



ORGANIKA

Shoqata e Përpunuesve dhe Eksportuesve Kosovar të PPJD
Kosovo Association of the Processors and Exporters of the NWFP

Non-Wood Forest Product and Medicinal Aromatic Plant Sector Assessment Report

Year 2018



Photo: Production fields of Basil and Lavender in Leposavic, Kosovo, photo source ORGANIKA



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Acronyms and Abbreviations

MAFRD	Ministry of Agriculture, Forestry and Rural Development
NWFP	Non-Wood Forest Products
MAP	Medical Aromatic Plants
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
USAID	United States Agency for International Development
EU	European Union
PPSE	Promoting Private Sector Employment
IADK	Initiative for Agricultural Development of Kosovo
CC	Collection Centers

1. INTRODUCTION

According to the 2018 Green Report, the agriculture sector participates with 9% in the gross domestic product and employs 25% of workforce; therefore, it is a very important and strategic economic sector for the country¹. Considering Kosovo's negative trade balance, Non-Wood Forest Products (NWFP) and Medicinal Aromatic Plants (MAP) represents the most important cluster of agriculture because of its high export potential and its adaptability to the climate conditions in Kosovo for growth of NWFPs and cultivation of MAPs.

According this year sector assessment (2018), export of NWFPs and MAPs is €6.3MilionEven though it is currently not significant amount, it has enormous potential to grow because of market linkages already established with key EU markets (leading markets Germany, Italy and Austria), representing 57.6% of total cluster exports. As per recent value chain assessment conducted by GIZ (Birgitt Boor, Value Chain and Market for MAPs in Kosovo, 2019, Prishtina) EU represents the largest single commercial market for herbal medicine in the world, importing yearly 150,000 tons of (raw material) medicinal plants in amount of €425 Million. Germany is an EU market leader, importing 65,000t per year in amount of €201 Million². Germany is also ranked globally in third places, both as importer and exporter, exporting €40 Billion of medicinal and pharmaceutical products yearly. Kosovo has unique opportunity to benefit from already established market linkages, vicinity with EU markets, ties with diaspora in respective countries, and potential to produce and collect high-quality products.

Despite great market potential mentioned above, cultivation and collection of NWFPs and MAPs struggle with common agricultural sector problems such as: fragmented land, small parcels, crop rotation, lack of organic cultivation know-how, low quality of seeds, high production costs, weed management, quality management system of collection centres and lack of experienced extension services. Therefore, focus on improved quality and increased quantity present cluster opportunity for growth both in sales and employment.

2. DEVELOPMENT OF NWFPs AND MAPs SECTOR

Kosovo has long tradition in the collection of NWFPs, "geographical position, historic past of the plant kingdom, and a range of other parameters, including the relief configuration, geologic and pedologic composition, climate conditions have determined that Kosovo has a rich and interesting flora and vegetation. The first data on flora and vegetation of Kosovo dates from the first half of the 19th century"³. Despite long tradition in collection of NWFPs, cultivation of MAPs is less developed. This is further supported with this year's export sales - MAPs participated with only 20% of total export sales. In the past, Kosovo was part of the sector supply chain through Serbia, Croatia and Slovenia with raw material supplies, but

¹ MAFRD (2018), Green Report

² GIZ, Birgitt Boor, Value Chain and Market for MAPs in Kosovo, 2019, Prishtina

³ Horticulture Promotion in Kosovo, Prof. Dr. Fadil Millaku, Inventory of Medicinal and Aromatic Plants and Wild berries in Kosovo, Faculty of Mathematics and Natural Sciences Department of Biology, p4

these ties were cut during the war. Only in the beginning of 2000, initial linkages with international markets were established through Macedonia and Albania.

The sector started developing in 2005 when international donors such as GIZ, Helvetas/Intercooperation, USAID, Care International and PPSE started supporting and helping establish the value chain. Sector support was followed by MAFRD in 2016 when the program of direct payment as subsidy for certified organic MAPs was introduced, providing yearly payment of 200EUR/ha. The subsidies for cultivation of certified organic MAPs were increased in the following year, with 300EUR/ha; whereas, in 2018, the subsidy reached 500 EUR/ha⁴.

The sector of NWFPs and MAPs was further empowered when the ORGANIKA association was established, in 2013, by the leading companies of the sector of NWFPs and MAPs. The purpose of the association is to improve cooperation among stakeholders in this sector and by promoting Kosovo products in foreign export markets, and through lobbying activities⁵. ORGANIKA, which currently has 34 members, has been supported by donors and development projects in the recent years. Its main supporting donor projects are:

- USAID AGRO (Agricultural Development and Rural Opportunities)
- GIZ project CETEP (Creating Employment Through Export Promotion)
- Swiss Contact project PPSE (Promoting Private Sector Employment)

The above-mentioned projects provided support to the association in:

- Strengthening and developing of ORGANIKA association,
- Serving its members through the creation of partnerships with the government and developing future strategies;
- Attending various international fairs and sales missions;
- Training members about the organic MAP cultivation sector;
- Printing brochures about organic MAP cultivation in Kosovo;
- Obtaining organic certification of its members;
- Supporting ORGANIKA with work force development and office establishment.

Recently, Swiss Caritas has approached ORGANIKA and is supporting the association in various activities, similarly to the above-mentioned interventions.

3. NWFP&MAP VALUE CHAIN

The main value chain stakeholders are input dealers, collectors of NWFPs, cultivation farmers of MAPs, collection centres of NWFPs and MAPs, processor and traders/exporters. Quite

⁴ MAFRD, Program of Direct Payments 2018, Retrieved from https://www.mbpzhr-ks.net/repository/docs/495_Programi_per_Pagesa_Direkte_per_vitin_2018_21.pdf

⁵ Retrieved from <https://organika-ks.org/en/about-us/>

often, one value-chain stakeholder plays several roles in the value chain, being the farmer, collection centre, processor, and/or exporter.

Almost all exporting companies are engaged simultaneously in more than two value chain activities cultivation, collection, processing, and exporting activities.

As per the recent GIZ study on Value Chain and Markets for MAPs (Birgitt Boor, 2019), there are around 7,500 NWFPs collectors, around 700 cultivating farmers and 50 collection centres, and as per this assessment report there are total 10 companies engaged in exporting activities.

According to updated figures of this year's report, there are 862 total hectares of cultivated MAPs, producing 537 tons of goods, with 26 different cultivated crops (even though, in some reports, a total of 38 different MAP species are mentioned). This year, a total number of 39 different NWFPs are collected; while, in some reports, 66-85 species are mentioned.

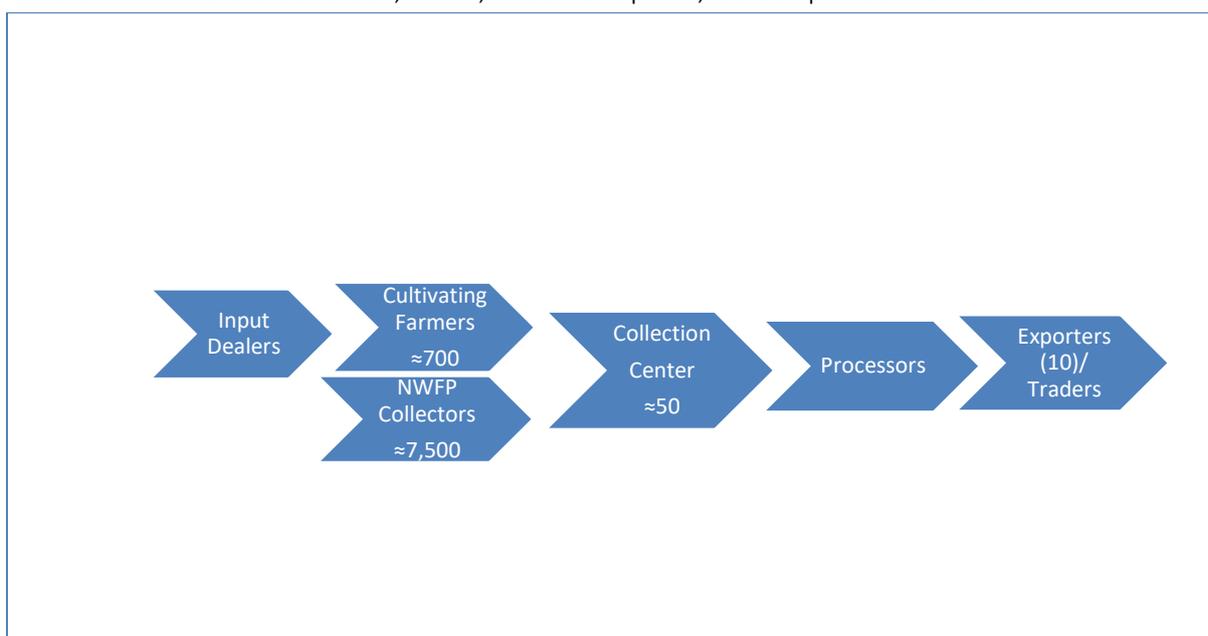


Figure 1 NWFP and MAP Value Chain Mapp

4. SURVEY RESULTS

4.1 Methodology

This report provides an overview of the NWFPs and MAPs sector development and its processing capacities including production and collection, opportunities for growth and challenges constraining the sector.

The report provides information on the key topics associated with NWFPs and MAPs sector: employment structure, production and processing capacities, current and future investments, export and local markets, type and quantities of collected NWFPs, type, surface and quantity of cultivated MAPs, and key constraints faced in the sector. This year, the report also compares the sector progress between year 2017 and 2018.

The initial survey was designed in 2017, when the first sector baseline study was conducted upon consultation with all relevant sector stakeholders. In 2018, after close consultations with ORGANIKA and GIZ, survey modifications were made.

The aim of this report, and the following yearly sector assessments, is to improve techniques of data collection which will aid in capturing accurate data, sector development trends, and intervention opportunities, which aim support and growth of the sector. Therefore, a better bond and trust is already established between ORGANIKA (interviews were conducted by ORGANIKA staff) and sector stakeholders, who aim higher accuracy of data that are crucial to any sector assessment. Few crucial quantitative data are cross-checked multiple times to ensure correctness, and they are also verified with the interviewees.

The information collected through interviews with 34 operators was essential for the development of the report and preparation of recommendations for the sector development aiming to improve competitiveness of the value chain. Among interviewed companies were collectors, cultivating farmers, collection centres, processors, local traders and exporters. 34 firms were interviewed, and these 34 firms represent about 80% of total companies operating in this sector (excluding collectors and farmers).

Compared to 2017, in 2018, 14 additional new companies were interviewed; whereas, eight of them either closed their businesses or did not respond to the request for an interview.

Data gathered on cultivated berries are not part of the main scope of this document; however, they will be provided in relevant sections given some stakeholders use the same processing capacities and human resources for collection, processing and trading of both NWFP/MAP and cultivated berries. Data provided in this report on cultivated berries do not represent the overall statistics of cultivated berries of the country; they only present the participation portion of NWFP& MAP sector in berry cultivation.

4.2 The outcomes

4.2.1 Employment and sector growth

As per below figures, the NWFP&MAP sector employs total 315 full time workers, 50% of whom are women, and 794 seasonal workers, 66% of whom are women. It is obvious that women employees dominate the sector workforce, both among full-time and seasonal employees.

When compared to employment figures obtained in 2017, there is a 61%-increase among full-time employees (119 additional employees) and 51% increase in seasonal employees (267new employees). Another important observation is significant increase in number of minorities employed especially seasonal jobs from 79 jobs last year to 271 jobs in 2018, with a 243% increase.

Table 1. Employment structure in NWFP& MAP

	Total	Full time				Total	Seasonal			
		Women	Men	Young (18-30)	Minorities		Women	Men	Young (18-30)	Minorities

Employment 2018	315	157	158	149	57	794	526	300	445	271
		50%	50%	47%	18%		66%	38%	56%	34%
Employment 2017	196	92	104	95	31	527	316	225	224	79
Increase #	119	65	54	54	26	267	210	75	221	192
Increase %	61%	71%	52%	57%	84%	51%	66%	33%	99%	243%

Based on data obtained from business registrations, the trend of new registered firms operating in the sector for the last four years can be observed. There is a steady and modest grow on number of newcomers in the sector- between 3 and 4 new companies registered each year.

Year	No of new registered firms
2015	4
2016	3
2017	3
2018	4

4.2.2 Processing capacities

Related to processing capacities, data on installed capacities of dryers, freezers and storage dedicated for NWFPs and MAPs are provided. In

Year	Dryers				Shock Tunnel (-40)			
	Surface m2	Capacity tons/24h	Used Capacity ton/year	Usage in % yearly	Surface m2	Capacity tons/24h	Used Capacity tons/year	Usage in % yearly
2018	1,993	72	1,533	19.3% ⁶	448	80	2,420	28% ⁷
2017	1,448				221			
Increase	38%				103%			

2018, there is an increase of 545m2 on installed dryers' capacities, or **38% increase** compared to 2017. **The total surface of installed dryers is 1,993m2.** Of the total, 640m2 are green-house dryers (natural dryers). As of next year, a separate question will be introduced to track separately natural green-house dryers. The daily capacity of all dryers in the sector is 72 tons/day, but as seen from the table below, **the yearly usage of dryer's capacities is very low only 19.3 %**, considering 5 months of seasonal usage. This is an indicator that more products can be processed and that there is potential to dry the quantity of collected NWFPs and cultivated MAPs. In total, from 34 respondents, 29 have at least one dryer (a firm can have more than one dryer).

Total surface of shock tunnels (-40°C) installed is 448m2 with capacity to process 80 tons of goods per day, but yearly usage is relatively low only 28%, considering 5 months of seasonal usage. Total **2,420 tons** of products are treated through Shock tunnels in 2018. When compared to last year there is a significant increase in surface of the **Shock Tunnel with**

⁶ The average usage of dryers is calculated with the assumption that dryers are used five months per year. Total yearly capacity is 7,920 tons= (5 months X 22 days = 110 days of yearly usage) * Capacity in tons per 24 hours (72 tons)/ by actual usage 1,533 tons per year= 19.3%

⁷ The average usage of shock tunnel is calculated with the assumption that shock tunnels are used five months per year. Total yearly capacity is 8,800 tons = (5 months X 22 days = 110 days of yearly usage) * Capacity in tons per 24 hours (80 tons)/ by actual usage 2,420 tons per year= 28%

doubled increased capacities or 103% increase. In total from 34 respondents only 8 of them have Shock Tunnels (-40°C).

There was a significant increase in the surface of **storage freezers (-20°C)**. An **additional 915m²** was installed in 2018, thereby representing a 32% increase when compared to 2017. Daily capacity of storage freezers (-20°C) is **816 tons**. Due to the lack of information from all interviewees, it was impossible to calculate the yearly usage and percentage use. In total, from 34 respondents, 10 of have a storage freezer (-20°C).

The warehouse storage increased with an additional area of 1,878m² (30% increase compared to 2017). 21 of the 34 respondents have warehouse storage.

Year	Storage Freezer (- 20 °)		Warehouse
	Surface (m ²)	Capacity (tons/day)	Surface (m ²)
2018	3,813	816	8,090
2017	2,898		6,212
Increase %	32%		30%

The following data provide information of the overall cultivation equipment and other processing machines.

As per below table, grinding/slicing machines represent the highest number of equipment with 35 pieces, followed by tractor and supporting equipment with 24 sets and cleaning/sorting/detecting machines with 13 pieces.

Tractor with supporting equipment	Chamo mile harvester	Pumpkin seeds cleaning machine	Grinding /Slicing machine	Distilling machine	Oil extracting machine	Cleaning/Sorting/Detecting machine	Packing machines	Pressing machine	Production lines
24	4	1	35	3	4	13	7	2	9

At the section of listed problems, lack of dedicated mechanization for cultivation of MAPs is addressed as a top problem for the sector; therefore, the 24 sets of tractors with supporting equipment do not represent adequate equipment for cultivation of MAPs, and thus specific equipment are needed for this sector.

4.2.3 Collection of NWFP

The list of collected NWFPs in 2018 is longer than in 2017; there are 7 more crops listed in 2018, but the quantity of overall collected NWFP decreased by 11% or 269 tons. The largest decrease is observed among two products: mushrooms and juniper, there is a combined decrease of 376 tons of these two products in 2018 – individually, a decrease of 220 tons of mushrooms, while a decrease of 156 tons of juniper.

Year	Ton	Increase
2018	2,088	-11%
2017	2,357	

A detailed list of all collected NWFP in 2018 is provided below and it is sorted from the highest to the lowest collected quantity. The total quantity of collected NWFPs is 2,088 tons. From total 34 respondents, 23 are engaged in collection of NWFPs.

No	NWFP	Kg
1	Blueberries	519,650
2	Juniper Berries	318,170
3	Fresh Mushrooms	266,200
4	Blackberries	265,700
5	Wild Apples	264,750
6	Rosehips	148,180
7	Elder	68,754
8	Wild Strawberries	49,012
9	Cowslips	30,703
10	Linden	27,106
11	Blackberry leaves	21,100
12	Field Horsetail	20,214
13	Yarrow	16,410
14	Nettle	15,800
15	Silver Birch	12,400
16	Raspberry Leaves	8,510
17	Hawthorn	5,940
18	Light blue garlic	4,500

19	Wild Thyme	4,450
20	St John's wort	4,300
21	Plantain	3,235
22	Edible Burdock	3,000
23	Cornelian Cherries	2,000
24	Dried Mushrooms	1,130
25	Mugwort	1,000
26	Bearberry	1,000
27	Whitethorn	750
28	Mullein	630
29	Common Mallow	605
30	Chicory	600
31	Dandelion	600
32	Papaver	558
33	Sunflower	550
34	Mint	400
35	Daisy	350
36	Horse Weed	290
37	Yellow Sweet clover	210
		2,088,757

In the table above, there are 37 crops listed; whereas, in 2017 there were only 31 crops listed. It is worth highlighting that two types of linden are grouped together. The same applies for common mallow; therefore, the total number of NWFPs collected this year is 39.

The total amount of 2,088 tons is collected from several farmers and collection centres, resulting in a total of 2,896 contracts. The majority of suppliers are farmers without contracts, representing 55% of the overall contracts.

Table.8 Collection of NWFPs and Contracting

Type of contract	No. of Contracts	%
Collection Centers	235	8%
Farmers with contracts	1,077	37%
Farmers without contracts	1,584	55%
Total	2,896	

4.2.4 Cultivation of MAP

Cultivated crops are listed below in two separate tables, one listing the surface in hectares and the other listing quantity in tons., All values are sorted from the highest surfaces/quantities to the lowest. The total amount of cultivated MAPs in 2018 is **537 tons**, which was cultivated in **an area of 862 Ha**. Top crops in terms of quantity of production and area in hectares can be observed.

Table 9. MAP cultivation surface

o	Cultivated MAP	Ha
1	Organic Pumpkin	365
2	Chamomile	169
3	Pumpkin seeds	124
4	Mallow	29.4
5	Wheat	24.3
6	Oregano	21.8
7	Marigold	21.6
8	Nettle	17
9	Peppermint	17
10	Green Barley	16
11	Cornflower	13
12	Sage	12.5
13	Leeks	12
14	Sunflower	8.2
15	Elder	2.7
16	Parsley	2.2
17	Cows hip	2
18	Melisa	1.9
19	Quince	1.2
20	Gentian	0.5
21	Yarrow	0.4
22	Levander	0.3

Table.10 MAP cultivation quantity

No	Cultivated MAP	Ton
1	Leeks	158.5
2	Chamomile	90
3	Marigold	59.4
4	Oregano	46.3
5	Mallow	41.2
6	Organic Pumpkin	26
7	Nettle	21.5
8	Peppermint	21.2
9	Sage	19.6
10	Pumpkin seeds	18
11	Cornflower	14.2
12	Wheat	12
13	Quince	4.7
14	Sunflower	2
15	Melisa	2
16	Thymus	0.2
17	Green Barley	0
18	Parsley	0
19	Levander	0
20	Cows hip	0
21	Elder	0
22	Yarrow	0

23	Thymus	0.1
Total MAP Ha		862.5

23	Gentian	0
Total MAP tons		537

There are total of 23 cultivated crops. It should be noted that two crops – cornflower and mallow – are grouped together, because there were three different colors of cornflower and two colors of mallow. As a conclusion, the total number of cultivated MAPs species in 2018 is 26. Crops listed with zero production quantity are listed as such for two potential reasons: 1) there may have been no production quantity this year due to small parcels or 2) the respondents reported zero production without further explanation. Zero production amounts are listed to show the relation with the table of MAPs cultivated surface and production quantities.

In contrary to NWFPs, there are positive trends in all figures related to cultivated MAPs. The surface of cultivated MAPs is four times greater than that in 2017, an increase of 604 ha or a 234%-increase of cultivated areas. The majority of the increase in hectares of cultivated MAPs resulted from increased surface owned by the companies, who are both collecting MAPs from other farmers but decided to expand their own cultivation surface (238ha of company-owned cultivated surface added in 2018) as well. It is worth mentioning that from total 604 new hectares of cultivate areas increased in 2018, 350 ha are from a single cultivator, and more than half of the surface increase is with only one crop – pumpkin.

The quantity of cultivated MAPs increased by 329 tons or with a 158%-increase compared to 2017. The structure of the cultivated MAPs is 91% in favor of organic products; therefore, the majority of cultivated MAPs are organic.

<i>Figure 10. MAP Cultivation – Summary figures</i>						
	Surface (Ha)	Quantity ton	Number of cultivating farmers	Surface owned by company (HA)	Organic (ton)	Conventional (ton)
2018	862	537	347	467	487	50
		Percentage		54%	91%	9%
2017	258	208	355	229	186	22
Increase #	604	329	-8	238	301	28
Increase %	234%	158%	-2%	104%	162%	127%

4.2.4.1 Cultivated berries managed through value chain of NWFP and MAP

As already explained in the methodology section, data gathered on cultivated berries are provided only because few NWFP&MAP stakeholders use the same capacities and human resources for berry cultivation, collection, processing and trading. Out of the 34 interviewed stakeholders, 8 of them engage in the collection and cultivation of berries. The total surface and the quantity of cultivated berries managed through the value chain of the NWFP& MAP is 287 ha and 1,260 tons respectively.

No	Type of berry	Ha
1	Raspberry	272.8
2	Blackberry	5.3
3	Aronia	5.5
4	Strawberry	4.0
	TOTAL	287.6

No	Type of berry	Ton
1	Raspberry	1,170
2	Strawberry	40
3	Blackberry	34
4	Aronia	16
	TOTAL	1,260

4.2.5 Current and Future Investments

In the table below, investments in year 2018 are shown. The total investment of 34 respondents is €1.9M, with the majority of investment being dedicated to business facilities and machinery.

Total amount of investment in 2018	Machinery	Business Facilities	Staff qualification	Cooling and freezing space	Other investments
€ 1,957,390	€ 698,700	€ 847,000	€ 23,700	€ 30,000	€ 357,990
	36%	43%	1%	2%	18%

The percentage of future investments is slightly different from current investments. Machinery leads with 28%, followed by investments in cooling and freezing space with 25%. From the total €617K of other investments, €515K are dedicated for dryers, which is an indication that dryers are an important part of future investments despite the percentage usage of current capacities being very low (only 19%).

Total future investments 2019-2021	Machinery	Business Facilities	Staff qualification	Cooling and freezing space	Other investments
€ 3,437,000	€ 970,500	€ 772,500	€ 223,500	€ 854,000	€ 616,500
	28%	22%	7%	25%	18%

4.2.6 Sales

Sales are the most important indicator of this sector because of its contribution in the overall country's trade balance and participation in export sales. In this section, the sales of local and export markets will be presented, including berries.

The total amount of sales is €10.8M, with €8.9M or 82% destined for export markets. The total amount of all sold goods is 4,439 tons.

Total sales	€ 10,851,637	Percentage	Sales ton	4,439 ton	Percentage
Export	€ 8,940,608	82%	Export	3,662 ton	83%
Local market	€ 1,911,029	18%	Local market	777 ton	17%

The table below represents sales of the sector that is the main scope of this document. The total **net sales of NWFP&MAP sector for the year 2018 are €7M, 91% of this amount are exports sales (€6.3M)**. Local market sales to the final consumer are presented in the table below, which are €1,272,379 lower than the amount presented in Table 15 because €1.3M of local sales is already reflected in export sales (with traders margin added) as they are what collectors and cultivators sell to collection centres destined for export. A more detailed sales breakdown will be provided at the section of local market sales.

Total sales	€ 7,032,758	Percentage
Export	€ 6,394,108	91%
Local market- final consumer	€ 638,650	9%

4.2.6.1 Export Sales of NWFP and MAP

There are ten companies engaged in export sales of NWFP and MAP products. The total export sales for 2018 are € 6.4M with NWFPs dominating with 80% of total export sales. Total quantity of goods sold in export is 1,827 tons, 89% of them NWFPs. There exists a large disproportion between NWFP and MAP export sales, and this is an indicator that there is an opportunity to further develop the MAP sector., In addition, challenges in the MAP cluster seem to be more emphasized, which are also reflected in the section of 3.2.8 List of Problems.

Export of NWFP & MAP	€ 6,394,108	Percentage	Export Tons	1,827	Percentage
NWFP	€ 5,109,475	80%	NWFP	1,630	89%
MAP	€ 1,284,633	20%	MAP	198	11%

Four leading crops of NWFP in export sales are: blueberries with €1.3M sales, mushrooms with €1.1M sales, blackberries with €546K sales, and elderberries with €440K sales. The complete list of export sales of NWFP sorted from highest value is in Annex 1.

No	NWFP	Export in €
1	Blueberries	€ 1,304,045
2	Mushrooms	€ 1,198,180
3	Blackberry	€ 546,800
4	Elder	€ 440,190
5	Juniper	€ 378,854
6	Cowslip	€ 355,857
7	Linden	€ 243,200
8	Wild Strawberry	€ 188,265
9	Rosehips	€ 118,116
10	Wild apple	€ 101,700

Blueberries are sold in Germany, Lithuania, Italy, Austria, Serbia, and Switzerland. Blackberries are sold in Italy, Germany, Serbia, Slovenia, and Switzerland. Mushrooms are sold in Italy, Holland, Germany, Romania, Serbia, and Canada.

MAP export sales participate with only 20% sales or €1.2M. The top sold crops are listed in the table below, while the complete list is at Annex 2.

No	MAP	Export in €
1	Mallow	€ 428,602
2	Chamomile	€ 296,000
3	Cornflower	€ 176,578
4	Pumpkin seeds	€ 105,000
5	Sage	€ 70,400
6	Leeks	€ 48,000

Malow leads as the top sold MAP product, it is exported to Germany, Czech Republic, Austria, and Canada. Chamomile is sold in the Czech Republic, Austria, and Germany. Cornflower is exported to Germany, Austria, Cech Republic, Canada and Bulgaria.

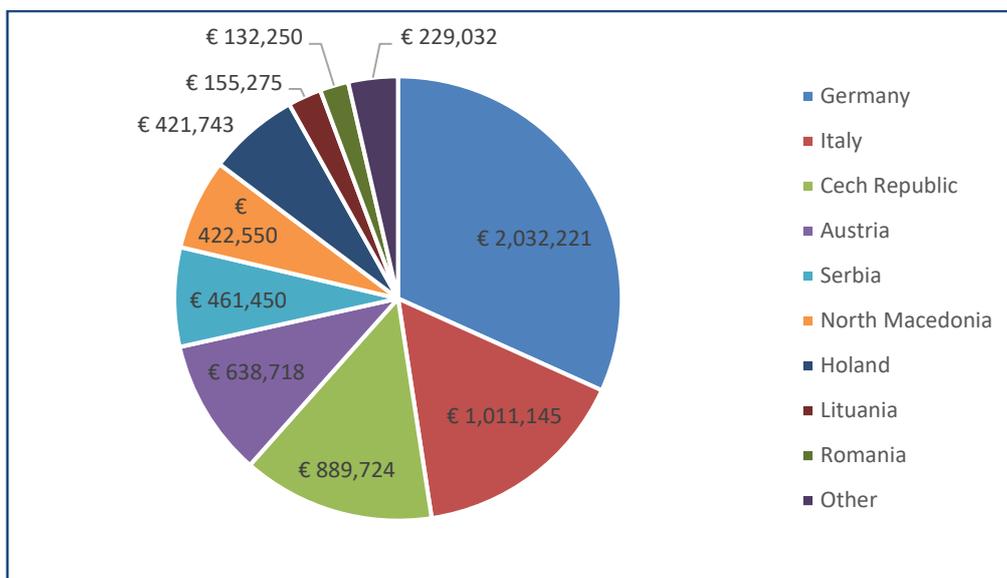
When compared to 2017, there is a positive increase in the overall export sales of NWFP and MAP, a 10% increase, or € 583,218 in additional sales; however, there is a significant reduction in the quantity of exported goods by 38%, or 1,122 tons fewer than last year. This may be explained with a shift in sales of products with a higher monetary value but lower weight, but it is also possible that there was a mistake on the reported amount of the last year sales.

Year	Export in € NWFP & MAP	Export in ton
2018	€ 6,394,108	1,827
2017	€ 5,810,890	2,949
Increase	€ 583,218	(1,122)
Increase in %	10%	-38%

4.2.6.2 Export sales of NWFP and MAP according to export countries

The export sales of NWFPs and MAPs are concentrated in Germany, Italy, Czech Republic, Austria, and Serbia. These five countries comprise 72% of the overall export market. Germany is obviously leading with 31% of total Kosovo export sales.

Figure 1. NWFP and MAP export market share in sales value- EUR



In the table below, a complete list of all export markets in EUR and market share percentage is shown.

Country	Exports sales in €	Exports in %
Germany	€ 2,032,221	31.8%
Italy	€ 1,011,145	15.8%
Cech Republic	€ 889,724	13.9%
Austria	€ 638,718	10.0%
Serbia	€ 461,450	7.2%
North Macedonia	€ 422,550	6.6%
Holland	€ 421,743	6.6%
Lithuania	€ 155,275	2.4%
Romania	€ 132,250	2.1%
Slovenia	€ 68,509	1.1%
Bulgaria	€ 53,422	0.8%
Montenegro	€ 47,209	0.7%
Canada	€ 35,892	0.6%
Switzerland	€ 24,000	0.4%
TOTAL	€ 6,394,108	100.0%

4.2.6.3 Local Market Sales of NWFP and MAP

The total amount of local market sales is € 1,911,029 - 33% of sales to final consumers/supermarkets and the other 77 % to collection centres. The total amount of goods sold to collection centres in amount of €1,272,379 are further processed and then exported; therefore, net local market sales are only € 638,650,

<i>Table 22. Local market sales of NWFP and MAP</i>		
Local Market	Sales in €	Percentage
Supermarkets/Final cons.	€ 638,650	33%
Leading CC	€ 1,107,779	58%
Other CC	€ 164,600	9%
Total local sales	€ 1,911,029	

The purchase value of the leading collection centre represents 87% of the total local purchases of collection centres; therefore, a €1.1M purchase-value of one single company represents a financial burden for one value chain stakeholder. There is a need for a specific financial mechanism to support the stability and potential growth of the entire value chain.

4.2.6.4 Export sales of cultivated berries through value chain of NWFP and MAP

Cultivated berries are not the main scope of this assessment, but because few of the NWFP and MAP sector stakeholders handle cultivated berries, it provides clearer picture of sector engagement if sales figure of berries are included as well. The overall berry cultivation and sales figures are to be provided by the relevant stakeholder – the Berry Association in separate reports.

The total sales of cultivated berries managed and sold only through the value chain of NWFP and MAP sector are €2,546,500, in total amount of 1,756 tons. The majority of the sales value and quantity is raspberries.

<i>Table 23. Export of cultivated berries</i>		
Berries	Sales in €	Tons
Raspberry	2,451,000	1,765
Blackberry	29,500	30.00
Strawberry	66,000	40.00
Total	2,546,500	1,835

4.2.6.5 Sales as per product category

The structure of sold goods is dominated by semi-processed products followed by raw materials, while sales from final products remain low with only 9%.

<i>Table 24. Sales of NWFP& MAP as per category of products</i>		
Raw Material	Semi processed products	Final Product
33%	58%	9%

Majority of sold products are organic, and this reflects the market demand trend as well.

Organic	Conventional
70%	30%

4.2.7 Future plans of MAP Cultivation

The summary of future investment plans regarding cultivation of MAP below is helpful for all value chain stakeholders and donors since it gives an overview of the size of investment and type of crops to be cultivated.

Surface (Ha)	Quantity ton	Organic (ton)	Conventional(ton)
445	2,085	1,635	350

MAP Type	Cowslip	Gentian	Nettle	Marigold	Leeks	Chamomile	Oregano
Surface in Ha	2	4	17	11.5	9.2	15	27.6
MAP Type	Peppermint	Elder	Pumpkin	Rosehip	Mallow	Cornflower	Sunflower
Surface in Ha	9.7	2	200	100	3	4	1

4.2.8 List of Problems

In addition to the general questions about the sector that were asked to respondents and addressed in this report, the respondents were also asked to list three issues that they considered the top problems of the sector. Their responses were then listed in the following table according to the frequency of each mentioned problem. At the top list, the problem of "lack of proper mechanization for MAP cultivation" can be found, and it may be one of the reasons why MAP cluster is less developed despite market opportunities to export in the EU markets, particularly to Germany. MAPs participate with only 20% of total NWFP& MAP sector exports.

"Unqualified workforce" is listed as second most-mentioned problem, but there are few other similar problems such as "Lack of workforce", "Weed Management", "Old technology" and "BMA Technology," which can also be categorized in the same category of problems that relate to "Lack of qualified workforce" or "Lack of know how." Therefore, this category of problems can be further analysed and addressed at the sector level, and an action plan to tackle it should be developed.

"Lack of working capital" is an indicator that this sector needs dedicated financial/banking services to address the overall complexity of lack of cash in the whole value chain. Financial solutions should address the lack of cash flow related to the seasonality of crop cultivation/collection, processing, and sales/exports. The problem relies on the size of the sector given questions whether the sector is sizable enough for commercial banks to engage in new product development arise. Nonetheless, any financial mechanism already in place

(public or private) such as Kosovo Guarantee Fund, or any future financial initiative, should be utilized for the benefit of the NWFP & MAP sector and address the working capital needs.

Table 28. List of sector problems	Frequency
Lack of mechanization for MAP/land cultivation	13
Unqualified workforce	12
Lack of working capital- cash flow	12
Lack of workforce	7
Qualitative seeds	6
Old technology	6
Weed Management	5
Market	5
Lack of water/irrigation system	3
Lack of financial capital	3
Small surface of land	3
Buyer's payments	2
BMA technologies	2
High loan interest rates	2

“Lack of qualitative seeds” is also listed in a relatively high spot; therefore, it is a topic to be addressed. Surprisingly “Market” is mentioned only a few times and mainly from respondents from North of Kosovo, “Buyer’s payments” was mentioned with regard to local market sales, but there are no problems with export markets and opportunities are high. “High loan interest rates” are at the bottom of the list of problems, while several years ago, it was one of the three top problems.

5. CONCLUSIONS

The established trust between ORGANIKA, the sector association and its stakeholders are promising, considering 14 additional respondents participating in this year assessment.

In overall NWFPs and MAPs sector demonstrated positive progress even though sector is yet relatively small, compared to market opportunities. All figures presented on this assessment report are higher than figures of 2017 assessment, with one exception, this year there was a decreased in the collected amount (tons) of NWFP with 11% less, even though overall exports of both NWFPs and MAPs are increased this year.

It is encouraging that despite underdeveloped MAPs sector, this year there is a significant increase in the surface and quantity of cultivated MAPs. MAPs expanded with additional 604

hectares and additional 329 tons. Number of collected NWFPs grow as well from 31 to 39 products. Because last year report didn't state the number of MAP cultivated crops, we can't compare it with this year number of 26 cultivated crops.

Positive trends are noted on investments of processing capacities, highest percentage increase in shock tunnels (-40), with 103% increased capacities compared to last year. Other processing capacities such as storage freezers (-20), dryers and warehouse experience an increase in investment from 30%-38%. The disadvantage relay on low utilization percentage of processing capacities, this year we could calculate the percentage use of dryers and shock tunnels which is between 19.3%-28%.

Increase in jobs is positive as well, in total additional 119 full time and 267 seasonal employees are engaged in the sector this year.

Regarding sales there were some slight changes in few export markets and their percentage participation. Germany remains main export market with 31%, but this percentage is lower than last year (50%). Italy is the following export market participating with 15%, last year Italy was not listed in the top four markets. Czech Republic and Serbia remain important export markets, being among four top export countries. Switzerland participated with 7% in total exports last year, while this year its participation is only 0.4%.

Despite 11 % increase in exports this year, with €6.3 Million, export remain insignificant considering market opportunities in the EU, specifically in Germany, which imports €201 million of MAP&NWFP yearly. Therefore, it is crucial to tackle the following problems of unqualified workforce, lack of organic cultivation know-how, lack of mechanization, crop rotation, low quality of seeds, high production costs, weed management, quality management system of collection centres, lack of experienced extension services and working capital.

This sector has the potential to improve Kosovo's trade imbalance and employ more people because of the key advantages in market linkages and right climate/environment for cultivation and collection of NWFPs & MAPs.

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Annex 1. Export sales of MAP in EUR

Export sale of MAP		
No	MAP	Export in €
1	Mallow	€ 428,602
2	Chamomile	€ 296,000
3	Cornflower	€ 176,578
4	Pumpkin seeds	€ 105,000
5	Sage	€ 70,400
6	Leeks	€ 48,000
7	Peppermint	€ 37,500
8	Nettle	€ 26,900
9	Oregano	€ 25,000
10	Raspberry Leaves	€ 22,420
11	Quince	€ 18,800
12	Marigold	€ 17,490
13	Goethe Arre	€ 8,800
14	Melisa	€ 2,500
15	Sunflower	€ 518
16	Basil	€ 125
	Total	€ 1,284,633

Annex 2. Export of NWFP in EUR

Export sales of NWFP		
No	NWFP	Export in €
1	Blueberries	€ 1,304,045
2	Mushrooms	€ 1,198,180
3	Blackberry	€ 546,800
4	Elder	€ 440,190
5	Juniper	€ 378,854
6	Cowslip	€ 355,857
7	Linden	€ 243,200
8	Wild Strawberry	€ 188,265
9	Rosehips	€ 118,116
10	Wild apple	€ 101,700
11	Blackberry Leaves	€ 58,000
12	Silver Birch	€ 27,000
13	Hawthorn	€ 23,200
14	Yarrow	€ 18,130
15	Wilde Thyme	€ 17,800
16	Field Horsetail	€ 15,642
17	Bear Berry	€ 15,000
18	Plantain	€ 12,475
19	Mullein	€ 9,450
20	Sunflower	€ 9,350
21	Papaver	€ 7,421
22	St John's worth	€ 5,500
23	Mugwort	€ 3,000
24	Whitethorn	€ 3,000
25	Daisy	€ 2,800
26	Cornelian Cherries	€ 2,000
27	Dandelion	€ 2,000
28	Horse Weed	€ 1,450
29	Yellow Sweet Clover	€ 1,050
	TOTAL	€ 5,109,475

Annex: 3 Assessment Questioner 2018

Questionnaire for assessment of NWFP and MAP sector					
1. General information					
Company _____					
Address: _____					
E-mail: _____					
VC Role: Select: CC; CC NWFP; CC MAP; Processor; Processor/exporter _____					
Contact Person: _____					
Telephone: _____					
Web page: _____					
Year of company foundation _____					
Legal Status _____					
2. Number of employees 2018					
Total number of employees					
	Full time	Women	Men	Youngsters 18-30	Minorities
	Number				
	Seasonal	Women	Men	Youngsters 18-30	Minorities
	Number				
The specific number of workers working with raspberries					
	Full time	Women	Men	Youngsters 18-30	Minorities
	Number				
	Seasonal	Women	Men	Youngsters 18-30	Minorities
	Number				
The specific number of repatriated employees					
	Full time	Women	Men	Youngsters 18-30	Minorities
	Number				
	Seasonal	Women	Men	Youngsters 18-30	Minorities
	Number				

3. The international standards with which your company is certified 2018		
	Certification year	Validity of the certificate up to / month / year
Organic	_____	_____
HAACP	_____	_____
ISO 22.000	_____	_____
IFS	_____	_____
4. Current processing capacity 2018		
Dryer: Surface _____ (m2); Capacity(ton/24 hour) _____; ton/year _____; % of usage _____ Shok Tunel (-40): Surface _____ (m2); Capacity(ton/24 hour) _____; ton/year _____; % of usage _____ Stores for freezing (-20): Surface _____ (m2); Capacity(ton/day) _____; ton/year _____; % of usage _____ Storage: Surface _____ (m2); Capacity(ton/day) _____; ton/year _____; % of usage _____		
Other processing capacities		
Describe the machines _____		
Capacity (Ton/ 24hour and Ton/year) _____		
5. Current collection and production capacities 2018		
	Types of NWFPs	Quantity (kg)
1		
2		
3		
4		
5		
5.1 Contracts with NWFP wild plants collection 2018		
Supply contract		

Number of contracts with CC		Quantity (ton)	
Number of contracts with farmers		Quantity (ton)	
Number of farmers without contracts		Quantity (ton)	

6 Cultivation of MAPs and berries in 2018

(information on types and cultivators of MAP and berries)

	Types of MAPs and berries	Surface (Ha)	Saisone Ton	Number of cultivation farmers		Surface owned by the enterprise	Organic kg	Conventional kg
				With contract	Without contract			
				No	No			
1								
2								
3								
4								
5								

Do you need to increase the number of cultivators for these plant species Yes ___ No ___

If yes please specify the cultures and surfaces you want to expand

Products	Surface (Ha)	Quantity (ton)	Organic	Conventional

7. Total investment amount (Please write an approximate amount of investment in euro) _____

Amount of investment in 2018

(Please write an approximate amount of investment in euro)

Machinery	Business objects (warehouse, processing space)	Capacity building of staff members	Cooling and freezing space	Other investments (specify in what)
	€	€	€	€

Planned investments for the next two years 2019-2021

(Ju lutemi shkruani një vlerë të përafërt të investimeve në euro)

Machinery	Business objects (warehouse, processing space)	Capacity building of	Cooling and freezing space	Other investments (specify in what)

		staff members			
€	€	€	€	€	
8. Market 2018					
Total amount of sales €			€		
Total amount of Exports €			€		
Total amount of local sales €			€		
Export					
	%				
Local					
	%				
Organice					
	%				
Convensional					
	%				
Types and quantity of exported products					
Products:	Quantity in 2018 (ton)	Country	(EUR)	NWFP (mark-x)	MAP (mark-x)
<i>Blueberry</i>	-				
<i>Mushrooms</i>	-				
<i>Cowslips</i>					
<i>Juniper</i>					
<i>Elderberry</i>					
<i>Raspberry</i>					
Types and quantity of products sold in KS. Specify buyers (treaders, supermarkets or final consumers)					
<i>Products</i>	Quantity 2018 (ton) (EUR)	Buyer	NWFP (mark-x)	MAP (mark-x)
Forms of sales of your enterprise products in %					
Raw material (%)	Raw material (%)	Raw material (%)			
9. Expanding capacities and potentials for the next five years?					
If Yes, please provide additional information on how do you plan to achieve these increases?					

Increase in production quantities
Development of new products
Development of new products
Processing and value increase of products - production of final products for the market

10. Your Expectations for Exports over the next 5 years

	Compared to 2017, as a result of increased demand and / or competitiveness, over the next 5 years, how much you expect to increase your export volume (tons)
	%
1. Increase	
2. Decrease	
3. I Do not expect change (neither increase nor decrease)	

Specify your anticipations in% for the next 5 years your enterprise plans to focus (based on market requirements)

Organic products %

Conventional products %

This increase in export is expected as a result of (choose all applicable options):

1. Increased demand for products in international markets
2. Better access to export markets
3. Productivity growth (eg through cultivation / production methods or advanced machinery / equipment)
4. Improvement of the quality of products
5. Improvement of product quality certification
6. Other (specify) _____

11. List top key problems you face

1. _____ 2. _____ 3. _____