agriculture, industry, buildings and biodiversity, and represents the EU's roadmap for transitioning to a sustainable and resource-efficient economy. The initiatives are designed to promote sustainable growth, reduce GHG emissions, protect the environment and improve the health and well-being of EU citizens.⁶²

Some of the key initiatives of the EGD include the following:^{63, 64, 65}

- I. **CLIMATE LAW:** The EU has set a binding target to reduce GHG emissions by at least 55 percent by 2030, compared to 1990 levels. This target was enshrined in the EU's first Climate Law, which was adopted in April 2021.
- II. **SUSTAINABLE TRANSPORT:** The EU is working to reduce the carbon footprint of transport through a variety of measures, such as investing in sustainable infrastructure, promoting the use of electric vehicles and encouraging the uptake of public transport.
- III. **FARM TO FORK STRATEGY:** The EU's Farm to Fork Strategy aims to make food systems more sustainable by reducing the environmental impact of agriculture, improving food quality and safety, and promoting healthy and sustainable diets.
- IV. **RENOVATION WAVE:** The EU's Renovation Wave aims to improve the energy efficiency of buildings, which account for a significant portion of the Union's energy consumption and GHG emissions.
- V. **BIODIVERSITY STRATEGY:** The EU's Biodiversity Strategy aims to protect and restore biodiversity in the bloc and set legally binding targets to increase the area of protected and restored ecosystems.

61. European Commission. (n.d.). Rural Development. Retrieved from https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/rural-development_en

62. https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

63. https://ec.europa.eu/food/farm2fork_en

64. https://ec.europa.eu/energy/topics/energy-efficiency/buildings/renovation-wave_en

65. https://ec.europa.eu/environment/strategy/biodiversity-strategy-2030_en

Figure 22 shows a framework for the cointegration of the 2030 Agenda with the 17 SDGs along with the EGD and nine Policy Areas: Biodiversity, From farm to fork, Sustainable agriculture, Clean energy, Sustainable industry, Building and renovating, Sustainable mobility, Eliminating pollution, and Climate action. The framework is of interest in the discussion in the following sub-section as it links the agro-processing sector with both the SDGs and the EGD policy areas.

Figure 22 Links between each SDG and specific EGD policies

The Global Goals for Sustainable Development - Agenda 2030		The European Green Deal								
		P1	P2	P3	P4	P5	P6	P7	P8	P9
		Biodiversity	From Farm to Fork	Sustainable agriculture	Clean energy	Sustainable industry	Building and renovating	Sustainable mobility	Eliminating pollution	Climate action
Goal 1 - No Poverty										
Goal 2 - Zero Hunger										
Goal 3 - Good Health & Well Being										
Goal 4 - Quality Education										
Goal 5 - Gender Equality										
Goal 6 - Clean Water & Sanitation										
Goal 7 - Affordable & Clean Energy										
Goal 8 - Decent Work & Economic Growth										
Goal 9 - Industry, Innovation & Infrastructure										
Goal 10 - Reduced Inequalities										
Goal 11 - Sustainable Cities & Communities										
Goal 12 - Responsible Consumption & Production										
Goal 13 - Climate Action										
Goal 14 - Life Below Water										
Goal 15 - Life On Land										
Goal 16 - Peace Justice & Strong Institutions										
Goal 17 - Partnerships for the Goals										

NOTE: Dark green, clear correlation between EGD policies and SDGs; light green, indirectly derived relationship between EGD policies and the SDGs; white cells, weak or no apparent relationship

Source: Koundouri, et al., 2021⁶⁶

66. Koundouri, et al., (2021). <https://doi.org/10.4236/tel.2021.114049>

8.3.1 Milk and dairy sector aligning to the European Green Deal

The milk and dairy sector is compromised by many environmental issues, second only to the meat sector. Its environmental impact includes i) high contribution to agriculture GHG emissions, ii) high consumption of natural resources per output unit, iii) need for sizable investments in manure management, and iv) relatively energy-consuming processing cycles, based on cooling and heating.

In addition, the drive to production efficiency induces increasingly intensive breeding systems, with subsequent problems with regard to pollution hotspots, animal welfare, gradual agrobiodiversity loss (due to the use of few, highly specialised breeds) and increased risks of animal disease. The main environmental issues that interventions can address include: i) primary production waste and manure management, ii) optimisation of the production cycle, reducing use of inputs, including veterinary medicines, applying the Farm to Fork approach, iii) partial self-production to meet the increasing need for energy, and iv) agrobiodiversity preservation. The contribution of the milk and dairy sector to alignment of the EGD in Albania concerns the policy areas Farm to fork, Clean energy, Biodiversity and Climate action. In this context, Table 7 reports the trends and issues in the sector that will have a direct impact on the alignment to the policy areas. The column ‘Impact’ shows the expected impact in the absence of interventions.

Table 7 Milk and dairy sector trends and impact on EGD policy areas

Ongoing trends in commodity chain segments	EGD relevant components	
	Impact	Policy area
Dairy cattle primary production		
Decreasing native breed population	-	Biodiversity
Inadequate manure management in larger breeding farms	-	Farm to fork; Climate action
Inadequate animal husbandry, especially with regard to animal feeding, leading to a lower yield in comparison to genetic potential	-	Climate action
Prevalence of dry pastures	+	Farm to fork
Increasing energy intensity	-	Clean energy
Small ruminants' milk primary production		
Decreasing native breed population	-	Biodiversity
Declining transhumance	+	Climate action
Decreasing size and quality of pasture resources	-	Farm to fork; Climate action
Milk processing		
Decreasing amount of small and informal dairy processing units	+	Farm to fork
Increasing energy intensity	-	Clean energy

Primary production is by far the most problematic sub-sector in relation to environmental impact. In particular, poor manure management and still inadequate animal husbandry constitute the main issues. Low milk yields in relation to the actual yield potential mean that it takes a larger number of animals to reach a specific output volume. The identification of issues relevant to the EGD and the assessment of potential impact in the absence of intervention provide guidance to the identification of actions and investments, reinforcing the positive impact or mitigating or reversing the negative impact, covered in the last section.

8.3.2 Meat and meat processing sector aligning to the European Green Deal

The meat and meat processing sector has the largest environmental impact, including i) high contribution to agricultural GHG emissions, ii) high consumption of natural resources per output unit, iii) need of sizable investments for manure management, and iv) relatively energy-consuming processing cycles.

Intensive pig and poultry breeding are among the most polluting agricultural activities, while stimulation of production efficiency induces increasingly intensive ruminant breeding systems, with consequent problems of pollution hotspots, animal welfare, gradual agrobiodiversity loss (due to the use of few, highly specialised breeds) and increased risks of animal disease.

The main environmental issues that interventions can address include i) primary production waste and manure management, ii) optimisation of the production cycle, reducing the use of inputs, including veterinary medicines, applying the Farm to Fork approach, iii) management of slaughterhouse and meat processing waste, iv) partial self-production to meet the increasing needs for energy, and v) agro-biodiversity preservation.

With reference to the contribution of the sector to the alignment to the EGD in Albania, the meat and meat processing concerns the components Farm to Fork, Clean energy, Biodiversity and Climate action. Table 8 reports the trends and issues in the sector that will have a direct impact in relation to the alignment to EGD policy areas. As in the previous table, the column 'Impact' shows the expected impact in the absence of interventions.

Table 8 Meat and meat processing sector trends and impact on EGD policy areas

Ongoing trends in commodity chain segments	EGD relevant components	
	Impact	Policy area
Bovine meat primary production		
Decreasing native breed population	-	Biodiversity
	-	Farm to Fork
Inadequate manure management in larger breeding farms	-	Climate action
Prevalence of dry pastures	+	Farm to Fork
Small ruminants' meat primary production		
Decreasing native breed population	-	Biodiversity
Declining transhumance	+	Climate action
Decreasing size and quality of pasture resources	-	Farm to Fork
	-	Climate action
Pig breeding		
Development of semi-intensive breeding and inadequate manure management	-	Farm to Fork
Increasing energy intensity	-	Clean energy
Poultry breeding		
Very intensive and standardised breeding systems, based on intensive use of inputs; market segmentation could sensibly increase the optimisation in feed use	-	Farm to Fork
Meat processing		
Growing, but considerably scarce and deficient industry with regard to the recovery and utilisation of slaughterhouse and meat processing waste to produce by-products	-	Farm to fork;
	-	Circular economy
Intensification of pressure and control with regard to meat processing wastewater (present situation is negative, though there is an increasing pressure towards improvement)	+	Farm to fork
Increasing energy intensity	-	Clean energy

The two issues that generate the largest impact on the environment and also inflict health hazards on the public include i) inadequate management or lack of primary production manure and effluents, and ii) slaughterhouse and meat processing waste. Both these issues are essentially relevant to the Farm to Fork EGD. Proper management of slaughterhouse and meat processing residues needs large quantities of energy, in the form of heat. Self-production of energy in these plants is associated with their financial and economic sustainability.

As also pointed out in the previous sub-section, the identification of issues relevant to the Green Deal and the assessment of potential impact in the absence of intervention provide guidance to identify actions and investments reinforcing the positive impact or mitigating or reversing the negative impact, covered in last section.

8.3.3 Fruit and vegetable sector aligning to the European Green Deal

The main challenges for the Albanian fruit and vegetable sector alignment to the EGD concerns plastic management and disposal, the strategy from Farm to Fork, the circular economy, organic agriculture and biodiversity. In the Farm to Fork strategy, the main challenge for the sector is related to the sustainable use of pesticides and the adoption of integrated pest management.

Biodiversity requires careful consideration in order to start the stimulation of propagation and the cultivation of native varieties that may expand in the future. Attention should be paid to the expansion of greenhouse cultivation needs with a view to a proper plan for the disposal of plastic and other cultivation waste. Organic cultivation may provide valuable opportunities for domestic horticulture while contributing to the relevant component of the EGD.

The development of the fruit and vegetable sub-sector value chains will be deeply connected to the gradual alignment to the European Green Deal as climate change will impose some structural changes to the fruit and vegetable sector over time, especially in those areas more prone to flooding or drought. The alignment to EGD will stimulate innovation and provide an opportunity to transform existing isolated pilot initiatives into mainstream investment and business models.

With reference to the contribution of the sector to the alignment to the EGD in Albania, the fruit and vegetable sector is mainly related to the following components: Farm to Fork, Clean energy, Biodiversity and Climate action. Table 9 reports the trends and issues in the sector that will have a direct impact on alignment to EGD policy areas. The column 'Impact' shows the expected impact in the absence of interventions.

Production of fruit and vegetables do have some negative environmental impacts, in particular inadequate production practices (e.g., use of PPP and fertilisers), outdated equipment and technology, and the amount of plastic used for greenhouse cladding and packaging.

Table 9 Fruit and vegetables sector trends and impact on EGD policy areas

Ongoing trends in commodity chain segments	EGD relevant components	
	Impact	Policy area
Fruit and vegetable production		
Increasing irrigation needs and costs combined with lack of, or outdated, irrigation systems	-	Climate action
Inadequate production practices and technology	-	Farm to Fork
	-	Sustainable agriculture
No genetic material certified for native varieties or cultivars	-	Biodiversity
Considerable amount of plastic used for greenhouse cladding and packaging	-	Farm to Fork
	-	Circular economy
	-	Clean energy
	-	Climate action
Lack of qualified technicians and technical assistance; Lack of weather monitoring systems	-	Farm to Fork
	-	Sustainable agriculture
Inefficient, old equipment, machinery, and technology	-	Clean energy
	-	Climate action
Fruit and vegetable processing & export		
Increasing investment in photovoltaic systems	+	Clean energy
		Climate action
Increasing pressure and control in regard to wastewater and waste treatment	+	Farm to Fork
Current cold storage capacities do not meet the demand	-	Farm to Fork
No coordination between value chain actors	-	Farm to Fork
Significant investments by large processing plants in new modern technology	+	Clean energy
	+	Climate action
Inability to meet EU standards for fruit and vegetable processing SMEs	-	Farm to Fork

8.3.4 Olive oil sector aligning to the European Green Deal

The olive and olive oil sector does not rank highly among those posing environmental threats, with the significant exception of the oil mill effluents (vegetation waters and olive oil cake), which constitute important pollutants if not properly managed. However, there is a wide range of technologies and a centuries-old experience in various management practices. In particular, with regard to olive cake, there is a growing understanding that it could become a source of additional revenue, rather than waste requiring minimisation of disposal costs.

The establishment of an olive refinery serving the main production area might bring changes but would not solve the issue of olive cake management, as smaller quantities of virgin olive oil cake spread in several oil mills will be replaced by a large stock of exhausted, fuel-grade olive cake. This would contribute to the establishment of a more structured market for biomass fuel, as well as prevention of the use of virgin olive oil cake to produce by-products with higher added value (which are not currently produced), thus limiting the great potential of olive cake to contribute to the circular economy.

The methods required to gain a genuine profit from recycling vegetation water are not suitable for the Albanian industry structure. However, there are relatively cheap and consolidated management methods, such as spreading over agricultural soils, with maximum quantities dependent upon the nature of the soils and the purpose of the spreading (fertigation or an increase in organic matter in degraded soils). The costs of these established practices are limited, but still exceed the financial benefits that a mill receives. (Farmers do not usually pay for the vegetation water spread on their land.)

Other environmental issues to be considered include the following: i) agrobiodiversity problems: in the case of absence of interventions, there is a concrete threat of loss of native germplasm (potentially native olive cultivars), ii) reducing waste and loss of nutritional qualities along the supply chain (i.e., a need for considerable efforts with regard to the overall adoption of the Farm to Fork approach).

Increased drive for quality could lead to a substantial increase in the use of PPP to control olive fly attacks. At present, pest management practices are scarcely applied, and PPP are seldomly used, but the consequences on the loss and quality of products are considerable. Know-how of biologic pest control is well established, as there is a consolidated protocol for the use of pheromones. But the method is considered too expensive and is therefore scarcely applied when not subsidised.

There have also been original experiments on other methods of biological pest control, which were not followed by a practical large-scale application. With reference to the contribution of the olive and olive oil sector to the alignment to EGD in Albania, this is mainly related to the policy area Farm to Fork, with some important aspects related also to Clean energy (supplying clean, affordable and secure energy) and Biodiversity (preserving and restoring ecosystems and biodiversity).

According to data from the International Olive Council (IOC), the olive tree counteracts the greenhouse effect, sequestering more CO₂ than the emitted into the atmosphere by the production of olive oil. The IOC's data demonstrate unequivocally that a hectare of olive trees captures a person's annual carbon footprint, that the production process from field to bottling of one litre of oil has a positive carbon footprint of 10.65 kg of CO₂. The IOC has developed an application for estimating the carbon footprint of olive oil production that can be used by IOC members.⁶⁷

In its study, the IOC divided the olive growing areas into four homogeneous macro-regions: Western Mediterranean (including Albania and the other biggest producers: Italy, Spain and Greece), Eastern Mediterranean, South America and North America. Based on a global average carbon balance with absorption of 10.65 kg CO₂ per litre of oil, the analysis highlights significant differences between the various macro-geographical areas. The average carbon sequestration level for the western Mediterranean is in line with the global levels: 10.51 kg CO₂ per litre of oil. The highest level of absorption is found in the eastern Mediterranean, with 12.67 kg CO₂ per litre of oil and the lowest in North America, with 6.4 kg CO₂. Among the factors that have the largest impact on the environmental sustainability of the olive tree is irrigation and the vigour of the individual olive varieties, demonstrating that biodiversity and environmental sustainability are closely connected.

Table 10 reports the sector trends and issues that will have a direct impact on the alignment to components of the European Green Deal.

67. According to IOC, published scientific studies document the positive environmental effects of olive growing, in terms of biodiversity, soil improvement and in serving as a barrier against desertification, and how certain agricultural practices increase the capacity to fix atmospheric CO₂ in the soil and plants. In the presentation of the application, IOC explains that the regulatory frameworks developed so far for quantifying and reporting GHG emissions are based on a life cycle assessment approach. In these frameworks, the potential effect of CO₂ capture and storage by olive orchards is reported separately from global emissions. Hence, there is no single specific indicator to report the real positive effect of olive growing as an ecosystem that captures CO₂ from the atmosphere and stores it on a long-term basis in plants and the soil. See <https://carbonbalance.internationaloliveoil.org/en>

Table 10 Olive oil sector trends and impact on EGD policy areas

Ongoing trends in commodity chain segments	EGD relevant components	
	Impact	Policy area
Olive production		
Limited and unsystematic work for native germplasm conservation, with lack of certified propagation material for most native potential cultivars.	-	Biodiversity
Much limited agronomic practices cause some loss of soil nutrients but ensure higher soil carbon sequestration capacity.	- +	Farm to Fork Climate action
Exploitation of water resources for irrigation and spread of irrigation in areas with sensitive water resources can impact the water balance.	-	Farm to Fork
Quality and quantity losses due to improper agronomic practices, pest management, olive harvesting and post-harvest logistics.	-	Farm to Fork Circular economy
Olive oil processing		
Slow replacement of processing lines with state-of-the art equipment increases the quantity of oil that is not extracted and is wasted.	-	Farm to Fork
No management of pollutant vegetation waters.		
Widespread and increasing recognition of olive cake as a resource. Virgin olive oil cake and ground olive seed (nocciolino di sansa) are already used as fuel, also inside olive oil mills.	+	Farm to Fork Circular economy Clean energy
Table olive processing		
Lack of treatment of used brine contributes somewhat to pollution.	-	Farm to Fork

At present, with the exception of the impact of vegetation waters (the treatment of which is provided for in accordance with the applicable legislation), most of the above listed impacts (positive or negative) are relatively limited compared to the impact of other agro-food sectors.

8.3.5 Flour and dough sector and drinking water sector aligning to European Green Deal

The flour and dough (including the bread industry) and drinking water sector showed similarities during the FGDs in terms of aligning to EGD. The participants from leading industry players stated that raw material, suppliers, auxiliary materials and technologies are imported from the EU adhering to its standards. However, it is not the case for the whole sector.

SMEs and informal businesses operating in both bread and drinking water sectors have poor and insufficient infrastructure with regard to the obligatory quality and safety control for guaranteeing their product quality to the consumer, to the domestic market and the official control bodies according to the Food Law.

The main challenge is linked to plastic management and disposal, which fall under the EGD Farm to fork strategy and the circular economy. Use of plastic as packaging material in both industries needs careful consideration for its disposal. Moreover, the main challenge for bakeries is the reallocation of unsold bread products in order to reduce waste (e.g., daily distribution of such products to social canteens for next-day consumption).

The FGD participants from both sectors contribute to one of the policy areas of EGD 'Clean energy' by investing in a cleaner and efficient technology. Some have started to switch to electrical transportation. Investments in photovoltaic systems are also in progress and for urban businesses (i.e., most bakeries) where space is limited, investments have been made in water heating panels (which require less space than solar panels), which are very cost-effective considering that heated water is necessary in almost every appliance that they use.

9.

ACTIONS RECOMMENDED FOR ADOPTION OF THE SDGs AND EGD IN THE AGRO-PROCESSING SECTOR IN ALBANIA⁶⁸

9.1 Dairy and meat sectors⁶⁸

SUPPORTING AGRO-BIODIVERSITY

The ongoing process of polarisation of primary production (gradual decrease in subsistence farming, increase in commercial milk farming and decline in semi-commercial milk farming) has led to an increasing number of some widely used popular breeds at the international level, such as the Holstein or Tarantese.

Most other bovines in Albania are of mixed breed, with little or no work undertaken for the selection of native breeds. Thus, the number of bovines and small ruminants of native stock are decreasing, with those used in production increasingly of mixed breed. Meanwhile, the decline in the traditional eco-pastoral socio-economic system (transhumance) and lack of investments in pastures is leading to a general decline in small ruminant breeding, resulting in reduced numbers of most native breeds, in favour of a few most popular and imported breeds. Interventions ought to provide incentives for endangered native breeds, which need to be confirmed and possibly extended to all native breeds, not only those endangered.

It can be useful to draw upon the experiences of preserving and imbuing value to biodiversity through market mechanisms. Such experiences were implemented in various international development projects, where quality schemes were linked to biodiversity-based products⁶⁹ (e.g., the Has goat,⁷⁰ now protected by Geographic Indication) or to a mix of specific breeds and traditional breeding systems (e.g., Ionian lamb quality scheme). A preferential criterion could be considered for animal products (in this case milk and dairy) obtained within the framework of quality schemes (e.g., Geographic Indication, collective marks, origin marks), which also include biodiversity-based products.

IMPROVING MANURE AND BREEDING WASTE MANAGEMENT

Improving the management of manure and breeding waste is the most environmentally sensitive issue in the sector, especially given that some large-scale milk breeding activities are being established with the potential for a major environmental impact at the local level. Breeding waste and manure impact two EGD components: EU Climate Action (through production of GHGs) and Farm to Fork, which is highly relevant to all aspects of animal breeding.

68. The primary source of supply of the bread sector is the import market and this Section does not include the bread sector to focus primary on the value chains that are most critical and that operate within the country through the producers (farmers).

69. A biodiversity-based product is a product whose main characterisation or marketing point of strength is linked to biodiversity and uses as a leverage the marketing concept that the scarcer a good is, the higher the price to be paid. Biodiversity-based products are rather common in the wine and meat sector (quality schemes related to specific and rare cultivars or breeds) and niche food products (e.g., some 'superfoods' that can be found only in some eco-systems).

70. The support for development of biodiversity products through Geographic Indications was the core concept of the FFEM BiodivBalkans project.

If managed properly, manure can positively contribute to EGD components such as Clean and Affordable Energy (through biogas production) and Farm to Fork itself (as the availability of mature manure in sufficient quantities is a key factor for organic farming and its growth). Investments in improved manure management and in facilities and equipment that would facilitate manure management are therefore to be considered a highly ranked priority in milk primary production and animal breeding in general.

OPTIMISATION OF THE USE OF INPUTS, INCLUDING FEEDS AND VETERINARY MEDICINES

Animal feed costs contribute heavily to the competitiveness of the milk-breeding sector. The cost of maize production in Albania is higher than in Serbia and other regional competitors. Reconsideration of the whole supply chain to optimise the use of inputs (from fertilisers and PPP used for forage and fodder cultivation, to water and veterinary medicines, etc.), the increased attention to animal health and animal welfare, the use of local, available by-products as components for animal feed, and the introduction of control systems along the whole production chain (e.g., automated feed dispenser) are all elements that contribute both to production efficiency and the achievement of EGD Farm to Fork objectives. Since material investments to optimise the use of inputs also increase production efficiency, it has been considered that there is no need for a preferential criterion linked to EGD Farm to Fork. However, much improvement can be obtained through counselling and advisory services on the optimal use of inputs, animal welfare and production system control, regardless of investments in equipment, farm machinery and fixed assets. Thus, interventions could help provide specialised advisory services that are focused on improving the sustainability of milk production.

STIMULATION OF MORE COMPLEX, ENERGY-INTENSIVE PROCESSING ACTIVITIES

Improving quality along the milk supply chain and establishment of larger and more competitive farms requires increasing quantities of energy, especially in primary production (farm machinery, milking stations, cooling system, etc.). The overall energy balance in the milk processing industry is to be considered quasi-neutral, as a larger and more complex processing plant requires much more energy than a traditional plant (which only needs heat and does not treat effluent). However, a single modern dairy plant replaces several informal or semi-formal dairy units (*baxho*) whose energy efficiency per output unit is less. Meanwhile, significant consumption of inputs and energy (direct and indirect) is related to packaging.

ADDRESSING THE ISSUE OF PASTURE MANAGEMENT

Lack of investments and decline in traditional eco-pastoral systems have contributed to the loss and degradation of pasture resources, especially highland summer pastures. The decline of traditional socio-economic patterns in mountain areas is leading to an alteration of the whole ecosystem, which, among other effects, leads to increased soil erosion, loss of biodiversity and further negative impact on the local economies. Reduction in the quantity and quality of pasture resources, and depopulation of inner areas, has negative effects in several sectors: small ruminant breeding (milk and meat), and the collection of wild MAPs and non-timber forest products.

With specific reference to milk-oriented small ruminant breeding, the decline of the economy of transhumance (to summer pastures and seasonal dairy processing units in the highlands) has not been structurally replaced by an alternative, with the resulting re-orientation of small ruminant breeding towards meat production and overall stagnation of the activity. There is a need to start investing again in pastures, which can be the focus of future interventions, through, for example, inclusion in local development plans. As most pastures are owned by municipalities, this could eventually result in more feasible options.

ADDRESSING THE ISSUE OF PLASTIC PACKAGING

Compared with traditional and informal supply chains, those ensuring safety controls utilise much larger quantities of single-use plastic and aseptic packaging (such as Tetra Brik Aseptic, TBA) packaging, which must be recycled in specialised plants.

For food industries such as milk and dairy, the EGD recommends recycling and the use of bioplastics rather than the reintroduction of recyclable packaging rotation schemes (i.e., with glass bottles). However, in Albania, bioplastics are not used and only a few types of plastic can be recycled (e.g., Polyvinyl chloride), while no recycling facilities are available. Increasing plastic packaging recovery is part of the EGD recycling component (mobilizing the industry for a clean and circular economy). Thus, such actions ought to be included in future interventions.

9.2 Fruit and vegetable sector

Climate change is expected to impact the profitability of several crops, increasing irrigation needs and costs in some areas where water is already scarce (e.g., Saranda, Lushnja), changing the profitability parameters of heated greenhouses (shorter periods of necessary heating) and creating opportunities for new sub-tropical crops.

The introduction and improvement of systems for reduction in GHG emissions and dust contamination are initiatives that the horticultural sector should consider in order to improve environmental performance under the climate-change related principle of the EGD. Primarily in areas most affected by water scarcity, investments in more efficient use of water resources (e.g., drip irrigation systems, restoring water reservoirs) should be encouraged, while expenses concerning the digging of new wells should be not allowed and at least not considered as an eligible expenditure. Sustainable water management might be achieved with improvement of the irrigation infrastructure and efficient systems for water recovery and treatment.

Supporting the transition from annual crops to fruit production should be considered, too. In most Albanian farms, production practices are inadequate: in small farms, fertilisers

are commonly underutilised and PPP is often misused. In fruit and vegetable production clusters (soft citrus in Saranda, apples in Korça, greenhouses between Berat and Lushnja intensive table grape cultivation) intensive farming is associated with a heavy use of PPP and fertilisers. Optimising the use of inputs, cutting waste throughout the whole value chain, ensuring traceability and optimising logistics is the objective of the Farm to Fork and Sustainable Agriculture EGD policy areas. **Priority actions** in this area refer to:

- Production techniques, with the adoption of integrated production and organic production, introduction of precision-agriculture systems and machinery and technical means that reduce the environmental impact, use of resistant plants and seeds and organic seeds and seedlings, and eco-friendly soil management.
- Green management of cultivation field areas, by grassing the orchard inter-rows, the establishment of green buffer zones, hedges, tree-lined areas, nests and shelters for birds and wild fauna.
- PPP management, with the construction of collective plants for the preparation and distribution of mixtures of pesticides and fertilisers, construction of units to wash the PPP spraying machine, investments in management systems of the related wastewater, establishment of systems of collection and disposal of PPP empty or used containers. As well as the development of a National Action Plan for the sustainable use of PPP.
- Traceability, by implementing systems for data recording on the use of chemicals and withholding periods, as well as transferring the records to the buyers.

Investments and interventions ought to support the transition from conventional to organic production, improving agronomic production practices through counselling and coaching, supporting the development of professional agronomic services rendered by specialised rural workers and introducing incentives for the adoption of more energy-efficient equipment.

Reintroducing as a rewards scheme the provision included in the 2018 National Scheme (actually envisaging a subsidy) to support the use of pollinators in greenhouse production should be also considered.

A rewards scheme should also be introduced for the use of native fruit cultivars to at least maintain agro-biodiversity. The practical application of this primary requirement could be limited by the need to introduce additional specifications and limits.⁷¹

The **Circular economy** is an area where the EGD is more relevant with regard to the fruit and vegetable sector in Albania, together with Climate action and Clean energy production. The

71. Limits are related to the ecosystem (native cultivars are best suited – adapted – to their area of origin) and that for most native cultivars there is no genetic material certified in accordance with international standards. Provision of extra support or preferential criteria to native varieties and cultivars is constrained by the lack of a catalogue of fruit and vegetable native germplasms (while for olive and grape such catalogues are available).

key topic is plastic, which is prevalent in greenhouse cladding and packaging throughout the value chain, from post-harvest handling to the end consumers. To address this issue, interventions can be designed to support investments in the production of bioplastics, particularly focusing on equipment for sustainable packaging production. However, it is essential to note that the current equipment used for bioplastic production is most appropriate when integrated into value chains that utilise waste products (e.g., agricultural and food processing residues, such as crop waste, fruit peels and vegetable scraps, can be utilised for bioplastic production).

Moreover, most of such waste can be also used to produce biogas (molasses, potato waste), so that there is some competition in terms of green management of waste. In conclusion, plastic constitutes a very serious problem in the fruit and vegetable sector, in terms of the scale of use and quantity of waste, but so far no pilot experiences or proposals have been provided from value chain operators to reduce the problem.

Looking at possible policy actions, the prospect is completely different and there is a major scope for intervention, introducing norms to determine suitable bioplastics (type of bioplastics to be used and for what purpose), incentivising the usage of bioplastics, applying taxes to compensate the damage made by non-recyclable plastics (the so-called 'plastic tax' is a widely discussed issue in EU member states, but adopted only by some) and bolstering the plastic recycling business.

In the horticultural sector, another focus of the circular economy should be on packaging. With an overall production of more than 1.5 million tons per year, the roughly estimated use of packaging is at least 50 million packages, a quantity that requires attention in terms of waste reduction and stimulation of recycling and reuse (Skreli and Imami, 2020). This might be obtained through the use of returnable packaging and the recycling of packaging materials (wood, carton, plastic). Reduction in the use of packaging might be promoted by raising awareness amongst the value chain actors, though most positive results are expected to be made from reuse and recycling. Several organisations are active in the management of Reusable Plastic Containers (RPCs), including international players such as IFCO, Euro Pool System, and CPR System.⁷²

There is important scope for **clean energy** production in greenhouses and fruit and vegetable sector processing. Initiatives that may be considered include the introduction of combined energy production systems (co- or tri-generation) and the introduction of renewable energy plants. In Albanian greenhouse cultivations, a few pilot experiences of a basic use of biomass

72. Following a constant increase, the Italian group CPR System achieved 150.7 million movements of boxes, and 6.7 million movements of pallets (2019 data). IFCO, the world leader in this specific service, has a much larger volume of movements per year. Currently, IFCO operates a pool of more than 300 million RPCs globally, used for more than 1.7 billion shipments of fresh fruits and vegetables, meat, poultry, seafood, eggs, bread and other items from suppliers to grocery retailers.

heaters (using waste from other value chains) have been implemented. A sizable investment has also been made near Tirana into high-tech greenhouses heated with gas, where the adopted technology recovers the CO₂ produced to accelerate plant growth.

In financing new heated greenhouses, interventions can focus (through a rewards scheme) on the use of biomass heaters, adoption of technologies for CO₂ recovery and use of thermal solar panels. Where electric equipment is used, the share of energy self-production should be adopted as one of the parameters to rank various applications.

Fruit and vegetable production is also a major user of fuel (for farm machinery) and an important user of electricity (for irrigation and post-harvest practices). Investments in the installation of renewable energy production equipment (photovoltaic, biomass) for self-consumption should be made available and, more comprehensively, the transition to electrification of farm machinery should be encouraged. Fruit and vegetable storage and processing is a major user of electricity, especially when sorting, grading and packing lines are involved (cold storage units). Most of Albania's electricity is already generated from renewable sources, so at the country level there is no major scope to replace renewable energy with another. However, at the enterprise level, there is scope to reduce costs, so that the conditions are in place to introduce as a requirement i) the purchase of cold storage systems of low energy consumption (including insulation and efficiency of cooling systems), and ii) eligibility of investments for installation of renewable energy equipment (main options being photovoltaic or biomass, with possibilities for biogas production from processing waste) for self-consumption. The economic feasibility of this option has been already proven in other value chains, as IPARD II has already financed the self-production of renewable energy through photovoltaic panels in a meat processing plant in Korça.

The adoption of combined transport systems and the introduction of low-impact transport facilities (gas-powered and electric vehicles) may improve the sustainability of mobility and should be considered for long-haul transportation and for transport related to urban mobility and delivery of horticultural products.

9.3 Olive and olive oil sector

PROVISION OF INCENTIVES TO MAINTAIN NATIVE GERMLASM AND RESTARTING OF THE PROCESS LEADING TO CERTIFICATION OF NATIVE CULTIVAR PROPAGATION MATERIAL

There is major scope for conservation of Albanian olive germplasm and for development of native cultivar propagation material.⁷³ With the existing systems and infrastructure, a conservational approach ought to be pursued in most cases, including endangered germplasm and varieties within eligible crops.

Interventions could support olive production only for the few native cultivars for which certified propagation material can be obtained, the main ones being Kaniniot (commonly known as *Kaliniot*) and Kryps Berati (commonly known as *Kokërmadh i Beratit*). Other local varieties that are not endangered (i.e., native varieties classified as ‘average’ or ‘large’ in the catalogue), such as Mixan, Freng, various types of ‘white olive’ (*i bardhi* varieties), could be considered for rewards schemes in future interventions.

IMPROVEMENT OF PERFORMANCE AND ENSURING OF ENVIRONMENTAL SUSTAINABILITY IN PRIMARY PRODUCTION

A major factor affecting the performance of the olive sector is the inadequacy of the production, harvesting and post-harvesting practices applied by most primary producers, with low productivity, product loss and unnecessary quality losses. Improving performance, minimising waste, maintaining soil fertility, making optimal use of inputs and maintaining the biological productivity potential of plants, without overexploitation are all issues that are included in the Farm to Fork EGD component.

One particular issue concerns the requalification of existing olive groves (rejuvenation through radical pruning and other agronomic practices exceeding ordinary activities). Past financing in this field has not been very successful in terms of absorption, especially compared to the demands for new plantations and farm machinery. Considering the above, existing olive grove rejuvenation could be considered for support (intervention) in relation to the Farm to Fork EGD component, as it contributes to optimizing the use of existing natural resources.

In the context of organic farming, of note is the certification of small plants for organic olive oil production in Albania. While such plants receive certification, obtaining certified organic raw olives for processing poses a significant challenge. The majority of olive groves lack adequate agronomic services, resulting in minimal or no support for cultivation techniques

73. The process to go from germplasm to certified propagation material is lengthy and complex and includes the selection of pure germplasm, clone selection, pre-multiplication and multiplication. Each stage requires facilities, know-how and infrastructure that are only partially available in Albania and, when available, are often not properly operated and maintained or have been dismissed in different rounds of organisational restructuring.

and practices aligned with organic production requirements. Although analysis of residues in olive oil conducted at the oil mill level may not indicate noncompliance with organic requirements, the absence of proper agronomic services does raise concerns. It implies that, while the final product, i.e., the olive oil, may meet organic standards, the olive groves may not adhere to the necessary organic farming practices.

This situation highlights the need to support the transition to a more comprehensive organic production regime tailored specifically for olive production. This transition would encompass not only the processing stage but also the cultivation phase, ensuring that olive groves receive appropriate agronomic services aligned with organic standards. By doing so, the entire supply chain, from olive cultivation to oil production, can adhere to organic principles and standards.

Given the importance of olive production in Albania, it is crucial that olive farmers are included in future interventions and support programmes, with provision of guidance, resources and training in organic farming practices specific to olive production. By promoting proper agronomic services and supporting adoption of a comprehensive organic production regime, the country can enhance the sustainability and integrity of its olive industry. Lastly, the development of a National Action Plan for the sustainable use of PPP would impact positively sustainability in primary production.

At the processing level, all the actions leading to reduction in losses or maintenance of nutritional quality throughout the supply chain (primarily through better storage facilities) are relevant to the Farm to Fork EGD component. Most interventions addressing this issue will eventually lead to increased competitiveness in terms of improved quality, lower losses and higher prices in the market.

A distinct and specific challenge pertains to the management of effluents (vegetation waters) and waste from oil mills, particularly regarding their utilization in producing by-products like olive cake. The environmental management of waste and effluents from oil mills represents a potential area for intervention. This is especially relevant given the existing obligations under the EU-harmonized legal framework for integrated waste management. In Albania, the Law 'On Integrated Waste Management' (Law 10463/11) is already in place. However, the necessary secondary legislation from the Ministry of Tourism and Environment (MoTE) and the Ministry of Agriculture and Rural Development (MARD), which would regulate effluents and waste in the agro-industry, has yet to be formulated.

Most uses of olive cake are more profitable than composting, so the latter is usually not preferred. However, this is a way to produce good, organic fertiliser, which can be useful in areas where organic farming is widespread and organic fertiliser scarce. However, this situation is not common in Albania, so that the cost of equipment and facilities to produce compost from olive cake should not be considered as a priority intervention.

MAKING USE OF OIL MILLS EFFLUENTS AND BY-PRODUCTS FOR CIRCULAR ECONOMY APPLICATIONS

The processes used for the extraction of olive oil generate large amounts of by-products, including the solid residue known as olive press cake (OPC) and large amounts of aqueous liquid known as olive-mill wastewater (OMW).⁷⁴ Vegetation water (OMW) and, especially, virgin OPC are rich in nutrients. The latter retains a significant proportion of olive oil, which can be extracted in pomace oil refineries or used in a range of by-products.

Currently, vegetation waters are dumped into water bodies untreated, posing an important environmental hazard. However, in Albania these waters can be used for fertigation or as an input for productive forestry (an application of phyto-depuration), while there are no conditions suitable for biogas production (very large oil mills are required for financial sustainability) or extraction of polyphenols and other components with various methods (e.g., ultrafiltration, reverse osmosis). Evaporation methods could be applied, but the economics of this should be studied on a case-by-case basis.

Virgin olive cake has a number of possible uses, in addition to the simplest process of fuel-grade biomass, while exhausted olive cake (from pomace oil refineries) could be used (were such plants to be established in Albania) only for biomass fuel.

Equipment for treatment of virgin olive cake to produce inputs for production other than biomass fuel should be considered for intervention support under the EGD Circular economy component.

STIMULATION OF MORE ENERGY-INTENSIVE PROCESSING ACTIVITIES

Although the olive sector is currently not a significant energy consumer, this may change with processing lines in Albania becoming more complex by the day. In particular, the use of heating in processing lines, a common practice in Albania's olive oil industry, accounts for a substantial portion of energy consumption. It should be noted that this trend could be amplified in the case of future establishment of pomace oil refineries. Some older plants have been retrofitted already for use of dried olive cake as biomass fuel to generate the necessary heat. The latest generation decanters (multi-phase or Decision of Council of Ministers decanters) can be regulated in a way to produce olive cake in quantities only slightly exceeding the needs of the decanter itself to produce the necessary quantity of hot water.

Use of vegetation waters and olive cake to produce biogas is possible, but with the present industry structure and the existing system of incentives for the use of biogas it

74. As an example, the three-phase process usually yields 20% olive oil, 30% OPC waste and 50% OMW, equating to 80% more waste being produced than actual product (data published by Bioenergy Consult, 2021).

is not considered an economically viable solution in Albania. Nevertheless, provision of incentives for biogas use in Albania would provide more favourable conditions for biogas production from vegetation waters and olive cake, and could include feed-in tariffs and subsidies making investment in biogas production more financially attractive for farmers and businesses. Moreover, government could develop and implement supportive policies promoting the utilisation of biogas as a renewable energy source, such as through establishing clear regulations, streamlined permitting processes and favourable grid access arrangements. Energy is needed to dry out virgin olive cake obtained from traditional oil mills and three-way decanters. At present, the cake is simply dried in the open air, sometimes under extremely basic conditions, even on asphalted surfaces. Dried olive cake is already commonly sold as fuel, but there are no standards for fuel-grade olive cake (for, e.g., level of humidity, minimal calorific power per kg) and no quality measurements are applied to the dried product. Enhanced passive drying systems using solar and wind energy and driers using solar energy (thermal and photovoltaic) would constitute a necessary upgrade. Energy can also be obtained in table olive processing units, using from olive stone extraction, and photovoltaic production for self-consumption is also an option. Considering the size of sheds and other covered infrastructure, oil mills have sufficient space for use for this purpose.

9.4 Summary of objectives and urgent actions for adoption of the SDGs and EGD in the agro-processing sector

Based on the discussion above the following summarizes the main objectives and actions considered for development of a roadmap for adoption of the SDGs and EGD in the agro-processing sector in Albania.

OBJECTIVE 1: AGRO-PROCESSING SECTOR CAPACITIES FOR SUSTAINABLE PRODUCTION AND INNOVATIVE APPLICATIONS ARE ENHANCED

ACTION 1: Conservation and propagation of native germplasm

- ✎ Provide incentives for maintenance of native germplasm
- ✎ Restart the certification process for native cultivar propagation material
- ✎ Establish quality schemes promoting animal products derived from biodiversity-based breeds

ACTION 2: Improve performance and ensure environmental sustainability in primary olive production

- ✎ Implement training programmes for primary olive producers in improved production, harvesting and post-harvesting practices
- ✎ Support requalification of existing olive groves through rejuvenation practices and agronomic interventions
- ✎ Develop a National Action Plan for sustainable use of PPP in primary production

ACTION 3: Support transition to comprehensive organic production practices for olive farming

- Establish guidance, resources and training programmes for farmers in organic farming practices specific to olive production
- Ensure that olive groves receive appropriate agronomic services aligned with organic standards
- Facilitate adoption of a comprehensive organic production regime for olive farming

ACTION 4: Improve water resource management and irrigation practices

- Encourage investments in more efficient use of water resources, such as drip irrigation systems and water reservoir restoration
- Discourage expenses related to the digging of new wells
- Improve irrigation infrastructure and implement efficient systems for water recovery and treatment

ACTION 5: Optimise input use and improve production practices

- Promote the adoption of integrated production and organic production techniques
- Introduce precision agriculture systems and machinery to reduce environmental impact
- Encourage the use of resistant plants, organic seeds and eco-friendly soil management practices
- Implement green management practices in cultivation field areas

ACTION 6: Support transition to organic production and energy-efficient equipment

- Support transition from conventional to organic production regimes
- Improve agronomic production practices through counselling and coaching
- Develop professional agronomic services provided by specialised rural workers
- Introduce incentives for adoption of energy-efficient equipment

OBJECTIVE 2: BUSINESS MODELS ARE ORIENTED TOWARD CIRCULAR ECONOMY

PRINCIPLES

ACTION 1: Reduce losses and maintain nutritional quality throughout the olive supply chain

- Improve storage facilities to reduce losses and maintain nutritional quality throughout the olive supply chain
- Implement interventions that enhance the competitiveness of olive products through improved quality and higher market prices

ACTION 2: Manage oil mill effluents and waste in an environmentally sustainable manner

- Develop and enforce regulations for management of oil mill effluents and waste
- Provide support for implementation of proper waste management practices in oil mills
- Promote use of oil mills effluents for fertigation purposes in appropriate areas

ACTION 3: Utilise oil mill effluents and by-products for circular economy applications

- ✎ Explore opportunities to utilise vegetation waters from olive processing for fertigation or productive forestry
- ✎ Support development of technologies for extraction of valuable components from olive mill wastewater
- ✎ Encourage use of olive cake by-products for circular economy applications, such as organic fertiliser production

ACTION 4: Promote agro-biodiversity and reduce plastic waste

- ✎ Introduce a rewards scheme for usage of native fruit cultivars
- ✎ Implement norms to determine suitable bioplastics and incentivise their usage
- ✎ Apply taxes to compensate for damage caused by non-recyclable plastics
- ✎ Support plastic recycling businesses
- ✎ Encourage use of returnable packaging and promote recycling and reuse

OBJECTIVE 3: COOPERATION FOR SUSTAINABLE PARTNERSHIP IS UPGRADED

ACTION 1: Stimulate more energy-intensive processing activities in the agro-processing sector

- ✎ Promote the use of renewable energy sources, such as biogas, in energy-intensive processing activities
- ✎ Provide incentives and supportive policies for adoption of biogas production from vegetation waters and olive cake
- ✎ Encourage the use of solar and wind energy for drying olive cake and explore photovoltaic production options for self-consumption in table olive processing units

ACTION 2: Enhance management of pesticides and fertilisers

- ✎ Construct collective plants for the preparation and distribution of pesticide and fertiliser mixtures
- ✎ Establish units to wash pesticide spraying machines and invest in management systems for related wastewater
- ✎ Develop systems for collection and disposal of empty or used pesticide containers
- ✎ Create a National Action Plan for the sustainable use of pesticides and fertilisers
- ✎ Implement traceability systems for recording chemical use and withholding periods

ACTION 3: Foster clean energy production and transition to electrification

- ✎ Introduce combined energy production systems and renewable energy plants
- ✎ Support the use of biomass heaters and technologies for CO₂ recovery in new heated greenhouses
- ✎ Promote investments in renewable energy production equipment for self-consumption

- Encourage electrification of farm machinery and transition to clean energy sources
- Set requirements for low-energy consumption cold storage systems

ACTION 4: Improve sustainability in transportation and mobility

- Adopt combined transport systems for long-haul transportation and urban mobility
- Introduce low-impact transport facilities, such as gas-powered and electric vehicles
- Enhance the sustainability of delivery processes for horticultural products

The SDGs are a set of 17 global goals set by the United Nations General Assembly that are broad and ambitious in nature. They encompass a wide range of issues, from poverty eradication, quality education, clean water and sanitation, to climate action and sustainable cities and communities. The sheer breadth and depth of these goals mean that their implementation often requires significant resources, which many businesses may not have at their disposal.

While implementation of the SDGs can generate positive impacts, such benefits often do not translate directly into financial returns for businesses. Positive impacts refer to the benefits that are enjoyed by third parties as a result of an economic transaction. In the context of the SDGs, these could include improved public health from reduced pollution, increased social cohesion from reduced inequality and enhanced ecosystem services from biodiversity conservation.

However, these benefits are often difficult to quantify and monetise and may not necessarily contribute to the bottom line of a business. This creates a gap between the social value created by the SDGs and the private value captured by businesses, possibly deterring businesses from investing in the SDGs. The SDGs comprise a top-down structure, meaning that they are set at the global level and are meant to be implemented by all countries, regardless of their specific circumstances.

This can create a mismatch between the Goals and the objectives of businesses, which are typically focused on profit maximisation. Businesses are primarily concerned with reducing costs and creating value, and may not see the SDGs as aligning with these objectives, making it difficult for businesses to justify investing their own resources in SDGs. Hence, there is a need for external financing.

External financing can help to bridge this gap by providing the necessary resources for businesses to align with the SDGs. This can come in various forms: grants or loans, or investments from governments, international organisations or private investors. These external sources of funding can help to offset the costs of implementing the SDGs, and can also provide incentives for businesses to align with the Goals by linking funding to SDG performance.

Moreover, implementing the SDGs can involve higher risks and uncertainties, especially in emerging markets or unproven sectors. Private sector actors may be reluctant to invest in such projects without external support to hedge against potential losses. External financing, from development banks or impact investors, can provide risk-sharing mechanisms and technical expertise to reduce uncertainty and encourage private sector involvement.

Meanwhile, for effective implementation of external financing for private sector alignment with the SDGs, it is crucial to develop a monitoring and evaluation (M&E) system of SDGs at the country level. Some of the reasons for the development of an M&E system include the following:

- ✎ **Ensuring accountability and transparency:** M&E provides a systematic and transparent way to track progress and outcomes of SDG-related projects and initiatives. By having robust M&E mechanisms in place, both the private sector and external financing entities can hold each other accountable for achieving the intended impacts. Transparent reporting on progress and results builds trust and confidence among stakeholders, encouraging continued support and investment.
- ✎ **Evidence-based decision making:** M&E generates valuable data and insights into the effectiveness of SDG interventions. This data-driven approach helps in making informed decisions about where and how to allocate external financing resources for the private sector. Understanding which projects yield the best outcomes and align most closely with the SDGs allows for more efficient and targeted investment, optimising the impact of the funding.
- ✎ **Demonstrating impact and value:** Effective M&E provides evidence of the tangible outcomes and benefits of private sector engagement in SDG-aligned initiatives. This helps businesses showcase their positive contributions to sustainable development and justifies the need for external financing. When businesses can demonstrate the value of their projects in terms of social, economic and environmental benefits, it becomes easier to attract further financing and partnerships.
- ✎ **Learning and knowledge sharing:** M&E facilitate knowledge sharing and learning among the various stakeholders involved in SDG implementation. Sharing best practices, lessons learned and success stories enables the private sector to gain insights from the experiences of others and apply them to their own initiatives. It also allows external financing entities to refine their funding strategies and improve the effectiveness of their support.

In conclusion, developing a M&E system at the country level is essential for successful implementation of external financing for private sector alignment with the SDGs. It promotes accountability, evidence-based decision making and transparency, while enabling businesses to demonstrate their impact and value. By identifying challenges and learning from experiences, M&E contributes to efficient utilisation of external financing and achievement of the SDGs in an effective and sustainable manner.

