

RESEARCH ARTICLE

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Value Chain Analysis of Maps on Skrapari's Area

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Abstract

Medicinal and Aromatic Plants (MAPs) is one of the most important sector in terms of incomes for rural households in remote areas and traditionally most competitive in the world markets. Non Timber Forest Products (NTFP) form an important part of livelihood strategies of the people. Additionally, they can be an incentive to leave the forest intact instead of cutting down trees for timber and fire wood. Skrapari's area, is one of main areas regarding the collection of the NTFP that constitute an important specific weight in the income of the rural families. The collection and marketing of medicinal plants from the wild is an important source of livelihood for many of the poor in Skrapari's Municipality, but unfortunately unsustainably managed during the transition period. The goal of this study is that through value chain analyses to provide information necessary on the local policy level to make sound decisions and plan interventions focused on developing productive dependent upon the sustainable management of the natural resources. As a case study value chain analyse through Gjendra Company operating on Skrapari's Municipality, is conducted in this paper, taking into consideration its activity during 24 last years (from 1993 to 2017). The company has spent a lot of efforts on the improvement of the performance and value chain. Through an economic analysis we will try to identify the effect of the value chain improvement on the performance and incomes increasing. The analysis consists on the identification of the value chain improvement to increase of the number of products, MAPs quantity and the total incomes. As are showing on the results of this paper there is a good relationship between the improvements of the value chain at all the hangers and the performance of the company.

Keywords: MAPs, Value Chain Analysis, Skrapari's Municipality, Gjendra shpk

1. Introduction

Communities, through time, have discovered innumerable plant species with various medicinal uses, accumulated considerable ethno-botanical knowledge to enhance the quality of their lives [7]. Despite ancient nature of the tradition, MAPs still form the basis of traditional or indigenous health systems and are reported by the World Health Organization [17] to still be used by the majority of the populations in most developing countries. The last three decades have seen substantial growth in herb and herbal product markets across the world.

On the framework of this paper, MAPs are defined as "botanical raw materials," from which herbal and medicinal drugs, culinary spices, and cosmetic products are created [4]. Rural families harvest/collect NTFP in natural way and process them in a natural and artisanal way. More than 100,000 people, especially from the rural areas, are employed part-time in this sector. One person can collect yearly the equivalent of c.a. 2,000 USD during 3-4 months of the harvesting

time [8, 9]. It is estimated that the incomes, from the collection of medicinal and aromatic plants account c.a. 35% of incomes for rural households [5]. Because of the expanding interest in MAPs, new incomes generating opportunities are opening up for rural populations. The Albanian MAPs trade plays a significant role in the international market, producing nearly 10% of Europe's medicinal plants by weight [10].

MAPs play a significant role in fulfilling the demands of the traditional medicine markets. Today, in Albania, MAPs make an essential contribution to health care, providing only effective medicine for the significant proportions of the population, where other forms of medication are either unavailable or unaffordable. Traditional medicine markets are found both domestically in producing and in economic, social, cultural, and ecological aspects of the local communities.

Albania is among the top 25 exporters of MAPs in the world. The export of MAPs has been growing and reached c.a. 10,000 tons yearly, amounting to EUR 25-

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(Accepted for publication December 19, 2018)

ISSN: 2218-2020, © Agricultural University of Tirana

30 million or 20% of the total agricultural exports of Albania. The most important export products are sage, oregano, thyme, lavender and savoury. Albania is one of main exporters in the international markets regarding some products such as the sage, savoury, oregano, etc. In some specific markets like Germany and USA, the Albanian products such as respectively the wild savoury and sage are the market leaders [1]. The domestic market for the sale of non timber forest products is very limited.

The collection and marketing of MAPs from the wild is an important source of livelihood for many of rural families in Skrapari's Municipality, but unfortunately unsustainably managed during the post communist transition period. With many of MAPs gathered from the wild, the collection and sale of medicinal plants is providing a complementary source of cash for many extremely poor rural households [13]. However, despite the fact that the products collected can have very high value in the final products, the collectors typically receive only a small share of the final value, either because they are unaware of the real value, are unable to market it in the form wanted by buyers or are unable to market to these buyers [14].

The nature, health, welfare, and power framework focuses on the nexus of natural resources, human health, economic concerns, and governance as a driving force in rural development. It highlights the interlinked challenges of: (a) facilitating sustainable utilization and improved management of natural resources, (b) improving standards of health and nutrition, (c) promoting economic growth and poverty alleviation, and (d) empowering rural producers and institutionalizing popular participation in public decision-making [3].

The value chain strengthening is a potentially powerful tool to promote nature conservation, health, welfare and power. It is important to understand that the development goals and deliberate interventions are necessary to create opportunities for the rural poor. The value chain analysis is used as a tool for understanding socio-economic benefits, disadvantages, and risks for the various member of such a chain. [17]. The value chain analysis helps us to design ways of adding value at the producers to live and get the maximum benefits [11].

The aim of the study is to ensure information regarding the structure (map) of the value chain of non forest timber productions in Skrapari's Municipality, dynamics, tendencies, strengths and weaknesses,

opportunities and strengths of the sector, taking into account the access into the domestic and foreign markets and providing recommendations about the efficient interventions for the development of this value chain sector. The study presents the results of a cross-regional market and value chain analysis, conducted in Skrapari's Municipality, at the different levels of the selected value chains, including producers, processors, exporters and traders.

The objective of this study is to provide a clear picture of the value chain for non timber forest productions focusing on: (i) review the dynamics and tendencies during last year's at regional/local level; (ii) complete analysis of the value chain map; (iii) identifying the participants in the value chain of non timber forest products and their relationships; (iv) main findings regarding strengths, weaknesses, opportunities and threats relating to each group in the value chain [13]; (v) recommendations for the development and improvement of product performance relating to each value chain.

2. Material and methods

2.1. Study area

Skrapari's Municipality is located in the southern part of central Albania, bordering the regions of Elbasan in the north, Korça in the east, Gjirokastra in the south and Fier in the west. The study area has some distinguished characteristics making it an area with great potential in the NTFP sector as:

- (i) Favourable geographical position. With an average height above sea level of c.a 700 m, Skrapari's Municipality covers an area c.a 83.000 ha, 80% of which is dominated by natural vegetation (forests, shrubs and pastures). Geographically is dominated by a hilly and mountainous landscape. There is a great diversity of the flora and vegetation, because the altitudinal extending, including the area of evergreen Mediterranean forests and shrubs, termophyllous broadleaves forests and shrubs, dominated by the oak forests, mesophyllous broadleaves forests dominated by the beech forests as well high mountain vegetation, dominated by the dwarf and herbaceous species;
- (ii) Great number of families, more than 40% of Skrapari;s families are engaging seasonally in the collection, processing, and marketing of the non forest timber productions;
- (iii) Significant income, up to 400 US\$/family/year, is generated from Skrapari's remote families by the engagement in this sector. The landscape is

mountainous with rivers and torrents that have created deep valleys and narrow passes.

2.2. Methodological Principles

Methodologically value chain study the sequence of activities required to make a finished product from its initial starting material [2]. In practical terms, value chain is the descriptions of transactions and processing of a product until it reaches its end market. The product in each stage of the value chain is adding its value. The analysis aims to identify all deficiencies in the whole value chain and to offer the proper solutions for improving the current situation.

The value chain research is focused on the nature of the relationships among the various participants involved in the chain, and on their implications for development. A fundamental distinction in the value-chain literature is between producer-driven chains and buyer-driven chains [6]. The focus of our value chain research has been two-fold. One focus has been to understand how different kinds of value chain confer competitive advantage, by changing the way of a product processed or sold [16]. By understanding the external and internal linkages within production, processing and trade networks, it is possible to understand more clearly why the quality of herbal medicines may vary in different markets. A key element of the discussions has been an assessment of the relative benefits to the primary producers, as compared to intermediaries, wholesalers, and retailers [12].

The methodology of this study is based on the analysis of both primary and secondary data. The secondary data were retrieved from the database and Financial Reports of Gjedra Shpk, operating mostly, but not only on Skrapari's Municipality.

2.3. Data analyses

The study was based on a practical methodology combining both desk-based and field research. It adopted a qualitative approach. The research was divided in two phases:

The first phase was based on a desk review of the identified sectors and sub-sectors in order to generate an understanding of market and value chains dynamics, the actors involved, their constraints and challenges. This phase employed secondary data sources drawn from a range of studies, inventory, analyses, policy papers and other relevant documents from both national and international sources.

The second phase consisted on the field research and was divided in two sub-phases:

- a) A preliminary assessment of pre-defined value chains in order to assess their potential for employment generating opportunities for rural population and diversification of family income;
- b) Data collection on the three potential value chains in the target area.

The main methodological steps included: (i) desk research, reviewing different documents and studies (especially the inventory of MAP); (ii) field data collection and discussions, with collectors in different villages of Skrapari area, collectors, processors, whole sale traders, representatives of local government, and whole sale traders in Skrapari's Municipality; (iii) focus group discussions, organized and facilitated by the author of this paper aiming at collection of opinions, ideas, perceptions, and suggestions by representatives of different interest groups.

As a case study value chain analyze through Gjedra shpk operating on Skrapari's Municipality, is provided. It is taken into consideration the activity of this company during 24 last years (from 1993 to 2017). Through an economic analysis we will try to assess the effect of value chain improvement (skill strengthening of the collectors, improvement of the packaging, transportation and processing at all the level of the value chain) on the increasing of the performance and incomes. The analytical framework allow us to understand how the changing pattern of commercialization changes the value chain, and what impact this has on the various elements of the chain from local producing householders to end user. The analysis consists on the identification of the value chain improvement to the increasing of the number of products, quantity of the MAPs and the total incomes and specifically for the most important species. As is showing on the paper there is a good relationship between the improvement of the value chain and the performance of the company. The bulk of the information about the harvesters, collectors and production companies was obtained from interactions with key stakeholders. A SWOT analysis is based on the assessment of strengths, weaknesses, opportunities, and threats of the NTFPs sector in Skrapari. The SWOT matrix has been consulted with the individuals and interested focus groups.

3. Results and Discussion

(i) Analyzing the dynamics and tendencies during last year's at the/local level, through the statistical analyze presented on the graphs bellows, results as follow:

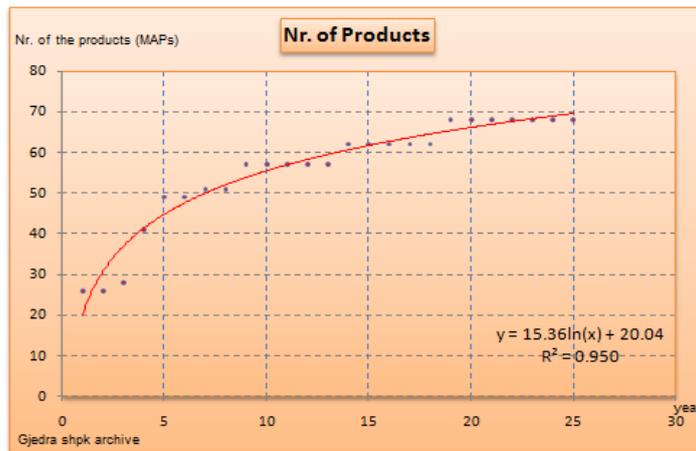


Figure 1: Trend line of the nr of MAPs collected by Gjendra shpk

It looks clear that the number of the MAPs collected during the time (24 years) by Gjendra shpk, is increased on an exponential manner, as is given on the above graph (Graph 1).

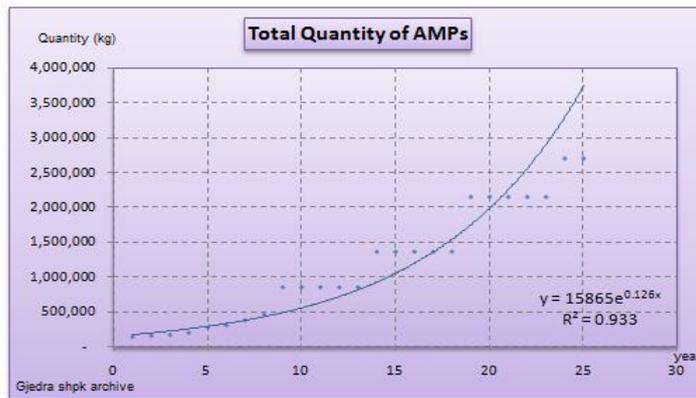


Figure. 2: Trend line of the quantity of MAPs collected by Gjendra shpk (kg)

The total quantity of the MAPs is increased in a logarithmic manner, as the results of increasing international marked demands and skill capacity strengthening of the harvesters and collectors, (graph 2).

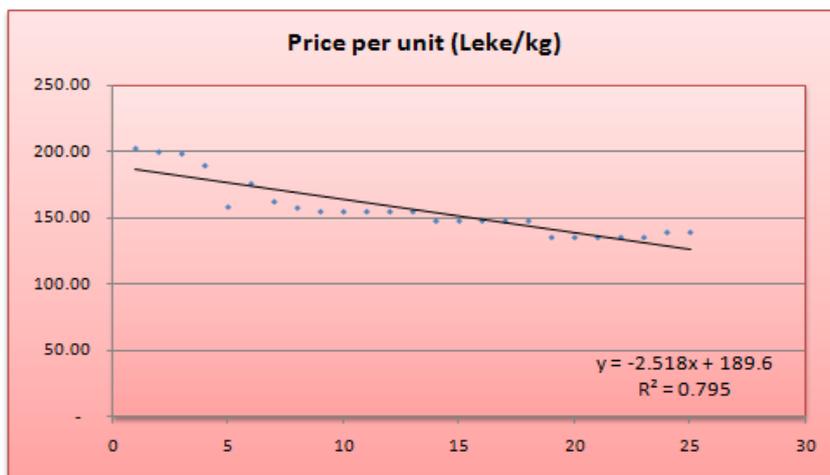


Figure 3: Trend line of the price/unit of MAPs collected by Gjendra shpk

Note: 1€ ~ 130 ALL (Albanian Leke).

Very interesting is the relationship between the price/unit ALL (Albanian Lekë) and incomes of the processing company. The price per unit ALL/kg) of

MAPs collected by Gjedra shpk during the last 24 years like on the graph below, is decreased on a linear manner (Graph 3).

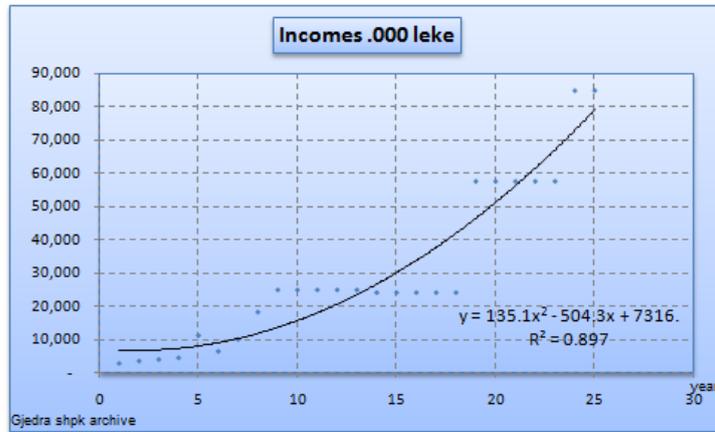


Figure. 4: Trend line of the incomes of MAPs collected by Gjedra shpk

The incomes (, 000 ALL) of MAPs collected by Gjedra shpk during the last 24 years on a polynomial manner are increased, like on the above graph (graph 4).. The income on the context of this analysis means: selling

price – buying price – expenditures (Sp – Bp – Ex). The expenditures are the complex expenses on the framework of transporting from the field and to the market, processing, packaging etc.



Figure. 5: Trend line of the expenditures of MAPs collected by Gjedra shpk

The expenditures (, 000 ALL) of MAPs collected by Gjedra shpk during the last 24 years, is increased on a polynomial manner, like on the above graph (Graph 5).

The increasing of the expenditures during the period 2008 - 2011 is related to the investment for the improvement of MAP processing.

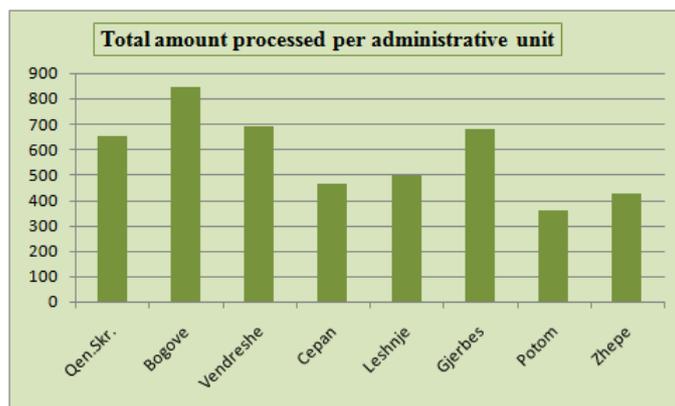
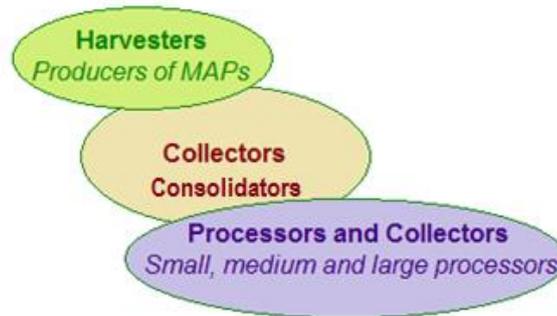


Figure 6. Total amount processed per administrative unit

The collected medicinal plant amount per administrative units is presented on the above graph (Graph 6). Looks that the richest administrative units are Bogove, Vendreshe, Gjerbes and Qender Skrapari. (ii) By the investigation the value chain map is completed. The value chain map showed that the

chain of medicinal plants is organized in 3 levels where in each level one actor is playing in responsible way his role. From our investigation, the supply chain is composed of local harvesters, district collectors and production companies. Like on the below scheme:

Profile of main operators in the MAPs value chain of Skrapari**Figure 7.** Profile of the main operators in Skrapari's Municipality

There is a gap in terms of analyzing the value chains which exist for herbal medical products very often harvested from the wild or produced in small scale agricultural practices.

(iii) Identifying the participants in the value chain of non timber forest products and their relationships; most important value chain actors are input suppliers, local cultivators and harvesters, consolidators and processors / exporters. There are other actors in the value chain who offer various services such as advice, certification and technical assistance.

There are c.a 1200 to 1500 local harvesters on the territory of Skrapari's Municipality, which are mostly located in remote and mountainous areas. It is usually a family business and a good way to diversify income. Women and children are heavily involved. Their activity has seasonality duration usually from April to September, spending 2 to 6 hours per day for medicinal plants collection. Local harvesters are responsible for either collecting plants from the wild or cultivating them. Harvesters of wild-grown MAPs and cultivators constitute the supply base for all processors and exporters.

There are as well 24 collectors on the territory of Skrapari's Municipality. Collectors are people/families living in rural regional areas with potential for collecting NWFP equally involving all members of the family. Depending on demand and prices, collectors

gather different NWFP species during the day and in the evening sell their products to collection centres and processors directly, receiving payment in cash and on the spot. The collection is conducted manually; for some products hand tools are used. Independent collectors at the district level buy MAPs from harvesters and cultivators, and act as middlemen between the harvesters and the production companies. Some district level collectors have facilities for storing and drying plants while others combine MAPs from various harvesters in different districts and then sell the plants to three different markets: packagers, medium processors and large processors.

Collectors are registered businesses that purchase large quantities of products for export. The processors make a yearly plan of collection, in terms of both quantity and prices, and inform other actors what they intent to buy. They set prices and in majority of cases, pre-finance others to purchase products. They process, grade and pack products based on demand. However, they are involved in the organization of collection, processing and exporting; one of them is even involved in the production of planting material and cultivation. For this reason they are also called Operators.

Consolidators serve as intermediary actors between farmers and processors. Their main function is to aggregate production and conducts some simple

operations such as drying and cleaning. Many have invested heavily in warehousing capacity.

Large companies that export MAPs are usually engaged in processing. Medium and large processors, like Gjendra Ltd, receive MAPs directly from cultivators or consolidators (Figure 4). Export companies have a long experience (around 20 years) in the sector and have established strong commercial ties with foreign buyers. They have invested in cleaning, cutting and packaging lines and they also own large warehouses. In some cases, investments are in the range of millions of Euros. They are supplied by collectors and farmers from all over the country. These companies have also supported groups of farmers engaged in cultivation. Medium-sized processors are mainly responsible for direct sales to foreign customers, (USAID 2009) while large processors have a more organized operation, working with large international company such as McCormick's (Paul 2014); (USAID 2009). Gjendra Ltd has financed cultivation through a variety of approaches. The structure of the value chain regarding NFTP is relatively simple: Families, especially those living in the rural areas, collect them in the wild. They dry a part of the production; then they sell to the area-based collectors; the area-based collectors sell them to round 24 district collectors, one processors, and exporters mainly including domestic entities but also foreign ones. The supply chain in Skrapari's Municipality is generally composed of local harvesters, district collectors and production companies. Local harvesters are responsible for either collecting plants from the wild or cultivating them.

4. Conclusions

There is a good relationship between the improvement of the value chain and the performance of the MAPs sector in general.

The value chain is not fully integrated: the processors need to make more investments but however they are taking most of the risks by pre-financing all operating activities, including collection, aggregation and basic processing.

The base production consists mostly of the wild MAPs, collected, developed and organized in mountainous areas. During the last years, the sector of MAP, in Skrapari area, is developed relating to the product quantity as well as the efficiency in wild and organic way.

A considerable number of local economic operators have established experience, contacts, new sources,

and have tried to engage in processing and in the domestic and foreign markets.

The value chain of non timber forest products in Skrapari area faces many challenges including: (i) limited knowledge by the collectors relating to proper timing and proper collection, drying, and processing technology; (ii) not enough financial support schemes to stimulate this sector in Skrapari; (iii) limited/missing capacities regarding technical and counselling support; (iv) price speculations by some exporters that collect with low prices manipulating the quantity and quality; (vi) weak promotion of the value of non timber forest productions for Skrapari area and its inhabitants.

Medicinal and aromatic plants (MAPs) are an export-oriented sector with traditions, developed markets and good potential for growth (more than 95% of collected/produced MAPs are exported).

The present medicinal plants value chain is characterized by the informal nature of its upstream base (producers, gatherers and collectors) and more formally structured downstream [suppliers, processors, distributors, and wholesalers (small processors/traders, big processors/exporters, domestic consumers and foreign consumers)].

The vertical and horizontal cooperation is indispensable to value chain promotion, especially in some buyer-driven value chains. The value chain on the study area operates with little vertical integration and almost no horizontal collaboration.

Improvement of value chain is an important factor for the poverty eradication and women economic empowerment on the rural area, increasing of the collectors involved on the sector and the improvement of the performance of processing and trade companies. The market requires suppliers to adhere to broker terms (quantity, quality, and timing of shipments), proper packaging, and consistency on product, price, and delivery.

5. Recommendations

We recommend:

- (i) improving efficiency be addressed at better vertical and horizontal integration among actors in the value chain adoption of a clear regulatory framework and sets of product standards; at building capacity for certification standards and promoting sustainable natural resource and production practices;
- (ii) improvement of the process and product, as well as displacement towards a new value chain with less actors and more flexibility; The need for technical

assistance, to increase the quality of production and to promote sustainable harvesting methods, are still important to prevent overexploitation of natural resources,

(iii) the medicinal plant industry must to establish effective channels of communication among value chain actors to allow them to respond quickly market demands.

(v) improvement of the business environment to establish the mechanisms for sustainable management, monitoring and control of the forest natural resources and to ensure a better flow of information in the value chain,

(vi) improvement of value chain stakeholders: to support the process of finding appropriate markets for MAPs, and the knowledge of exporters related to appropriate export markets.

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