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## **Task 2.1 - Research on the state-of -art, local good practices and opportunities**

**-ALBANIA-**



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## Abbreviations

EU	European Union
EPR	Extended producer responsibility
DCM	Decision of the Council of Ministers
LGU	Local Governmental Unit
MIE	Ministry of Infrastructure and Energy
MoTE	Ministry of Tourism and Environment
MSW	Municipal Solid Waste
NWMP	National Waste Management Plan
NEA	National Environmental Agency
NGO	Non-Governmental Organisation
PET	Polyethylene Terephthalate
REAs	Regional Environment Agencies

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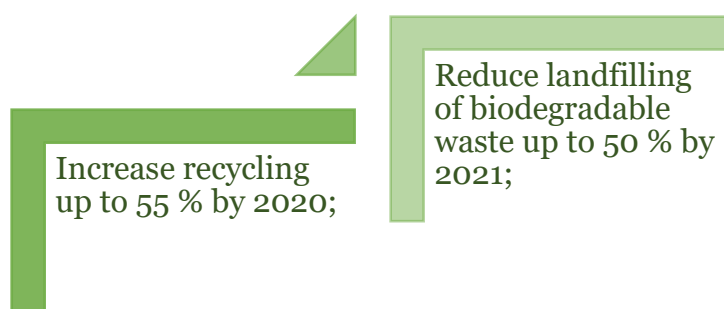
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**Please describe the legal/regulatory, policy and institutional framework for bio-waste management. Laws/regulations, policy goals/strategies, responsible institutions and public/private companies in charge of regulating and handling bio-wastes.**

The Albanian framework law on integrated waste management aims to transpose the EU waste legislation, including targets for recycling and diversion of waste from landfill.

For 2021, the plans are to prepare acts that fulfil the requirements of the framework law on integrated waste management, with one act transposing the European List of Waste into Albanian legislation and one act transposing the producer responsibility obligations of packaging producers. In the short term, measures will focus on drafting/updating the legal acts in accordance with the new EU directives/regulations, clarifying the institutions' roles and responsibilities in relation to waste management and establishing waste management reporting in all municipalities.

The previous NWMP (2011-2019) had quite ambitious targets for separate collection and recycling and yet no change happened during that time. The targets for municipal solid waste (MSW) were the following:



*Fig. NWMP (2011-2019) targets for Municipal Solid Waste*

The new NWMP (Decision of Council Members no. 418, dated 27 May 2020) 'On the approval of the strategic policy document and national action plan on integrated waste management, 2020- 2035' sets more realistic targets, which are not based on current legislation or on the targets of the revised Waste Framework Directive. The new NWMP aims to move from a linear to a circular economy in which resources are used in a more sustainable way, with a key focus on:

- identifying and defining the methodology and technology for future waste treatment investments in an integrated waste management system, including equipment for waste

collection, composting, recycling, incineration for energy recovery and disposal on the basis of waste management areas;

- determining costs and fees related to waste disposal at treatment plants and waste transfer stations;
- a verifiable and transparent objective system of investment priorities related to waste management infrastructure that is built on the basis of needs and impact assessment.

The targets in the new NWMP partly approximate the respective targets set out in the EU waste legislation. The key targets are as follows:



Fig. 2 The new NWMP targets for Municipal Solid Waste

For the 2035 targets, there may be a need for additional infrastructure, but this depends on other developments in municipal waste management, such as the increased separate collection of packaging and bio-waste and also the actual development of waste generation.

The NWMP (2020-2035) plans the development of waste management zones, which are the base units for integrated waste management planning. The zones cover a territory of one or more municipalities that offer an uninterrupted road network, facilitating the transport of waste to the pre-treatment, recovery and final disposal destinations.<sup>1</sup>

The legal framework that applies to waste management includes the most important:

- Law no. 10431, dated 9.6.2011, "On environmental protection", amended;
- Law no. 10463, dated 22.9.2011, "On integrated waste management", amended;
- Law no. 8094/1996, "On public waste disposal", provides the legal basis through which municipalities can contract the service to third parties with management contracts that can last up to 5 years.<sup>2</sup>

In the Decision of the Council of Ministers "On the Determination of the Necessary Measures for the Collection and Treatment of Bio-Waste as well as the Criteria and Deadlines for their Reduction" (DCM no. 608, dated 17.09.2014) the following are defined:

- a) the rules for the differentiated collection of biological waste for treatment purposes;
- b) bio waste treatment, in order to achieve a high level of environmental protection;
- c) steps and deadlines for the differentiated collection of organic waste;
- d) the procedures followed by the local government units for the differentiated collection of bio-waste.

LAW	DCM	POLICY DOCUMENT
Law no. 10431, dated 9.6.2011, "On environmental protection", amended; Law no. 10463, dated 22.9.2011, "On integrated waste management", amended;	DCM no. 608, dated 17.09.2014, "On the Determination of the Necessary Measures for the Collection and Treatment of Bio-Waste as well as the Criteria and Deadlines for their	National Waste Management Plan 2020-2035

*Fig. 3 Legal framework and policy document*

The institutional architecture of the solid waste management sector in Albania is divided into several levels:

- The Ministry of Tourism and Environment (MoTE) is in charge of formulating strategy and drafting legislation, and it sets the rules for monitoring and inspection/control of the implementation of the waste acts.

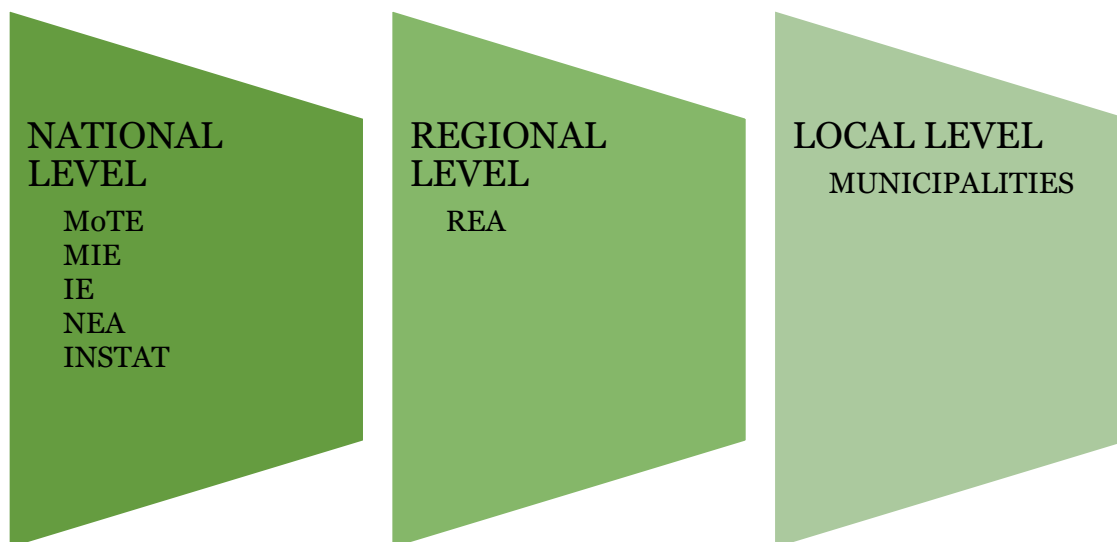
<sup>1</sup> (European Environment Agency, 2021)

<sup>2</sup> (National Waste Management Plan, 2020-2035)

- The government supports waste management with investments in big regional infrastructure, mainly by building sanitary landfills, incinerators and transfer stations. The Ministry of Infrastructure and Energy (MIE) is the contracting authority for public services, including waste management and waste infrastructure projects.
  - The Environmental Inspectorate is accountable to (MoTE) and specialises in the control and enforcement of environmental legislation. Together with the regional agencies and the Environmental Inspectorate, (MoTE) is responsible for setting up a system for the environmental management of waste and for monitoring its implementation at all stages and levels.
  - The National Environmental Agency (NEA) is a division of (MoTE). Twelve regional environment agencies (REAs) under NEA undertake work at the regional level. (NEA) is responsible for issuing, changing, suspending and revoking waste permits. It is required by law to have a licence issued by (NEA) and approved by (MoTE) for all waste management operations. The (REAs) are involved in the approval of waste collection and disposal sites and cooperate with local authorities to issue environmental permits for local waste facilities. Data collected by municipalities and all licensed waste management and recycling companies are reported annually to the (NEA). The (NEA) has the role of verifying these reports and providing the Institute of Statistics (INSTAT) with the reported data. (INSTAT) combines the reported data with information from surveys and uses correction factors for reported and missing data to come up with the official statistics on waste generation and treatment in Albania.
  - Municipalities (the local government) are responsible for organising waste management services based on policy development targets and national standards. Municipalities also set the tariffs for waste handling and treatment in the territory of their jurisdiction.
  - Other administrative entities that work with (MoTE) in the field of waste management policy include the Ministry of Health, the Ministry of Energy and Industry, the Ministry of Finance and Economy and the State Ministry for Local Governance.
- There are two ministries involved in waste management planning. The collaboration of these two ministries is key to developing (MSW) management in Albania. As the implementation of the (NWMP) requires funding for planning, implementation and infrastructure development, it is important that the two ministries collaborate with each other to identify priorities and draft schedules.<sup>3</sup>

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<sup>3</sup> (European Environment Agency, 2021)



*Fig. 4 Institutional framework for waste management*

**What are the bio-waste management practices? Please elaborate in particular what are the current practices in rural communities.**

In Albania, during the last years, the amount of waste generation has increased, while the way of their management has room for improvement. Waste management is carried out in all urban areas and less so in rural areas. Waste is mainly dumped in designated storage areas by local self-government units, but there are quantities that are also dumped in unauthorized places, along roads and near settlements.

The waste management service is performed through contracting by the local self-government units of private enterprises or through their companies, and these contracts are usually with a duration of 3-5 years. The collection infrastructure is weak, as the number of containers is often insufficient. The collection equipment (containers and trucks) is not according to European standards and needs constant renewal.

The NWMP plan's measures will include promoting separate collection of recyclable materials in urban areas and separate management of organic waste in rural areas. Decentralized composting and home composting in rural areas will be encouraged. Separate collection of organic waste in urban areas will be included as part of the system once the necessary equipment is in place to manage these waste streams.<sup>4</sup>

<sup>4</sup> (National Waste Management Plan, 2020-2035)



Although some 40% of the Albanian labour force is employed in the agricultural sector, due to high fragmentation of the arable land, only a limited number of farms, mainly on the coastal plains or close to suburban areas, practise more intensive agriculture that allows them to produce for the market. Organic farming oriented towards quality rather than quantity is not very well promoted.

The local authorities are obliged to organize municipal solid waste (MSW) collection and provide data to the relevant bodies of the Government. The collection of MSW is provided in most cities and towns, but significant part of rural areas does not have an official collection system in place.

Separate collection has only been introduced to date within the frame of several pilot projects funded by intergovernmental organizations (IGOs) and NGOs. These have been implemented in numerous settlements around the country, targeting the at-source separation of paper and cardboard, PET and other recyclable plastic and metal (mostly aluminum cans) waste streams from other types of waste. In rural areas, the projects also covered the separate collection of organic and (small-scale) agricultural waste from households.

Quality management systems for the production of compost from bio-waste (including separate bio-waste collection, national standards for compost quality and quality management system) for Albania during 2016-2018, did not started to develop.<sup>5</sup>

## **Which circular economy activities exist, dealing with bio-waste? Recovery of products from bio-waste, recovery of nutrients, composting, recovering bio-based materials or chemicals from waste/residues.**

During the recent years, several business companies in Albania have shifted their business activity towards the circular economy concept, by applying efficient waste management practices and turning waste to resources. Several circular economy activities in Albania comprise the following initiatives:

### **I.N.C.A NORDFISH SH.P.K.**

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Established in 2004, the company is known for processing products of animal origin (cattle intestines). It was presented as the only producer of Natural Casing and animal by-products in Albania. As the only company of its kind in Albania and the Balkan region, it supplies with products large companies in the country and region, which are specialized in the treatment of meat and sausage products.

A considerable part of the revenues is invested in the development of treatment technology, which in turn has increased the volume of production. Currently, the company is employing about 110 workers, which will be doubled in the near future. However, to avoid the economic loss from the products which do not meet the clients' requirements, faulty products are further

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<sup>5</sup> (EEA Report, 2020)

recycled through technological processes. After being processed, the products are exported elsewhere in Europe as food for animals under the EU standards.

From 2008 to 2015 they had a linear approach about manufacturing and distribution of natural casing through importing raw materials. From 2017 they went towards a Circular Approach, thus investing in casing cleaning machineries and collecting and processing 5 tons/month of Albanian casing for the Albanian market. During this time 5% of organic waste disposed by the slaughterhouse was reduced.

Further on, from 2017 to 2018 they started to collect and recycle the entire intestinal tract and to export Albanian products to a lot of European countries. After 2018, they went to a fully circular system by investing in a new pet chews production facility, new mucosa treatment plant destined for pharmaceutical industry, recycling 40-50% tons/month of organic animal by products. They reduced the organic waste disposed by slaughterhouses and their own company by 30% and continue exporting to EU countries and other countries worldwide.

In 2020 they invested in the only rendering plant in the Western Balkans area, recycled 200 tons/month of organic waste created by the food industry and reduced all organic waste disposed in Albania by 98%.

## **AGRIMONA**

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It is an environmentally friendly initiative (organic shop) with the mission to contribute to social impact in a financial sustainable way, with all profits dedicated to the social mission. Their social goals are to: promote development of high quality local and traditional Albanian food products; support smallholder products and remote areas; promote customer education on healthy nutrition and environmental protection.

They aim to reduce waste and pollution by short term inventory and reduce food waste; paper packing and unpacked products; promote natural production techniques; promote reusable shopping bags; buyback used jars and bottles.

## **AIBA COMPANY**

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Established in 1993, AIBA Company is a leader in the field of cattle food production, breeding and growth of chickens for meat consumption and eggs production. The number of eggs produced annually reaches around 100 million per year, which in turn generates about 40 tons of waste due to excessive moisture.

Nevertheless, AIBA Company has invested in technology that reduces the moisture and benefits about 20 tons of soil fertilizers per day. The end product is compressed in packages and sold to farmers for the production of agricultural products. Also, AIBA company is investing in creating a new system that will make the drying of waste possible. It will improve the quality of fertilizers, ensure better environmental conditions and a higher quantity of products for selling.

## **SOAP PRODUCTION**

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Soap production is a project initiated by the EU, which takes place in the city of Roskovec located in the south-central part of Albania. The city is known for being rich in olive trees, generating large amounts of olives and extracted 23 oils for trade purposes. However, the oil extraction process leaves behind considerable amount of organic sludge. The project aims to

refine organic waste into organic soap, which benefits both the environment and the social economy of the region.

## **AGRICULTURAL PRODUCTS INITIATIVES**

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Over the recent years, agricultural initiatives have been developed increasingly in the market by promoting agricultural products and services in different shapes, be it shops, restaurants, deliveries, etc.

The focus of these entrepreneurs is to offer domestic products which either grow them in the backyard, as it happens with restaurants, or collect them from local farmers who provide seasonal products of high quality as it is the case in shops.

Some of the well-known restaurants in the country that serve local food are “Uka Farm”, “Mrizi i Zanave”, “Agroturizem Huqi”, “Ferma Albanik” etc., which are located in remote areas where it is possible to build their own farms and obtain additional products from other farmers without additional cost in transportation.

On the other hand, there are several shops selling local agricultural products collected from farmers from different localities; just to mention a few, “Ferma Jone”, “Agrimona”, “Zepa Natyral”, etc. This way, not only do the local products prevail over imported ones, but they also help in the economic development of rural areas.

During December 2020, from the Environmental Council of Tirana, a group of professionals in environmental, climate, urban planning and energy issues, brought together voluntarily, was organized an online meeting about the new initiative of Tirana Municipality on “Green Business Grant Tirana”. During this meeting was discussed about the grant that will be disseminated to the green businesses (start-ups or existing ones).

Any project that has access to reduce environmental pollution, installation of new technologies environmentally friendly, adaptation of renewable energy to business needs, etc. will be subject to financial support from the grant of the Municipality of Tirana.

**Please provide data (dataset, reports, peer-reviewed publications, other information) about the type of agricultural production. Which products/value chains, volume/size (tonnes of production, area of production, monetary indicators, or other).**

Agriculture remains one of the largest and most important sectors in Albania. **24 percent of soil is used for agricultural reasons.** South-east of Albania is considered as one of the earliest lands in Europe used for agriculture.<sup>6</sup>

Compared to other countries in the European Union, where the agriculture sector represents around 2 percent of GDP and 36.4 percent of overall employment the agriculture in Albania represents 18.9 percent of the GDP (2019), according to the National Institute of Statistics (INSTAT).

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<sup>6</sup> (<https://invest-in-albania.org/industries/agriculture/>)

In 2019 for instance, there were **351,600 registered farms in Albania**, and the total export of agricultural goods was valued at Lek 35,300 million.

Agricultural statistics are an important tool for monitoring and managing the market of agricultural products. The growth of agricultural production not only develops the economy and reduces unemployment, but it also helps lower the prices of the major vital consumer products consumed by the population as well as lower the country's dependence on imports.

### **Field crops**

**The vegetables production** in 2021 is 1,338,218 tonnes, increasing by 3.28%, compared with the year 2020. The highest level of vegetables production was achieved in the prefectures of Fier with 541,792 tonnes, Tirana with 133,579 tonnes and Berat with 131,830 tonnes.

Cereals production in 2021 is 691,353 tonnes, increased by 1.04 % compared with the previous year. The highest level of cereals production was achieved in the prefectures of Fier with 168,385 tonnes, following by Elbasan with 98,249 tonnes and Korça with 85,094 tonnes.

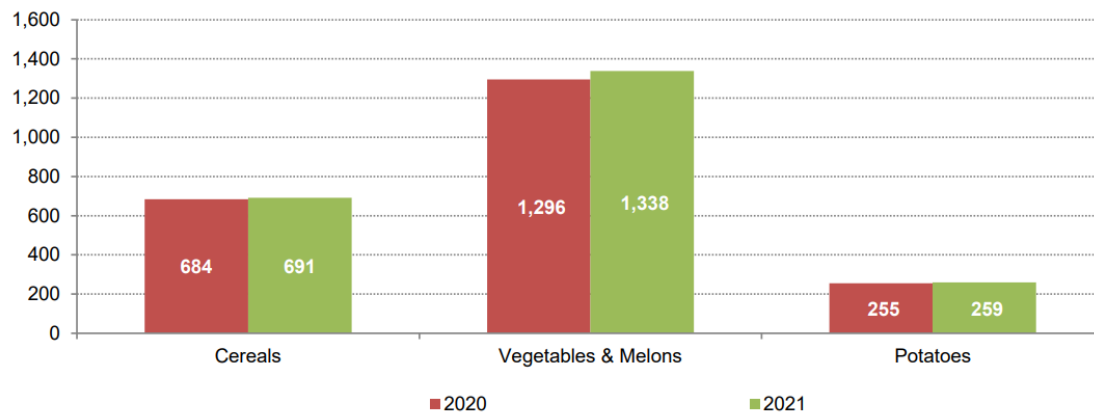
In 2021, the potatoes production is 258,862 tonnes, increased by 1.56 % compared with the year 2020. The highest level of potatoes production was achieved in the prefectures of Korça with 63,418 tonnes, following by Fier with 44,636 tonnes and Elbasan with 29,986 tonnes. Compared with previous year, white beans production is decreased by 12.98%.<sup>7</sup>

Agriculture production	2017	2018	2019	2020	2021
<b>Field crops</b>					
Cereals	701.7	678.2	666.1	684.0	691.4
Vegetables	1,151.9	1,166.3	1,258.0	1,295.7	1,338.2
Potatoes	249.8	254.5	260.7	254.8	258.9
White beans	21.2	24.5	24.8	25.8	22.4
Industrial crops	32.7	30.8	33.7	30.1	27.3
Medicinal crops	12.8	12.5	12.9	14.4	16.0
Forage	6,688.6	7,050.1	7,115.2	7,170.5	7,054.0
<b>Permanent crops</b>					
Fruit trees	262.6	274.3	272.6	273.7	287.2
Olives	107.8	117.6	98.3	131.9	110.2
Citrus	41.0	45.5	46.9	49.2	50.5
Grapes	202.9	184.8	189.9	199.1	212.2

*Fig.5: Agriculture production (thousand tonnes)<sup>8</sup>*

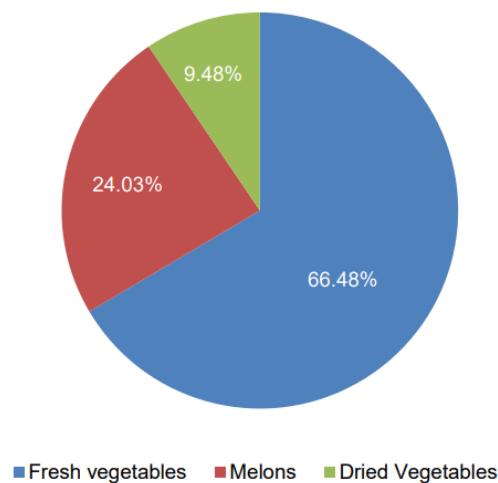
<sup>7</sup> (<https://www.instat.gov.al/en/themes/agriculture-and-fishery/agriculture/publication/2022/agriculture-statistics-2021/>)

<sup>8</sup> (Source: Ministry of Agriculture and Rural Development)



*Fig.6 : Production of cereals, vegetables and potatoes (thousand tonnes)*

Fresh vegetables represent 66.48 % of total vegetables followed by melons with 24.03% and dried vegetables with 9.48%.



*Fig.7: Structure of vegetable production, 2021 (in %)*

Fresh vegetables production in 2021 was 889,693 tonnes, increasing by 1.69%, also melons production and dry vegetables increased with 7.60% and 4.11% respectively, compared with the year 2020. In the group of fresh vegetables, the most representative crops are tomatoes with 35.35%, cucumbers with 13.28% and peppers 11.17%. In dried vegetables, dry onions represent 85.32% of total production, while in the production of melons, watermelon represents 84.25% of the production.

Vegetable production in greenhouses represents 21.67% of total vegetable production, where the prefectures of Fier represents 52.00% of the production. Greenhouse vegetable production in 2021 increased by 2.64% compared to the previous year where tomatoes production represent 51.9% of total production.

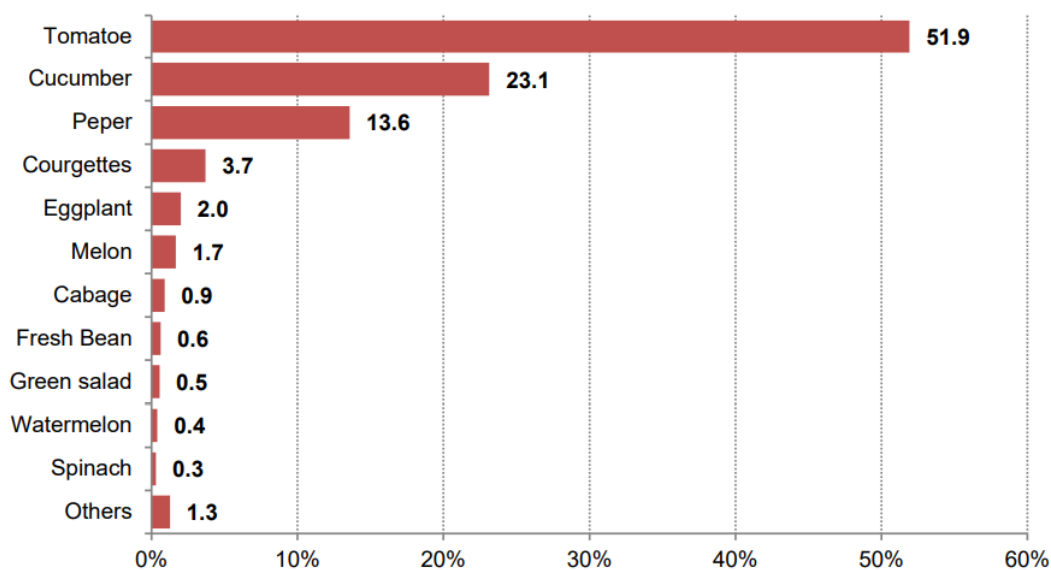


Fig.8: Vegetables production by crops in greenhouse (in %)

The highest level of greenhouse vegetable production from the total vegetable production was achieved in Berat prefecture with 64.62% and Fier with 27.79%, and the lowest level was achieved in Korça and Gjirokastër prefectures with 0.16% and 0.42%.

### Permanent Crops

The production of permanent crops is represented by the production of fruit trees, olives, citrus and grapes.

Fruit trees production in 2021 is 287,210 tonnes increased by 4.92% compared with 2020. The highest level of production was reached in the prefecture of Korça with 89,753 tonnes, followed by the prefectures of Elbasan with 39,118 tonnes and Fier with 33,774 tonnes.

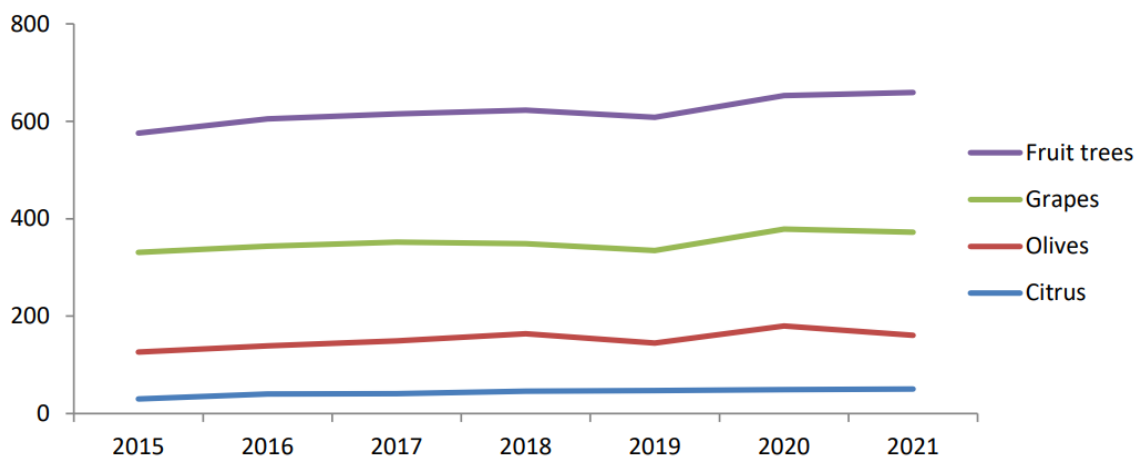


Fig.9: Production of permanent crops (thousand tonnes)

Pome fruits group occupy 45.43% of the total production represented by apples with 85.25%. Korça prefecture occupies 66.02% of total apples production in country.

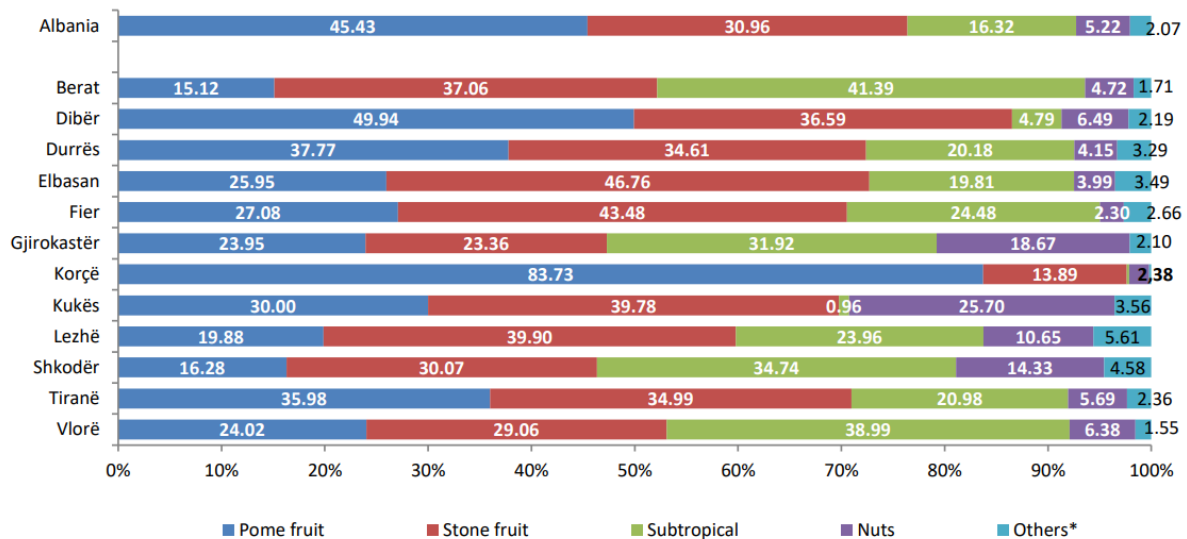


Fig.10: Structure of fruit trees production by kinds and prefectures, 2021 (in %)

In the stone fruits group, the largest category is represented by plums with 46.33%, followed by cherries with 24.80% and peaches with 23.18 %. In the subtropical fruits, the major group is represented by figs with 51.40 %, followed by pomegranates with 17.76%. The highest level in the group of nuts is achieved in Kukës prefecture and the main category is occupied by nuts with 46.37 %, followed by chestnuts with 33.96%.

In 2021, were produced 110,164 tonnes of olives, increasing with 16.52 % compared to the previous year. The highest level of olive production was reached in the prefecture of Fier with 34,241 tonnes, followed by the prefectures of Elbasan with 21,102 tonnes and Vlora with 20,298 tonnes.

The highest level of citrus production was achieved in the prefecture of Vlora with 64.41% (32,518 tonnes). The citrus production in year 2021 was 50,485 tonnes, increasing with 2.61 % compared with the previous year, where 65.04% of total citrus production is occupied by Clementine production.

## **Please provide a list of best-practices of circular bio-waste management, and -if available- entrepreneurial activities to valorise bio-waste.**

A pilot project for separate collection and composting of bio-waste in Cërrik, Peqin, Rroskovec and Belsh includes providing dedicated bins and implementing door-to-door collection (Albanian Environment Agency, 2021).

Decentralised composting and home composting will be encouraged in rural areas. Separate biowaste collection in urban areas will be incorporated into the system once facilities are in place for the management of these waste streams. A new composting plant is scheduled to start operation in the Cërrik municipality in autumn 2021, with a capacity of 1 000 tonnes annually. The plan is to produce compost for use in landscaping (Albanian Environment Agency, 2021).<sup>9</sup>

In addition, the Albanian Government intends to implement a Solid Waste Management Project in the northern part of the Vlora district. Investment measures in this project include a new regional sanitary landfill, a waste separation plant mainly for previously separated recyclable materials, a composting plant for previously separated organic waste, equipment for the collection and transport of municipal waste and the closure and rehabilitation of existing major landfills. The implementation of the project started in 2017, financed by KfW Entwicklungsbank within the framework of the Germany-Albania Financial Cooperation.<sup>10</sup>

### **ALBANIAN FARMERS TO TRANSFORM OLIVE OIL WASTE INTO ENERGY**

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The United Nations Industrial Development Organization (UNIDO) is implementing in Albania a project that aims to transform olive oil's organic wastes into renewable energy. The project is financed by the Global Environmental Facility and will help Albanian olive oil producers to treat the waste of such product in a more efficient and beneficiary way- by transforming it into renewable energy.

The project consists in bringing to Albania the latest technology for the transformation of organic waste into energy into 15 farms throughout the country.

“Biomass energy for productive use for small and medium enterprises (SMEs)” program will be applied for a period of three years and aims to realize 15 transformation processes of olive oil's organic waste into renewable energy. The project aims to raise awareness on the usage of technological equipment for the transformation of wastes into energy by Albanian farmers.<sup>11</sup>

### **WASTE MINIMIZATION AND 3R PROMOTION IN REPUBLIC OF ALBANIA**

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The Project for the Support of Waste Minimization and 3R Promotion in Republic of Albania is implementing its pilot projects in three municipalities; namely Vau i Dejes, Cerrik and Tirana Municipalities.

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<sup>9</sup> (UNECE, 2018)

<sup>10</sup> (German Financial Cooperation, 2018)

<sup>11</sup> (Invest-in-albania.org, 2016)



Vau i Dejes Municipality has planned to implement in three phases: Phase 1, improvement of quality and frequency of waste collection service; Phase 2, improvement of waste discharge manner; and Phase 3, promoting recycling (composting).

During Phase 1, the Project supported the municipality to secure the provision of appropriate waste collection service. The services were provided once a week in the entire Bushat Administrative Unit (AU) by utilizing the municipal compactor. Through this, it was expected 1) to achieve improvement of collection efficiency, 2) to gain citizens' reliance on the municipal service, and 3) to improve the town's view by clearing the waste scattering around the containers. The municipality built trust of the citizens for the collection services through Phase 1 and prepared for the implementation of Phase 2 activity.



*Fig. 11: Phase one of the Project*

In Phase 2, the residents were encouraged to discharge their agricultural waste separately into a specially designed container which was installed by the side of the existing general waste containers in two pilot neighborhoods. Now the residents in these neighborhoods are no longer discharging the agricultural waste on the ground. This has helped the municipality to cut the time of shoveling the waste piles from the ground, leading to the improvement of the collection efficiency.



*Fig. 12: Phase two of the Project*

The Project moved on to Phase 3, in which it was intended to try out methods of composting. Possibility of utilizing the agricultural waste separately discharged in the designated container were also being discussed.

In Cerrik, two phases were implemented: 1) improvement of discharge and collection system in rural area; and 2) separate collection system for recyclables from generation sources. In phase one, it was expected to improve the quality of waste collection and citizen's discharge manner, as well as, the situation of waste littering around concrete-made waste discharge points existed in the rural area, by providing punctual waste collection service.

The municipality removed the structures of the collection points which existed in the targeted area; i.e. Neighborhood 3 (or Ferme), and implemented door-to-door collection with a collection truck coming to their gates on time as previously scheduled and notified playing the tune selected for this type of collection. In order to inform the collection schedule and rules, the municipality prepared a leaflet and distributed it to every house. The residents in the target area came to be aware of the timing of the collection, which has allowed them to discharge their waste before or upon the arrival of the collection truck. Thus, it has reduced waste being discharged uncontrollably around discharge points.



*Fig. 13: Cerrik Project*

In phase two, it was aimed to improve citizen's awareness about reducing and recycling waste, to reduce the waste amount to be collected and landfilled, and to help improving the situation of the waste littering. For these purposes, the municipality provided "Bell collection" service once a week specifically for the recyclables.

A collection truck was prepared to play a tune selected for this type of collection when proceeding through the residential areas, and the residents were expected to discharge the targeted recyclables (PET, hard and soft plastics, steel/aluminum cans, and items made of other steels) once the truck comes close to their houses. This was implemented throughout the Cerrik AU area. Another leaflet explaining a day and time for collection and rules was distributed to every house by the municipal staffs and their temporally hired assistants.

In Neighborhood 3 where phase one has been implemented, more residents were cooperative for phase two and discharged their recyclables on the designated day to the collection truck which comes on the same route as in phase one than in other areas, where only a few limited households cared to use the service. According to some narrative reports by the citizens living in the urban area where many apartment buildings exist, they found the service difficult to catch since it did not stop at one spot for a time long enough for the residents to come out and discharge after hearing the tune from the truck.

In a rural area where individual residential houses are predominant, similarly to Neighborhood 3, lack of door-to-door collection of the municipal waste seems to have been one factor hindering the residents' engagement in separate collection of the recyclable.

For the rural area, in Neighborhood 2, the door-to-door collection of the municipal waste is now also implemented. Furthermore, the municipality has taken a measure to optimize the cost. They provide this municipal waste collection service on the same day with the same truck as the recyclable collection in the two Neighborhoods (2 and 3). The truck is now equipped with a few bins on its deck, and the recyclables discharged by the residents are collected in these bins.

The Project will conduct reviewing survey to extract lessons learnt from these pilot projects so that they will be incorporated in the final draft of 3R Guideline to make suggestions for implementation in other municipalities as well as for continuation of the 3R activities in Cerrik Municipality.<sup>12</sup>

## **Which support mechanisms exist for entrepreneurs in this field? Public sector start-up funding support or other support programmes, fiscal measures. Private sector accelerators, etc.**

Albania's start-ups are still at a nascent stage, however continuous access to stable funding from venture capital funds, crowdfunding initiatives, and/or angel investor networks that support start-ups could help scale up micro, small, and medium-sized enterprises.

### **THE EU IPARD III PROGRAMME<sup>13</sup>**

The EU programme 2021-2027 seeks to support sustainable food systems by increasing the agri-food sector's competitiveness and progressively aligning it with the EU acquis. In addition, it aims to improve the efficiency and sustainability of on-farm production to meet the demand for safe, nutritious and sustainable food and animal welfare. The initiative's other key tenets include facilitating business development and employment in rural areas and elevating farmers' position in the value chain. It also hopes to attract more farmers to the sector and improve community development on a local level. The funds will be divided up into tranches that will be disbursed over the years of the programme. The most significant sum, some €31.4 million, is set aside for investments in farmers' physical assets, with a further €30 million for investment in assets for the processing and marketing of agri-products. Some €2.1 million will be used to increase organic farming. Other significant investments include €21.3 million for farm diversification and business development and €12 million for rural public infrastructure.

### **SOCIAL AGRICULTURE DEVELOPMENT FUND IN ALBANIA<sup>14</sup>**

The Cooperazione per lo Sviluppo (COSV) in Albania, as the lead partner of the EU-funded project TOKA JONE, is launching the Social Agriculture Development Fund (SADF) sub-granting scheme to promote the sustainable reuse of confiscated assets to benefit vulnerable groups at risk of exclusion. The main aim of the CfP will be to develop innovative social agriculture initiatives re-using confiscated assets as a means to promote socio-economic development, and use of agricultural land through community-based social farming services. The SADF sub-granting scheme relies on a holistic approach combining smart, flexible and action-oriented regulating solutions embracing technology and community collaboration. It aims to achieve the following objectives: Overall Objective: To promote sustainable re-use of confiscated assets to benefit vulnerable groups at risk of exclusion. Specific Goal: To develop innovative social agriculture initiatives re-using confiscated assets as a means to promote socio-economic development, use of agricultural land through

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<sup>12</sup> (JICA, 2016)

<sup>13</sup> <https://www.euractiv.com/section/agriculture-food/news/eu-to-fund-albanian-agriculture-organic-farming-rural-development/>

<sup>14</sup> <https://www2.fundsforngos.org/latest-funds-for-ngos/social-agriculture-development-fund-in-albania/>

community –based social farming service (including therapy and rehabilitation, social connection and inclusion, and social services, sense of legality and rule of law).

### **NOA SH.A. PROMOTER OF AGRICULTURAL SUPPORT<sup>15</sup>**

NOA has a clear and practical mission, which is the economic empowerment of family and business, as an important factor for the development of the Albanian economy in urban and rural areas. The institution is positioned close to the clients, extending with 26 branches in 14 districts of the country, and geographically covering 95% of the Albanian territory. The attention of the institution towards the development of agriculture is evident when it is seen that the financing of agricultural activities occupies a share of 25% of the total economic activities financed by the company, having about 2,700 active clients and covering about 60% of rural areas with service. NOA is the second largest operator in the microcredit sector providing financial services by supporting entrepreneurs from all sectors including manufacturing, agriculture, livestock, trade and services, developing a quality and diversified loan portfolio. For many years, micro-credits will be an important factor of economic development in the country and the financing of small entrepreneurs and farmers, a factor that is in line with the strategies and 5-year development plan in NOA.

### **THE EUROPEAN BANK FOR RECONSTRUCTION AND DEVELOPMENT (EBRD), PROCREDIT BANK ALBANIA, THE EUROPEAN UNION (EU) AND THE GOVERNMENT OF ALBANIA<sup>16</sup>**

The European Bank for Reconstruction and Development (EBRD), ProCredit Bank Albania, the European Union (EU) and the government of Albania are stepping up their support for companies in the country's agribusiness and tourism sectors under the Albania Agribusiness and Tourism Support Facility (AATSF). The EBRD has committed to a risk-sharing facility of up to €20 million to ProCredit Bank Albania, which will provide loans to eligible firms in the agribusiness sector. The new package of support for the Albanian agribusiness sector was signed during EBRD President Odile Renaud-Basso's first visit to Albania. The AATSF is a framework aimed at improving access to finance for small and medium-sized enterprises (SMEs) in partnership with a number of commercial banks in Albania. The framework includes a 10% investment grant for sub-borrowers in the agribusiness sector, funded by the government of Albania and the EU. Borrowers will receive the grant retroactively once their investments have been completed and verified. The facility will also benefit from a government-backed, first-loss risk-cover mechanism. ProCredit Bank Albania signed its first agreement with the EBRD, for €30 million, under the Albania Agribusiness Support Facility (AASF), as it was known then, in July 2016. A leader in financing the agribusiness sector, with the EBRD's support, it will now be able to lend an additional €20 million under the blended finance facility, for a total of €50 million. Up to €180 million has been allocated to date under the AATSF for specialised credit lines and risk-sharing facilities through local partner banks. Since its launch in 2016, more than €70 million in loans have been committed, benefiting more than 6,100 local agribusiness SMEs.

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<sup>15</sup> <https://noafin.al/eng/blog/100/the-potential-of-albanian-agriculture-and-financing-opportunities>

<sup>16</sup> <https://www.ebrd.com/news/2022/ebrd-eu-and-government-boost-funding-for-albanian-agribusiness-tourism-smes-.html>



**Which ongoing or recent projects can BECBA synergise with? Projects with similar objectives, e.g., youth entrepreneurship projects, circular economy projects, sustainable value chain development projects.**

**EQGJ @ALBANIA – CIRCULAR AND GREEN ECONOMY, OPPORTUNITIES FOR PROMOTING AN ACTIVE SOCIETY AND ECONOMIC DEVELOPMENT IN THE MUNICIPALITIES OF PATOS AND ROSKOVEC**

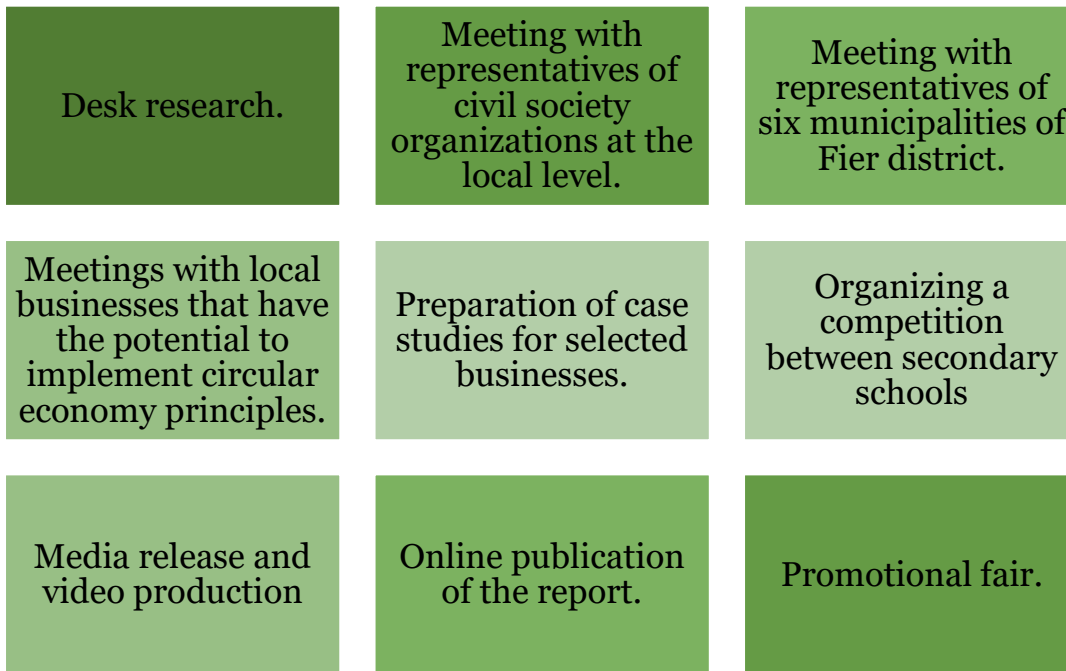
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EQGj (Circular and green economy) is a new business model that is not well known even in developed countries and that is being promoted and growing rapidly. The project aims to identify the poor situation related to EQGj in Fier district and to promote the ideas and implementation of EQGj. At the same time, the project intends to encourage businesses, local and central governments to think more about the application of EQGj and the creation of non-fiscal facilities related to businesses that apply EQGj.

This project aims at concrete advocacy initiatives for the circular and green economy as a new model of sustainable development in the protection of the environment in cooperation with local actors such as businesses, citizens and local government, creating opportunities for the growth of local economies.

The project aims to increase the understanding of concrete action for the circular and green economy (CGE) through practical approaches of models in the daily life of citizens and businesses. To identify businesses in the district of Fier with potential orientation towards a green and circular economy, as well as to increase information at the local level on the benefits of EQGj.

- First, to encourage and promote businesses to apply the green and circular economy and to identify at least five business cases that can apply the principles of a circular economy.
- Secondly, to encourage and distribute knowledge about the green and circular economy to local government and to young people in schools
- Thirdly, to create a set of concrete recommendations for direct and indirect incentives from the local government for businesses that apply the principles of the circular economy, as well as to inform at least 500 actors (individuals, businesses, local government) about the benefits of the circular economy green/circulating, locally.



*Fig.14: Main Project Activity*

Expected results include:

- Increasing knowledge about EQGj among the local government, local businesses and young people
- Competition and promotion of ideas for EQGj
- Promotional fair for increasing knowledge and promotion of facilities among citizens
- Media release and promotional video
- Promotion through the publication of the final report

Main beneficiaries:

- County businesses, local government, county youth<sup>17</sup>

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<sup>17</sup> (Leviz Albania)

## Albania Research Report: data collection, processing and analysis on bio-waste management among farmers in Divjaka municipality

ETMI has conducted the field research in the city of Divjaka as the most important agricultural area of the whole country. Every day of the week, an average of 30 vans from all the cities of Albania come to the agricultural market of Divjaka, who receive fresh vegetables and fruits, directly from the place of production. Divjaka's agricultural products are known throughout Albania and the annual production reaches up to 40,000 tons. Approximately 90% of the population is involved in agriculture with over 5,000 independent farmers and 50 small and medium enterprises.

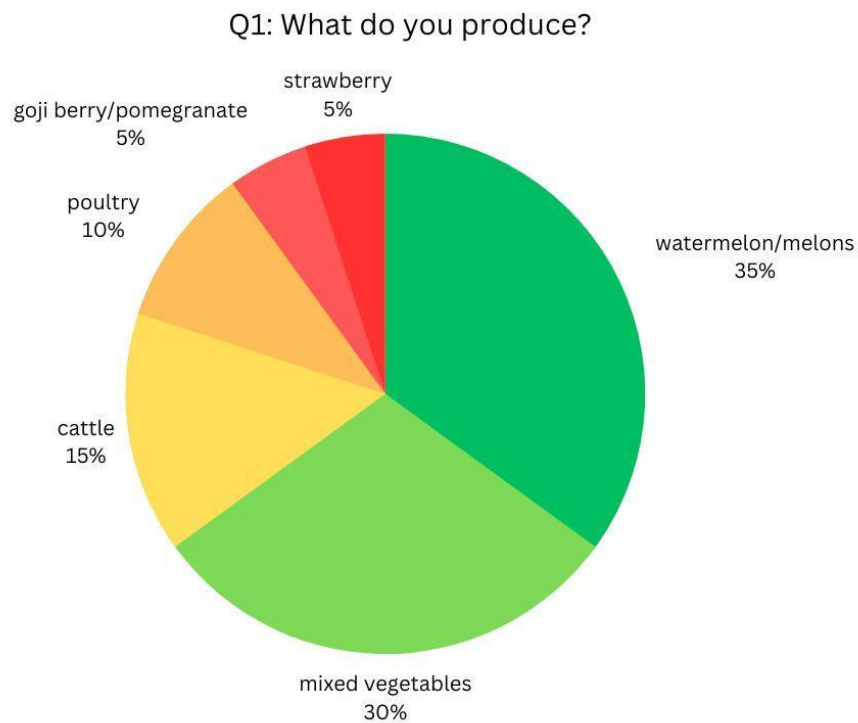
Vegetables such as potatoes, carrots, cabbage, cauliflower, and broccoli are available throughout the year in the agricultural market. While from May to the end of August there are melons, watermelons, field peppers, pumpkins, carrots, beets, cucumbers, tomatoes and other products. Recently, strawberries have also started to be produced in Divjaka, a fruit known for its profitability. The warm climate enables early harvests and the land is planted throughout the seasons. Animal husbandry is another traditional activity, raising cattle and sheep for dairy and meat products.

According to the “Local Plan of Integrated Waste Management of Divjaka Municipality 2020” the amount of waste collected by the Municipality of Divjaka, which is reported by the Cleaning and Greening Agency, is about 1,054 tons of urban waste per year. Considering both the fact that the bio waste generation rate is high (since it is a rural area), and the fact that farmers barely compost organic and green waste individually, the amount remains high again. Further analyses regarding costs, effectiveness and other details have no effect as the results will be distorted.

In this direction, an estimate as close as possible to the reality of the amount of bio-waste that is generated and the amount that is collected and processed through established practices is necessary to enable an accurate analysis of the future integration of circular actions. **ETMI collected the answers from a total of 20 farmers registered in the Divjaka municipality.**



## QUESTION 1



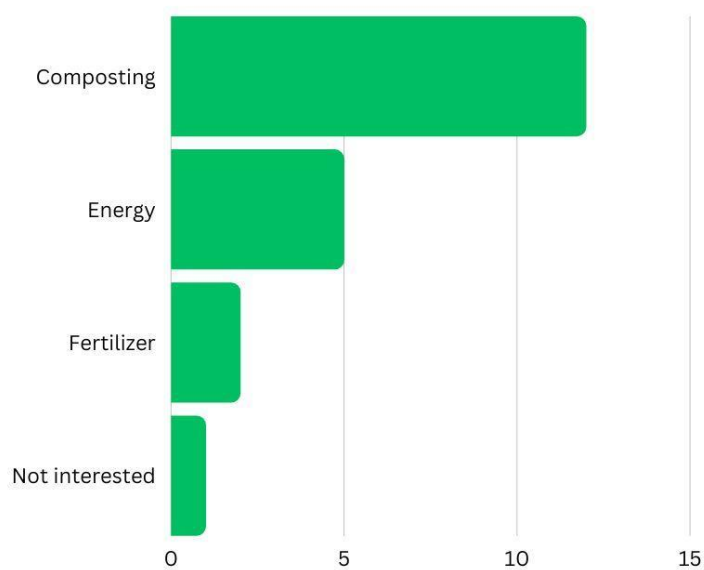
### Quantitative findings:

- 7 farmers were involved in watermelon and melon production
- 6 farmers were involved in mixed vegetables production
- 3 farmers were involved in cattle farming
- 2 farmers were involved in poultry farming
- 1 farmer was involved in goji berry and pomegranate production
- 1 farmer was involved in strawberry production

The report findings suggest that the vast majority of farmers are engaged in watermelon and melons production which are the main cultivars the area is known for. 30% of the farmers depended on vegetables production stating potatoes, carrots, field peppers, pumpkins, carrots, beets, cucumbers, tomatoes as some of the varieties in their mixed farms. Animal husbandry was present with cattle farming (cows and sheep) and poultry farming (chickens, turkeys and geese). New initiatives due to grant and partnership investments were established in strawberry and goji berry/pomegranate production resulting compatible to the Divjaka ecosystem and opening new opportunities to the local farmers.

## QUESTION 2

Q2: Are you interested in commercial products that could be produced from your agricultural waste?



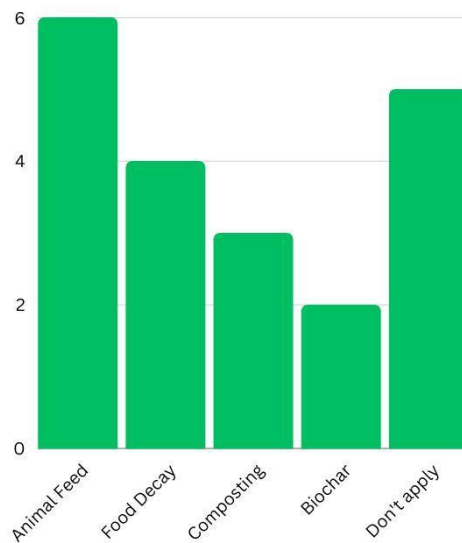
### Quantitative findings:

- 12 farmers expressed interest in composting products
- 5 farmers expressed interest in energy related products
- 2 farmers expressed interest in fertilizer products
- 1 farmer expressed no interest in agricultural waste products

The report findings suggest a general interest related to composting products. The majority of the farmers interested in the methodology required further knowledge in improving composting efficiency at scale and how to monetize on the latter. The animal husbandry related farms expressed interest in converting the animal manure in energy products (biogas or biofuel) mainly for heating purposes. The farmers interested in fertilizers were seeking knowledge on organic fertilizers production for on-farm and selling purpose to correspond to the requirements for organic farming certification. The strawberry farmer saw no interest in agricultural waste by-products claiming the waste generated is too small for having interest in it.

### QUESTION 3

Q3: What do you currently do with the residues of crops?



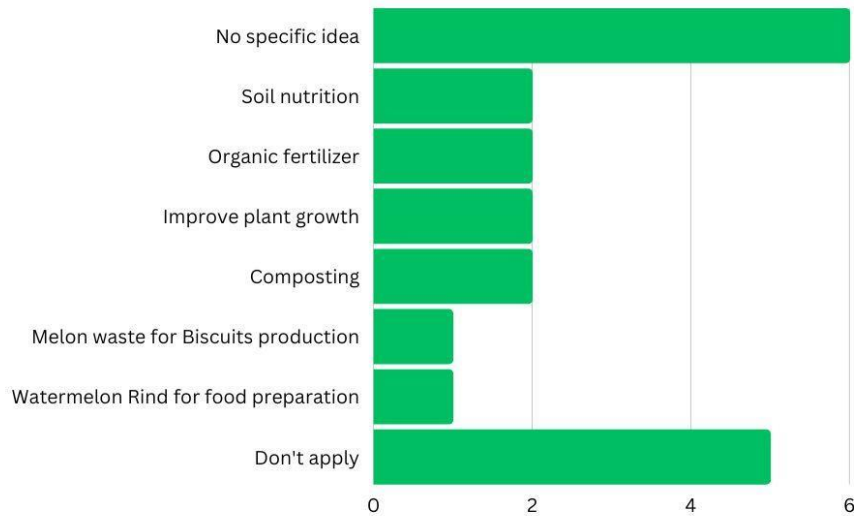
#### Quantitative findings:

- 6 farmers utilize it for animals feeding
- 4 farmers leave it for decomposition in open fields
- 3 farmers utilize it for composting
- 2 farmers utilize it for biochar production
- 5 farmers don't find the question applicable to them

The report findings suggest a mixture of methods in crop residues management among farmers. The prevalent choice remains animal feeding. These animals eat these crop residues along with green fodder and specially prepared concentrates or compound feeds. Crop residue decomposition follows closely suggesting high dependency on tilling soil for faster decay and soil microbes' activation under moist warm conditions offered by Divjaka climate. Biochar production process can be found mainly among cauliflower and cabbage farmers which cut the residues, turn them to dry waste and burn the mixture to benefit the by-product. The rest of the farmers don't find the question applicable to their activities.

## QUESTION 4

Q4: What would you like to do with your crop residues?



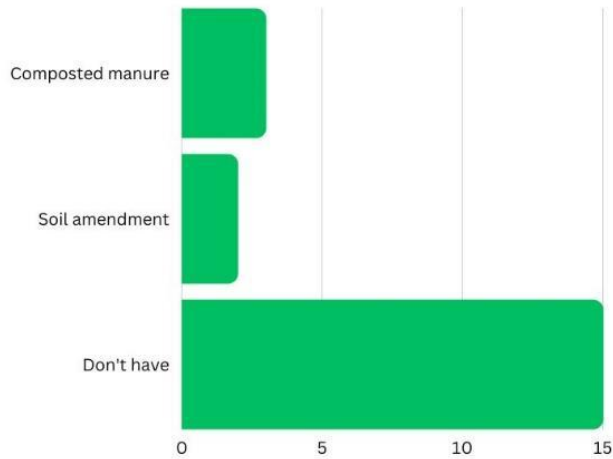
### Quantitative findings:

- 6 farmers had no specific idea what to do with the crop residues
- 2 farmers wanted to use the residues for soil nutrition
- 2 farmers wanted to turn them to organic fertilizers
- 2 farmers wanted to utilize them for their plants growth improvement
- 2 farmers for composting of the residues
- 1 farmer wanted to introduce biscuits for visitors from melon residues
- 1 farmers wanted to utilize watermelon rind in various food preparations
- 5 farmers don't find the question applicable to them

The research findings highlight a general lack of ideas when it comes to crop residues utilization. The positive note is that the farmers are open to innovative ideas as long as it's on their benefit. The majority of farmers expressing their opinion opted for residues utilization connected with the soil improvement and plant growth in the process. Composting remains a trending topic despite its large utilization in Divjaka. New ideas have been highlighted connected with watermelon/melon farmers who are trying to insert tourism in their farm activities and utilize the residues for food preparation for visitors. The food varieties brainstormed on the field research included flour-based cookies, fruit butter and cakes. The rest of the farmers don't find the question applicable to their activities.

## QUESTION 5

Q5: What do you currently do with livestock manure?



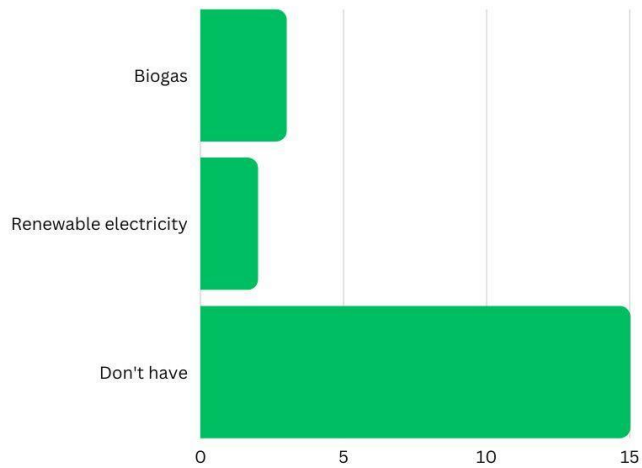
### Quantitative findings:

- 3 farmers decompose it to composted manure
- 2 farmers utilize it for soil amendment
- 15 farmers don't produce livestock manure in their farm

The research findings showcase that livestock manure is currently utilized in 2 main categories: as composted manure, creating a mixture which contains other composted materials like straw or sawdust, targeting mainly vegetable growers looking to reduce potential health and environmental risks of applying raw manure. The second category includes farmers using livestock manure as a soil amendment to improve soil quality. In addition to providing nutrients for plant growth, applying fresh or composted livestock manure to cropland improves soil organic matter and tilth (the physical conditions that make a soil suitable for growing crops). The rest of the farmers don't produce livestock manure on their farms.

## QUESTION 6

Q6: What would you like to do with livestock manure?



### Quantitative findings:

- 3 farmers want to produce biogas from livestock manure
- 2 farmers want to produce renewable energy for utilization in their farms
- 15 farmers don't produce livestock manure in their farm

The research findings display a general interest in renewable sources of energy emitted from livestock manure. However small-scale farmers are still trailing behind in adopting this technology because the initial installment cost of a biogas plant is high and they have inadequate numbers of livestock to feed using a biogas plant. On-farm manure-to-energy technologies are expensive and require initial investments in infrastructure as well as on-going maintenance and operation costs. Systems installed to produce heat will require more labor than traditional propane-fueled heating systems. The rest of the farmers don't produce livestock manure on their farms.

## CONCLUSIVE TABLE

	Question 1	Question 2	Question 3	Question 4	Question 5	Question 6
1	watermelon/melons	Composting	Decay in open field	soil nutrition		
2	mixed vegetables	Composting	Decay in open field	soil nutrition		
3	cattle	Energy			soil amendment	Biogas
4	poultry	Energy			soil amendment	Biogas
5	watermelon/melons	Composting	Animal feed	Melon Wastes in Biscuit Production		
6	mixed vegetables	Fertilizer	compost	organic fertilizer		
7	mixed vegetables	Composting	Biochar	improve plant growth		
8	cattle	Energy			Composted manure	Renewable electricity
9	mixed vegetables	Composting	Animal feed	composting		
10	watermelon/melons	Composting	Decay in open field	no specific idea		
11	watermelon/melons	Composting	Animal feed	no specific idea		
12	watermelon/melons	Composting	Animal feed	Watermelon Rind utilization in food preparation		
13	poultry	Energy			Composted manure	Biogas
14	watermelon/melons	Composting	Animal feed	composting		
15	mixed vegetables	Fertilizer	compost	organic fertilizer		
16	mixed vegetables	Composting	Biochar	improve plant growth		
17	goji berry/pomegranate	Composting	cattle feed	no specific idea		
18	cattle	Energy			Composted manure	Renewable electricity
19	watermelon/melons	Composting	Decay in open field	no specific idea		
20	strawberry	no interest	compost	anything apart from animal feeding		

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