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HEGO BSB 987

Consolidated Review report on case studies of clusters in Greece, Moldova, Georgia and Armenia

Activity A. T4. 1 / Deliverable D. T4.1.1

PP1 - Development Association of Halkidiki (ANETXA)

**PP3 - Organization for the Development of Small and Medium Enterprises Sector
(ODA)**

PP4 - Georgian Farmers' Association (GFA)

**PP5 - Center of Agribusiness and Rural Development Foundation (CARD
Foundation)**



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Executive Summary

The objective of the Cluster and hence of the Work Package linked with the Clusters, meaning WP T4 “Preparatory actions for “Black Sea Herb Cluster”” will be the promotion of environmentally responsible economic activity with reference to herb plant species as well as the improvement of trade and exporting opportunities of high value herb products produced in Black Sea Project countries. As so, the maturity toolkit of the Black Sea Herb Cluster will contain all the necessary preparatory documents - templates and plans for the direct activation of the Cluster after the end of the HEGO project funding. In addition, the critical factor which will include the maturity toolkit are the letters of intent from several enterprises from collection/ production, processing, marketing and promotion, trade as well as research organizations and local/ regional/ national public organizations from Black Sea Project countries to declare their provisions under which will participate in the Cluster. Special plan will be for the funding of the Cluster as well as an operational plan for its activity and its consultation process which will be continued also after the end of the project. The specific output directly contributes to the COI 1.2.1 Number of enterprises participating in cross-border agricultural or agro-industrial business events.

In a nutshell, the goal of the Cluster, with reference to the Aromatic and Medicinal Plants (AMF) sector, is the promotion of environmentally responsible economic activity, as well as the improvement of trade and opportunities for high-value plant products produced in its partner countries. Black Sea Program (Armenia, Georgia, Greece, Moldova).

The HEGO Project aims, through both this deliverable and the work package, to contribute to "Networking and creating trade links", by increasing the number of companies involved in cross-border agricultural or agro-industrial business activities.



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1. Introduction

1.1. Project Summary

HEGO's overall objective is the modernization

HEGO's overall objective is the modernization of enterprises associated with cultivation, production and promotion of diversified, sustainable, value added herb products and the enhancement of cross-border trade opportunities for local herb enterprises in Black Sea Basin countries participating in HEGO Project (Greece, Moldova, Georgia and Armenia).

Project countries (Greece, Moldova, Georgia and Armenia) share a rich biodiversity and endemism of herb plant species, as well as an interconnected herbal medicine and food historical tradition. However, the overexploitation of wild growing endangered and endemic herb plant species, due to the inappropriate collection methods from the wild and the rapidly growing demand for herb products to 2025 (according to recent studies), resulted in unsustainable wild growing herbs utilization as well as production efficiency. The unsustainable and doubtful economic future of local people in areas with rich biodiversity, like the mountainous population in Project countries, is the bottom line of these environmental and socio-economic risks. The significant positive impact of the HEGO Project will be the change of the production model for herb products in all Project countries, which will lead to the positive effect on improving the **economic and business performance of the herb sector** and indirectly on contributing to the **biodiversity conservation of endemic herb plant species**, with the sustainable utilization in Project countries.

The HEGO Project will address to the above mentioned **common challenges** by developing training tools and by applying them in activities:

1. Informing and **educating farmers** for reducing collecting **herbs** form the wild and promoting **agricultural diversified new cultivations** with improved trade value added products (endangered and endemic herb plant species for processed products)

1. Informing and educating farmers on how to adapt to **new challenges in farming entrepreneurship**, trade and product quality with reference to herb products
2. Establishing and promoting **“research to business”** networking linkages among research organizations and relevant enterprises with reference to the improved value of herbs, especially for endemic species, having potential markets in Food industry, Pharmacy and Cosmetics.
3. Establishing and promoting multi-lateral cross-border and international **trade links** for herb products produced in BSB countries participating in the proposed Project using **ICT and Marketing and Branding Strategies**.
4. Improving the access of agricultural enterprises in **granting and investment schemes** as well as in initiatives for the **creation of clusters** in the agricultural sector.



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1.2. Document Scope

The specific goal of this deliverable D.T4.1 “Review Report on case studies with clusters” is to find out what works best for businesses when it comes to grouping together (i.e. Clusters). This will be done by looking at examples of businesses in Greece that have done well, and figuring out what factors contributed to their success. The present document consists of the four (4) review researches elaborated at national level, one for each Project Country and aims to comprise all the information and conclusions gained from the mapping and reviewing of the case studies on Clustering schemes at Greece, Moldova, Georgia and Armenia in order to create an interconnection with EU’s Cluster Alliance and Policy, towards its capitalization from HEGOs’ stakeholders. This consolidated document of Deliverable D.T4.1.1. aspires to constitute a means of guidance towards the empowering of the development of Clusters in Project Countries. HEGO's stakeholders shall have the opportunity to harvest from the benefits this deliverable has to offer, towards the flourishing of Clustering schemes, by gaining information and know-how both from national level resources, but also from the EU opus on empowering clustering collaboration.

1.3. Document Structure

This document is comprised of the following chapters:

Chapter 1 provides a summary of the project, the document scope and its overall structure.

Chapter 2 provides a brief overview of the EU's Cluster opus, policy and alliance.

Chapter 3 introduces the research on case studies of Clustering schemes in Greece.

Chapter 4 delves into the research on case studies of Clustering schemes conducted in Moldova.

Chapter 5 continues with the presentation of the research on case studies of Clustering schemes conducted in Georgia.

Chapter 6 imprints the research on case studies of Clustering schemes elaborated in Armenia.

Chapter 7 closes with a brief consolidation of the conclusions of each individual research at project level, while stating how HEGO Project could constitute the means that not only could bring together the clustering collaboration among Project countries, but also the creation of a pathway to accessing EU’s opus on empowering clustering collaboration.



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2. Overview of Europe's Cluster opus, policy and alliance

Clusters have become the focal point of the economic and societal viability and sustainability in the last few years in Europe. More specifically, the report published by the European Cluster Panorama, analyses the important role of the clusters in fostering resilient, green and digital industrial ecosystems in regional economies. Furthermore, the report showcased that clusters have the potential to make a significant contribution to the creation of new high-quality and skilled jobs, increasing the level of employment, as well as to contribute to the creation of value-added to the economy.

Extra, a European Cluster Collaboration Platform (ECCP) has been created, aiming to strengthen the European economy through collaboration, while working as the European online hub for industry clusters. Throughout this initiative cluster stakeholders (cluster organisations, policymakers and other related stakeholders from the cluster ecosystem) will be able to be part of the European online hub, which aims to set up partnerships with European counterparts, since it will be the reference one-stop-shop for stakeholders in third countries. The ECCP acts as a service facility aiming to provide cluster organisations, cluster partnerships, initiatives and networks, cluster associations and resource efficiency support actors (EREK) with a variety of modern tools. Furthermore, these tools also enable training providers and public/policy institutions to:

- Make efficient use of networking instruments (search and find potential partners and collaboration opportunities);
- Develop collaboration trans-nationally (within Europe) and internationally (beyond Europe);
- Support the emergence of new value chains through cross-sectoral and cross-industrial cooperation;
- Access the latest quality information on cluster development through news announcements and events;
- Improve their performance and increase their - as well as their members' - competitiveness;
- Build up knowledge and capacities on industrial ecosystems and cluster development.

To maximize further both the economic and societal impact, generated under the concept of the clusters, a Cluster policy has been designed, developed and applied in a European level, aiming to use clusters to implement European priorities. The actions that have been taken are multiple (not only the European Cluster Panorama and the ECCP) and can be find below:

- EUROCLUSTERS
- European cluster partnerships
- Cluster mapping
- ClusterXchange
- Advanced technologies for industry
- Interregional Investment



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Another initiative that has been generated, aiming to be the common voice of the European cluster community, facilitating inputs, connections, and opportunities to meet common challenges of the clusters, is the European Cluster Alliance. The European Clusters Alliance, born in 2019, is the umbrella organisation of European clusters. Its members are national cluster associations as representatives of the clusters in their countries and public actors or ambassadors in the countries that do not have a national organisation. The vision is to position industrial clusters as key agent in the European innovative ecosystem for the development and growth of our economy and competitiveness. The objectives of this alliance are to:

- Promote fast and agile inter-cluster collaboration at European level and reinforce the activities of the cluster network
- Foster the internationalisation of the cluster members and promote a better knowledge of the European clusters
- Build joint recommendations to public administrations in cooperation with national associations
- Cooperate with other networks and organisations that support clusters at European and global level
- Study, promote and defend collective interests of the cluster community

Concluding, with all that being analyzed the clusters are an important catalyst of the Europe's economic sustainability and societal stability, and their contribution in terms of both economic and societal development constitutes a fact. HEGO project and its consortium, understanding the importance of clusters, having a two-fold role and being a pillar in economic and social level, will pave the way towards clustering opus in the herb sector, through informing and providing all the tools that are necessary for stakeholders to be able to develop a united and well-structure herb cluster.



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3. Clustering Case in Greece

1. Introduction

1.1 Project Summary

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1.3 Document Structure

This document is comprised of the following chapters:

Chapter 1 provides a summary of the project, the document scope and its overall structure.

Chapter 2 provides the mapping of Greece’s SMEs and an overview of their importance in the country’s economy as its backbone.

Chapter 3 delves into the importance of the agricultural sector in Greece’s economic and societal level, since this specific sector works as a catalyst of Greece’s economic and societal viability, sustainability and viability.

Chapter 4 specifies the market size of fresh and medical herbs, the herb sector as a pillar for economic and social sustainability, as well as it showcases the importance of medical and aromatic plants and of sustainable agriculture in the Greek territory.

Chapter 5 begins with a preliminary introduction to the historic background of the Cluster Concept and ends with the different types of clusters that can be as well as with their importance in the competitiveness of the market, as clusters influence competition in three ways i.e., increasing static productivity, increasing capacity for innovation and the stimulation of new business formations.

Chapter 6 reports the clusters in Greece and is focusing on the success stories of Greek clusters and analyzing the best practices identifies from these clustering schemes. Also, in this chapter there is an analysis of the tools that have been used e.g., questionnaires, SWOT analysis, AIDA model in order to pave the way towards spreading the concept of the cluster to the herb sector and its stakeholders.

Chapter 6 includes the results concluded from the research that took place, in order to develop this deliverable.

Bibliography and sources which have been utilized for the completion of this deliverable are referred in this chapter.



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2. Mapping the SMEs of Greece

Before diving into the part of Greece's economy undertaken by the agricultural sector, a size - oriented overview of its economic structure would appear necessary.

From the end of the 20th century to present, rapid technological development in the fields of information and communications technologies and the globalization of capital markets and products, have changed the conditions of production internationally. A significant number of Small and Medium-sized Enterprises (SMEs) employ a workforce with a high level of know- how in factors which decisively influence the production conditions of products and services. Knowledge has become one of production's factors complementing the traditional factors of capital, labor and land, the development of which was outbid by proponents of the important role of large companies. Solow R. (1956) for example defined capital and labor as the main sources of growth, as these two factors were the basis for industry's large-scale production, while years earlier Coase R. (1937) highlighted that increased transaction costs in such production scale impose increased firm size. At the same time, however, knowledge is characterized by high uncertainty and information asymmetries and its transfer creates high costs for companies. Given that SMEs have the potential to make a significant contribution to the creation of new high-quality and skilled jobs in new technologies according to modern requirements imposed by the age of globalization, public policies have turned their attention to SMEs, not just for social cohesion, but also because of their significant contribution to creating added value to the economy. The response of public policy to the developing demand which recognizes knowledge as the main source for the creation of comparative advantage, leads to the reappearance of what is called "The Entrepreneurial Economy" (Thurik R., 2009).

The importance of SMEs as an employment generator is also highlighted by OECD (2017), whereas Haltiwanger J., Jarmin R., Miranda J. (2012) and Lawless M. (2014) show that younger enterprises are significant creators of employment. As well, Lawless M. (2014) shows that smaller enterprises indeed provide the main source of employment. On a sectoral basis, Rotar L.J., Pamic R.K. and Bojnec S. (2019) provide empirical evidence which confirms a positive association between the employment of SMEs in the services sector and total employment. Furthermore, they find a positive relationship between GDP per capita and total employment whereas the effect of the employment of SMEs in industry sectors to total employment was found insignificant. In addition, the literature to date has highlighted the contribution of entrepreneurship to economic growth, further highlighting the positive contribution of start-ups to job creation, reducing unemployment rates (Hart P.E. and Oulton N., 2001; Thurik R., 2003; Ayyagari et al, 2011) and economic growth (Van Stel et al, 2005; Audretsch D.B. et al., 2006; Van Praag M.C., Versloot P. H., 2007; Koellinger P., Thurik A. R., 2012). This positive effect comes both from the innovative entrepreneurs at the heart of Schumpeter's analysis and from the entrepreneurs in necessity as well, who do not necessarily take on this role having discovered some market opportunities, but purely for survival reasons (Baumol W. J., 1990; Vivarelli M., 2013). The majority of entrepreneurs, both those who discover opportunities in markets or innovate and those in necessity, belong



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to the multitudinous group of SMEs. In the OECD area, SMEs account for 99% of all firms creating about 70% of jobs on average and contributing between 50% and 60% of value added on average (OECD, 2016).

Such recognition is a fundamental step to justify State's intervention through the appropriate public policies. In countries like Greece which is characterized by its limited national market and economy in terms of size compared to other developed European countries (such as Germany, France, Italy, Spain), SMEs are the vast majority and play a substantial role in the creation of national income and employment and the accomplishment of social coherence.

According to the DIW Econ Fact Sheet 2021 for SMEs in Greece, in 2020, the COVID-19 crisis significantly affected small and medium-sized enterprises (SMEs) in the country. According to the latest European Economic Forecast, Greece's economy contracted by 8.2% in 2020. SME value added declined by 19.7% and SME employment fell by 1.4%. SMEs form the backbone of the Greek 'non-financial business economy'. In 2020, **718.558** enterprises, almost 100% of all Greek enterprises were defined as SMEs according to data from the DIW Econ Factsheet 2021. 94.6% of Greek business (680.038) were micro-enterprises, 4.8% were small enterprises and 0.5% (3.819) were medium-sized enterprises. Much more than half of the Greek workforce, or **83.0%**, is employed. More specifically micro-enterprises employed 1.217.952 (46.9%) of the workforce, while the small- and medium-sized enterprises employed 603.944 (23.2%) and 331.976 (12.8%) of workforce respectively. In the side of the large-sized enterprises, the total amount of workforce that was employed by the 522 businesses (0.1%) was 442.391 (17%). Further, the overall value, added by the SMEs was **56.7%** substantially more than the EU averages 53.0%. Also, SMEs productivity, defined as value added per person employed, was EUR 11.400, less than a third of the EU average of EUR 40.000, while the average SME size in 2020 was slightly lower than the EU average, comprising 3 employees versus 3.7. As such, compared to the EU-27 average, SMEs and especially micro-enterprises are more numerous and more important to the Greek economy, as well as the small-sized enterprises, as they employ a higher amount of employees.



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	Number of enterprises			Number of persons employed		
	Greece		EU-27	Greece		EU-27
	Number	Share	Share	Number	Share	Share
Micro	680 038	94.6%	93.3%	1 217 952	46.9%	29.6%
Small	34 701	4.8%	5.7%	603 944	23.3%	19.7%
Medium-sized	3 819	0.5%	0.9%	331 976	12.8%	15.8%
SMEs	718 558	99.9%	99.8%	2 153 872	83.0%	65.2%
Large	522	0.1%	0.2%	442 391	17.0%	34.8%
Total	719 080	100.0%	100.0%	2 596 263	100.0%	100.0%

Table 1: Number of enterprises, persons employed and value added in 2020

On SME performance in specific areas, Greece has experienced an increase in entrepreneurial and innovation activity in recent years, with the country now becoming an attractive foreign direct investment (FDI) destination for technology-based sectors. However, access to finance and the administrative burden for SMEs remain key aspects to improve in the Greek business environment. In addition, Greek SMEs are lagging behind in digitalisation, although significant steps have been made recently on the digital transition.

In 2022, substantial growth in both SME value added and SME employment is expected, which can partly offset the downturn in 2020. SME value added is predicted to grow by 14.1%, and SME employment is forecast to increase by 10.6%.

With SMEs covering the biggest percentage of Greece's economic structure, the necessity of adapting and establishing methods towards their empowerment and strengthening, creates space for cooperation, which rests as the only sustainable, yet cost - effective answer, harvesting from the benefits, the SMEs, as well as the primary and secondary sector have to offer in the upscaling of the economic stability and growth of Greece.



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3. Showcasing the importance of Agricultural Sector in Greece at economic and societal level

When attempting to analyze and imprint Greece’s dynamic, its interconnection of significant importance with the primary and secondary production sectors can not be absent. With the fundamental components of Greece’s economy and society being no other than the primary and secondary production sectors, their tangibility with economic growth and societal advances, such as employment, is beyond profound.

With the agricultural sector being a catalyst of Greece’s economic viability, sustainability and societal stability, the contribution of agriculture in terms of both economic and societal development constitutes a fact. Despite the uncertainty that follows the agricultural sector, due to the lack of stability and predictability of the production factor of climate, this does not hamper agriculture on being a basal pillar of Greek economy and society.

Greece’s economy consists of 3 contributing pillars, with them being no other than Agriculture, Industry and Services. The contribution of the abovementioned economic pillars to Greece’s economy can be measured as a percentage of GDP, as value added and resilience.

When talking with numbers, Greece’s distribution of gross domestic production (GDP) across economic sectors from 2011 to 2021, as presented in the following Table, imprints that more than 50% share of GDP follows the domain of Services, when the rest of less 50% of share is covered by Agriculture and Industry. More specifically, Agriculture, forestry, and fishing in Greece, as a percentage of GDP, was reported at 3.8974 % in 2021, according to the World Bank collection of development indicators, compiled from officially recognized sources.

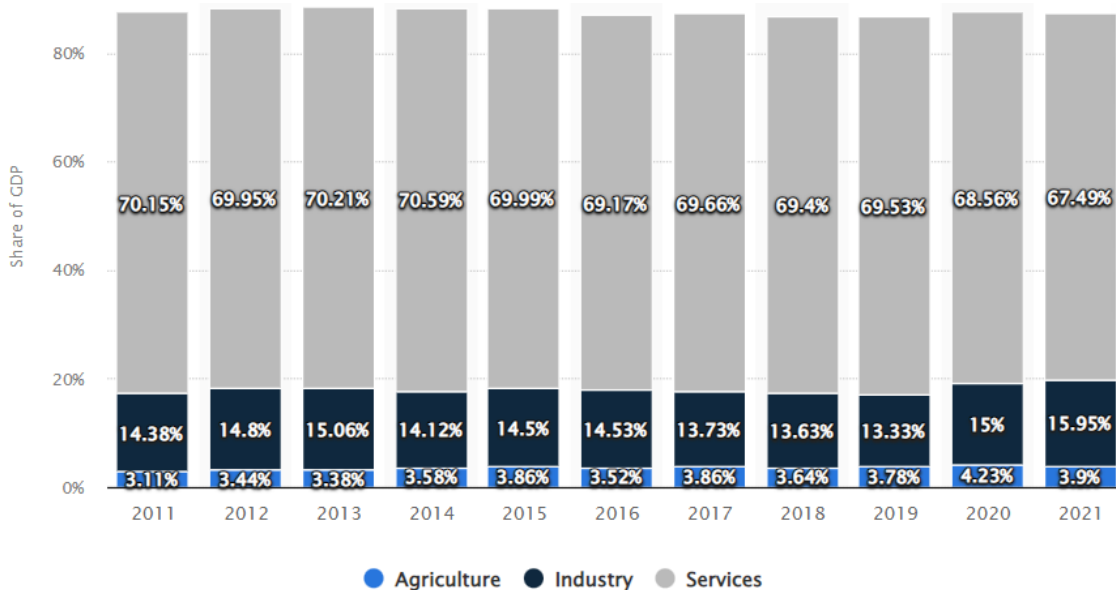


Figure 1: Agriculture’s, Industry’s and Services’ share of Greece’s GDP (2011-July 2021)



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When monitoring the overview of Greece’s GDP, deriving specific from Agriculture, which is imprinted in the below Table, for the timeframe from July 2019 to July 2022, the fluctuations over the years concluded to an increase to 1666.73 EUR Million in the second quarter of 2022 from 1588.50 EUR Million in the first quarter of 2022.

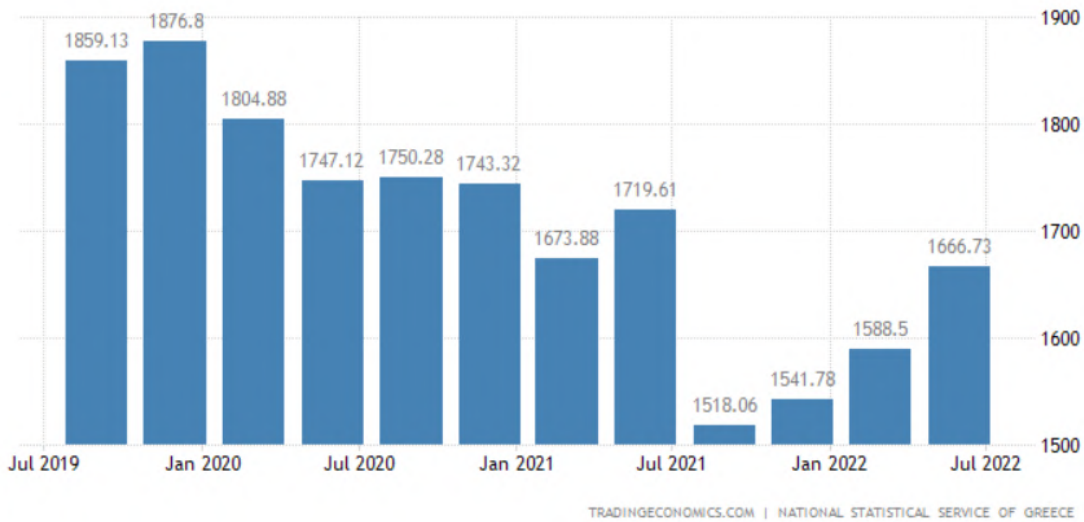


Figure 2: Greece’s GDP, deriving from Agriculture (July 2019-July 2022)

In terms of value added in the agricultural sector as percent of GDP, the above figure provides data for Greece from 2010 to 2022. The average value for Greece during that period was 3.67 percent with a minimum of 2.9 percent in 2010 and a maximum of 4.23 percent in 2020. For comparison, the world average in 2020 based on 168 countries is 10.86 percent.



Figure 3: Value added in the agricultural sector as percent of GDP (2010-2022)

Despite not holding the bigger burden of Greece’s economy, the agricultural sector is an important factor of economic and social cohesion in Greece, both at national and regional



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level. The abovementioned indices confirm the role and importance of the agricultural sector as a sector of economic activity and employment.

The agricultural sector both in the European Union (EU), as well as in Greece, has faced various transformations in the context of the Common Agricultural Policy (CAP), which aims to improve the competitiveness of European, and hence Greece's, agriculture in a globalized context.

Toward the demand of competitiveness improvement, the agricultural sector must create value for producers, drive into the production of goods fulfilling the expectations of the customers, and contribute to the wider targets of the community, such as the livability of rural places and the preservation of the environment and the ecosystems. Especially for the most developed countries, although it does not account for a large proportion of the Gross Domestic Product (GDP), the agricultural sector still comes with great direct and indirect benefits, both at the farm (microeconomic), and local and national (macroeconomic) levels. A thriving agricultural sector also contributes to the social development of countries, as it ensures the supply of basic nutrients to the citizens and promotes the social cohesion targets by keeping the rural parts of countries alive. Following its importance in the production set of the regional and national economies, the agricultural sector should be simultaneously stable, adaptive, and dynamic enough to ensure an active role towards regional and economic development.

This requirement interprets that the agricultural sector should be both equipped with quality structural (labor quality, specialization, high capital, level of technology, etc.) and functional (adaptability, self-organization, innovation, etc.) properties to provide a major developmental factor in the complex configuration of the national and regional economy. Within this context, recent research conceptualizing the complex setting of the modern economies, has brought into the light the new concept of economic resilience, which describes the capacity of an economic system to respond to shocks (disturbances), and withstand or recover or shift to a new state of functionality, if necessary, by undergoing adaptive changes to their structures and social and institutional arrangements.

Economic resilience is a complex concept consisting of diverse conceptualizations, such as geographical, structural or industrial, engineering, ecological, and dynamic, each expressing an aspect of complexity ruling an economic system. The resilience profile of Greece seems to be more a matter of the disproportionately tertiary specialization, with an emphasis on tourism, of the country compared to the other production sectors. The overall geomorphological, infrastructure, and functional handicaps of the country, discriminate Greece as an interesting case study for the development of a resilient agricultural sector toward the EU's institutional requirements and the social demand into the inequalities of convergence and sustainable regional development.



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4. Herbs sector in globe, EU and in Greece

4.1 Market size of fresh and medical herbs

In the last decade, there has been a growing social and political interest in the production and commercialisation of Non-Wood Forest Products (NWFPs). These products are important elements for economic development and are a key generator of rural employment. Among others, Medicinal and Aromatic Plants (MAPs) are key NWFPs in the Mediterranean area and contribute to society's well-being in many different manners. MAPs comprise an important source of income to families living within forest areas, consolidate food security, satisfy nutrition needs, and provide various medicinal remedies. For instance, almost 3 billion people use traditional herbs and medicines coming mainly from forest areas, while there are at least 28,187 plant species that have been recorded as being of medicinal use. MAPs, as well, form part of Mediterranean cultural heritage and spiritual life.

As global markets showcase, both the fresh and medical herbs demand and supply are increasing at a steady pace. More specifically, according to a comprehensive research report conducted by the Market Research Future, the **global fresh herbs market size** has seen sustained progress over the last few years and is anticipated to develop by **USD 1,679.5 Million** from **2022** to **2030** at a **CAGR of 4.15%**. Despite the fact that the fresh herbs market is minor in comparison to that of fruits and vegetables, it has grown significantly in recent years. The impact of the COVID-19 pandemic was severe, and the global market for fresh herbs was severely impacted. The vast majority of fresh herbs sold on the global market are sold to restaurants, and with restaurants closing due to national lockdowns, the whole herb economy has come to a halt. After the global scenario changes, it is expected that the fresh herbs market would take some time to recover. The increased popularity of cross-cultural cuisines is expected to fuel the expansion. According to the analysis, the market would increase in the future years till 2025 due to the growing preference for packaged fresh herbs. Globalization has expanded worldwide trade and travel, exposing people to a wider range of authentic ethnic foods. In addition, the rise of the organized retail sector, as well as increasing consumer preference for grocery shopping at supermarkets and hypermarkets, as well as online retailers, is pushing sales of packaged fresh herbs. Furthermore, market players can expect profitable growth possibilities as demand for organic fresh herbs grows.

Regarding the global herbal medicine market, the projections of the research that was conducted by the Fortune Business Insights revealed that the market will grow from **USD 165.66 billion** in **2022** to **USD 347.50 billion** by **2029**, exhibiting a CAGR of 11.16% during the specific timeframe. The growing preference for traditional medicines by consumers, recent technological advancements in the healthcare sector, and the increasing demand for natural medicines are expected to drive the Herbal Medicine Market over the predicted years. The global COVID-19 pandemic has been unprecedented and staggering, with herbal medicine witnessing higher-than-anticipated demand across all regions and continents compared to pre-pandemic levels. Based on the same analysis, the global market exhibited



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a growth of 8.46% in 2020 as compared to 2019, while in 2021 was valued at USD 151.91 billion.

4.2 Herb sector as a pillar for economic and social sustainability

From an economic perspective, having analyzed the global market size of the fresh herbs and the medicinal herbs, one can understand the importance of the herb sector in the global market.

An estimated 50,000 - 70,000 species of higher plants - 1 in 6 of all species - are used in traditional and modern medicine throughout the world, and many more species are important to the growing market for plant-based cosmetics and other products, representing by far the biggest use of the natural world in terms of number of species (Leaman, 2008).

Today, in many developing and transition countries these species make an essential contribution to health care, providing the only effective medicine for the significant proportions of the population, where other forms of medication are either unavailable or unaffordable. An estimated 80 percent of the population in Africa and Asia rely largely on these plant-based drugs for their health care needs, and the WHO (2008) has estimated that in coming decades a similar percentage of the world population may well rely on plant-based medicines. There is also an interest in using aromatic plants in animal nutrition, in order to replace the use of antibiotics and ionophore anticoccidials (Greathead, 2003).

Many aromatic plants thrive worldwide, with many originating from the Mediterranean area, either in the wild or cultivated (e.g. rosemary, oregano, sage, thymus, peppermint and garlic) (Bampidis, Christodoulou, Christaki, Florou-Paneri, & Spais, 2005; Botsoglou et al., 2009; Christaki, Bonos, Giannenas, & Florou-Paneri, 2012). They include chemical substances such as polyphenols, quinines, flavonols/flavonoids, alkaloids, polypeptides or their oxygen-substituted derivatives (Perumalla & Hettiarachchy, 2011; Negi, 2012; Christaki et al., 2012). Several of these substances can operate synergistically, so their bioactivity is enhanced (Tiwari, 2008). Some bioactive compounds indicate therapeutic value, such as antioxidant and antiseptic activities (Madsen & Bertelsen, 1995; Christaki et al., 2012). As a result, aromatic plants may reduce the risk of cancer or cardiovascular diseases (Duthie & Brown, 2004; Milner, 1994) and may find application as treatments in curing or managing a wide range of ailments such as respiratory diseases and stomach or inflammatory disorders (Kadri et al., 2011; Christaki et al., 2012).

Mediterranean countries are endowed with a wide range of favourable agroclimatic conditions that make them ideal for producing and collecting MAPs. Subsequently, there is an increasing demand for such raw materials around the Mediterranean, which can be explained by the long tradition of the use of plants, the strong interest in natural ingredients, healthy diets, and the need for more traditional products with strong cultural heritage. MAPs are widespread in all Mediterranean countries and are considered an important element of wild flora. These plants have always been employed in domestic preparations as natural remedies, beverages, confectionery and foods. The World Health Organisation has indicated that the majority of world's population in developing countries



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depends directly on MAPs for basic healthcare needs. The importance of the use of MAPs in developed countries is also increasing; more than 25% of the population in the UK consumes herbal medicines regularly, while the corresponding percentage in Germany increases to 90%. Herbal medicines seem to be becoming increasingly popular in most “western” countries. Several areas in the Mediterranean are characterised as being rich in MAP spices, including the Alps and Pyrenees, the Massif Central in France, Greece, and North Africa, while the Mediterranean basin has been recognised as a global biodiversity hotspot.

The Mediterranean, a biodiversity hotspot, is rich in medicinal and aromatic plants covering an extensive area with different environmental conditions. The geographical position of Greece, its geomorphology, the presence of flora of past geological eras and the coexistence and interplay of biotic and non-biotic factors have defined it as a region of high plant diversity and endemism, a fact that also impacts the category of medicinal and aromatic plants (MAPs). The past 30 years there has been a rapid growth of interest in MAPs as a result of the vital contributions these goods make to large numbers of rural communities. At the same time there is a shift within many developing countries from subsistence to commercial usage. MAPs are important factors in sustainable development, environmental protection and public health. In Greece, they are expected to play an important role in the country’s agricultural profile due to quantitative and qualitative advantages.

MAP cultivation can help small-scale farmers strengthen their livelihoods and as a result, greater access to a wider range of assets can be achieved, and a capacity to build these into successful and sustainable activities. This review aims at profiling the current state of MAP cultivation in Greece, as well as their future sustainability prospects.

Nowadays, the world is rapidly developing and population demographics are continuously growing. Consequently, the use of natural available resources is a new provocation and it has become a typical approach, where the environment permits it. It is of high priority to do so in areas that have a favorable climatic conditions (Bogers, Craker, & Lange, 2006), and the Greek area is one favorable place where the aromatic plants are an important natural resource (Lange, 2001; Mateescu, Paun, Popescu, Roata, & Sidoroff, 2014).

Aromatic and medicinal plants are important factors in sustainable development, environmental protection and public health. Since ancient times, medicinal and aromatic plants have had wide applications, and continue to be used fresh, frozen or dry, as well as transfused into oils, extracts and essences, initially for the food, pharmaceutical and cosmetic industries (Miguel et al., 2004; Bogers et al., 2006). Moreover, beekeepers utilize these plants in honey, pollen and bee-glue production during spring. Among MAPs, the more salable species like mint, lemon balm, lavender, chamomile, etc., are cultivated with conventional or sustainable management systems

Medicinal and aromatic plants can help small-scale farmers strengthen their livelihoods directly through income generation from their trade as well as health care provision. With strengthened livelihoods comes greater access to a wider range of assets, and a capacity to



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build these into successful and sustainable activities, thereby reducing vulnerability to poverty in the long term.

4.3 Importance of Medicinal and Aromatic Plants and Sustainable Agriculture in Greece

The geographical position of Greece, its geomorphology, the presence of flora of past geological eras and the coexistence and interplay of biotic and non biotic factors have defined Greece as a country of high plant diversity and endemism (Martinos, Skoufogianni, Stathaki, & Solomou, 2015). This vast diversity is also reflected in MAPs as Greece conveys a long ethnopharmacological tradition (Kantsa, Sotiropoulou, Vaitis, & Petanidou, 2015), partly due to diverse landscape and the numerous mountainous and insular systems, viz. 109 out of the 255 habitat types encountered throughout Europe. MAPs are expected to play an important role in the Greek rural economy and facilitate change in the national agro-food sector as it is still a developing sector. In 2013 MAPs occupied a land span of merely 0.04% of the country's cultivated land (Ministry of Rural Development, pers. comm.).

Nowadays the needs of both producers and consumers are changing dynamically. Common Agricultural Policy (CAP) played an essential role in crop selection throughout the last decades in Greece. Developments in CAP during the period of 2007 to 2013 indirectly influenced the culture and production of aromatic plants in Greece. The two most important developments were the release policy (decoupling) of subsidies from production and their conversion to area subsidies based on historical production (RE.HERB, 2013). As a result a critical number of farmers shifted to growing herbs or legumes or even to non-agricultural activities such as rural tourism, and energy production via photovoltaic systems. The global economic crisis, started at 2008, affects the cultivation in different ways. One of the effects it had was the dramatic increase of unemployment rate especially for people from 15 to 25 years old to the rate of 65% and the consequent shift of many young people to the agricultural sector but to non-conventional crops.

All the factors above somehow seem to facilitate a change in Greek crop selection in which MAPs should reflect an important part of for the following reasons:

- 1) Land allotment in Greece is characterized by small figures, land holdings ranging from 2 to 4.9 ha represented a stunning 75% of agriculturally utilized Greek land in 2010 (Eurostat, 2015). By cultivating MAPs, Greek farmers can be allowed to sustain a livelihood by utilizing few hectares of land which would not otherwise contribute to their income in the case of conventional crops such as tobacco or cotton.
- 2) Greek biodiversity and the Mediterranean climatic conditions are two very favorable factors in the production of indigenous MAPs which will offer a substantial qualitative advantage to Greek herbal products.
- 3) Concerning the climate change, the aromatic and medicinal plants, appears to be of low demand concerning their irrigation and organic cultivation when compared to high maintenance crops. In the new programming framework which provided important actions



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for resilience and adaptation in climate change, aromatic and medicinal herbs, plants and trees cultivation should face significant opportunities to grow.

At this point, we should mention two critical points that will be of great importance regarding the development and utilization of such crops.

1) The technologies used now and in the future, will determine to a large extent the state of production for MAPs. These factors include implementation of R&D programs, the adoption of innovative technologies in the production and the automation of the production. The specific technological improvements could influence the production costs, the product quality and lead to innovation.

2) Government subsidies and motivation should be focused partly on the MAP sector in terms of promoting cultivation, innovation, and processing of medicinal and aromatic plants.

Other than this, an attempt to educate past and future generations of farmers so as to merge old traditional cultivation techniques with the new European phytosanitary standards via the use of innovative technological means should be made.

Conclusively, medicinal and aromatic plants have a vital role in the utilization of the natural wealth and conservation of biodiversity in the state. Also, due to the selective and multifaceted biological activity of essential oils, there exists considerable potential on the use of aromatic plants for novel applications in sustainable agriculture.

Moreover, valuable uses are possible and medicinal and aromatic plant diversity represents attainable new environmentally and economically sustainable opportunities for agricultural areas, which should be the motive to boost further studies on the cultivation of these plants.

Having identified the conquering of SMEs enterprises of Greece's economic acquisition, finding ways towards their empowerment for economic growth and stability seems more than logical. When it comes to the agricultural sector of Greece's economy, even though, as highlighted before, it is not holding the bigger burden, it still holds an important role of economic and social cohesion in Greece. Keeping in mind the role and importance of the agricultural and hence herbal sector, as a sector of economic activity and employment, it is beyond profound that the Agricultural small and medium-sized enterprises (Agri-SMEs) are critical to the development of more inclusive and sustainable value chains. Therefore, tools and measures are needed to be determined, in order to enhance Greece's herbal, agricultural and economic capacity. Among potential tools and measures can be considered the development of agro based, and hence herb based clusters. The following chapter is an endeavor to analyze the significance of cluster development on the basis of available documentary evidence of contribution of clusters in Greece.



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5. Introducing the “Cluster Concept”

5.1 Historic background

The “Cluster Concept” made his first appearance into the world in the early beginnings of 1990. It was introduced with a variety of terms, such as “Groups”, “Gatherings” or “Corporate Partnerships” with the term “Cluster” being the one which was established during the years, up until nowadays. While there were many scientists that attempted to define precisely the debutant term of Cluster, the definition which finally stood as the prevailing and commonly accepted, both from the European Union and from the business world, was the one of Porter, which is dated approximately between 1990 - 1998. According to Porters’ definition, Cluster is conceived as “a geographically interconnected, mutually complementary set of many businesses and cooperating institutions, which share common interests, common goals and aspirations, with a view to promoting innovation and competitiveness, in the long term”. In other words, Cluster refers to a dynamic, multispectral approach, that goes beyond the linear concept of a transaction-oriented value chain and is based on a more integrated and systemic perspective, considering both formal and informal interactions.

5.2 Types of clusters

While the geographical interconnection constitutes an interwoven characteristic of Clusters, their existence is not only limited at local level, with their flourishing being noted in also regional, national and international levels.

When diving into the Business World, Cluster’s existence is considered as given, with the level of their establishment differing from country to country. Excluding that level of their rising, there are two (2) types of Clusters in the Business World, the Horizontal Clusters and the Vertical Clusters with the former being the most established form. The horizontal clusters lie in companies with a common field of activity, while the vertical ones refer to activity in different areas of the production process.

The stages followed during the development process of business clustering are the following:



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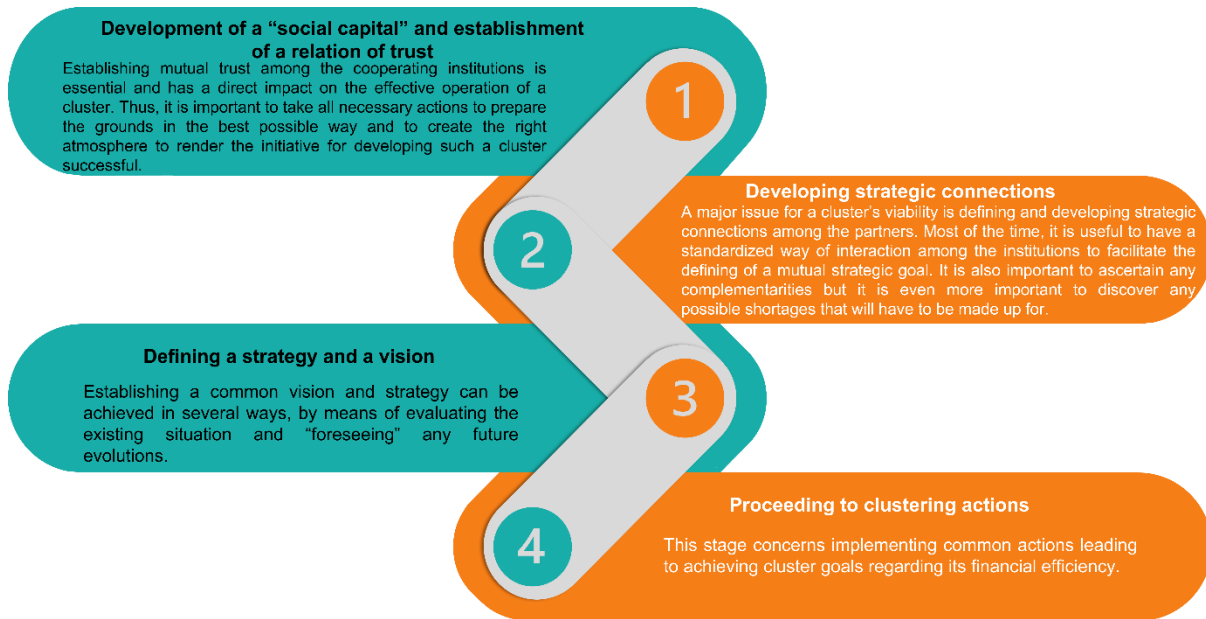


Figure 4: The 4 stages of the development process of business clustering

5.3 Clusters and competitiveness

Clusters influence competition in three ways: increasing static productivity, increasing capacity for innovation and the stimulation of new business formations (M. Porter, 2000).

1. Static Productivity:

- a. **Access to specialized inputs and employees:** companies located within a cluster have access to specialized inputs such as machinery, services and employees that are superior or have lower costs compared to input alternatives from distant locations. The presence of a cluster does not only increase demand for certain inputs but also increases the supply (M. Porter, 2000). Competition of supply increases the quality of the supply of inputs. Access to information and knowledge: knowledge about the market, technical knowledge and specialized knowledge accumulates within a cluster. This can be accessed best and at lowest costs from within the cluster. Also the existence of personal relationships and community ties that arises in clusters fosters trust and stimulates the flow of information. Important knowledge is knowledge about buyer needs; when buyers and sellers are both part of the cluster that information is available. This information benefits everyone that is part of a particular cluster (M. Porter, 2000).
- b. **Complementarities:** a cluster enhances productivity by facilitating complementarities between activities of cluster participants. When a part of a cluster performs badly it negatively influences the performance of the rest of the cluster. Marketing is a form of complementarity; a group of related firms and industries can efficiently work together in joint marketing. It can also enhance the reputation of a certain location or field (M. Porter, 2000).



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- c. **Access to institutions and public goods:** firms can benefit from local public goods such as infrastructure or benefit from locally situated institutions at low costs. Knowledge is a quasipublic good (M. Porter, 2000).
- d. **Incentives and performance measurement:** clusters can give incentives to improve productivity or efficiency of firms; competitiveness is the main incentive. Clusters also facilitate performance measurements; there are opportunities to compare performances with similar firms. For instance: comparing the employee performances of similar firms (M. Porter, 2000).

2. Capacity for innovation:

- a. Firms in clusters have clear information about the buyer's needs because of knowledge and relationships, as mentioned earlier. Cluster participants learn early about technology changes and technical possibilities, so the opportunities for innovation are great. Another advantage for clustering is the possibility to innovate rapidly because firms supplying input are likely located closely.
- b. Competitiveness stimulates innovation; when a firm innovates a rival firm probably cannot stay behind. Firms that are isolated from a cluster are less likely to innovate (M. Porter, 2000).

3. Clusters and new business formation:

Many new businesses are formed within clusters rather than individually in isolated locations. There are a number of reasons why this happens:

- a. Clusters provide incentives for entry of a market because of information about opportunities.
- b. The existence of a cluster itself indicates opportunity.
- c. People working in or near a cluster more easily perceive gaps in products, services or suppliers to fill; these individuals are more likely to start new firms to fill those gaps.
- d. Lower barriers: assets, inputs, services, staff and skills required are often available at the cluster location. The lower barriers do not only apply to new firms but also to existing firms that might relocate to the cluster location. (M. Porter, 2000).



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6. Clusters in Greece

Following the introduction of the Cluster conceptualization, the existing types of clustering schemes and their stages of development and establishment, as well as their possible contribution to the herbal and as a consequence to the agricultural sector, in the above chapter, diving into a few success stories of Clusters in Greece, will lead the way towards identifying best practises, that can be adapted for flourishing and thriving of Clusters in the Greek herbal sector.

In total, 10 Greek Clusters have been identified and studied, in order to discover the key factors for their successful operation. All of the 10 Cluster cases, even though they operate in different fields and their specializations are different, many similarities have been identified such as the structural organization, the mission, vision and goals behind the concept of the establishment of a cluster. One example is that the connectivity among individual enterprises does not only took place for the purpose of achieving competitive advantage on the basis of optimizing a process that creates added value. At the forefront are also demands to include the customer or user in the process of creating new value. The linear sequence of individual stages of the process to create added value is therefore increasingly shifting into an extensive vertical and horizontal network of interconnections among various organizations and individuals that collaborate in the entire added value chain. This allows competitors to develop mutual (inter)connections in individual areas of common interest and to form a network connection in a narrow segment of the process to create new values. More specifically, the 10 Greek Clusters which are coming from the tourism, health and technology sectors are presented below as well as the 7 best practices identified from these clustering schemes.



Figure 5: Success stories of Greek Clusters in multiple sectors

Common borders. Common solutions.



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Figure 6: The 7 best practices identified from Clustering schemes in Greece

Regardless of the fact that not all countries, worldwide, present the same level of establishment and flourishing of Clustering schemes in their Business Worlds, yet this shall not hamper its tangibility of its success, that can be noticed under suitable environment and conditions.

With that being the case between Greece’s Business World and Clusters, meaning an underdeveloped level of establishment and flourishing of Clustering schemes, the market research review identified potentials, in order for Greece engaging into a more developing liaison with Clustering Schemes.

Although the lack of organized business clusters from the Greek economic and business world is a fact, the generally small number of business cluster ventures makes it an excellent source for outlining good practices to adopt.

6.1 Paving the way towards spreading the Cluster to the Herb Sector

Our HEGO project, aiming to contribute to Clusters’ establishment in Greece, attempted to insert the idea of cooperation and networking to each network of stakeholders. More specifically, while identifying the most needed training skills according to farmers and non - farmers stakeholders, when drafting the Deliverable D.T1.5.1 “Final Cross-country Report on Market Research Surveys results”, the consortium found the opportunity to introduce to the stakeholders the idea of finding events, through which they will accomplish upscaling the training needs declared as needed.

In other words, from the findings around the future needs in herb training, in the framework of WP T1 survey, the results highlighted Greece’s needs of training for managerial/commercial skills. Moreover, the most important skills that need to be developed are marketing, trading and cooperating internationally. With all three major training needs of Greek responders being included in the broader category “Training for managerial/ commercial skills”, Greece’s HEGO project team, decided to extend its



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research a bit further, having in mind its goal to promote the Cluster Concept in its stakeholders, and proceeded with examining the willingness of survey's respondents to participate in HEGO Forum conferences and e-Business Portal.

From the following Table, it is established that, almost half of Greek participants are willing to participate in HEGO Forum Conferences and follow e-Business Portal. Responders expect that their participation in HEGO Forum conferences and e-Business Portal will be an opportunity to gain technical knowledge and new ideas.

Willingness to participate	Greece (%)	Moldova (%)	Georgia (%)	Armenia (%)	Total (%)
Extremely unlikely	3,33	2,04	0,00	2,50	1,97
Unlikely	0,00	4,08	0,00	12,50	4,61
Neutral	6,67	10,20	30,30	5,00	12,50
Likely	56,67	32,65	48,48	50,00	45,39
Extremely likely	33,33	51,02	21,21	30,00	35,53

Table 2: Willingness (%) of stakeholders to participate in the HEGO Forum Conferences and e-Business Portal

They view their participation in HEGO Forum Conferences as a means of identification of new markets and an opportunity to share and promote knowledge and ideas by interacting with other participants (Fig. 7).

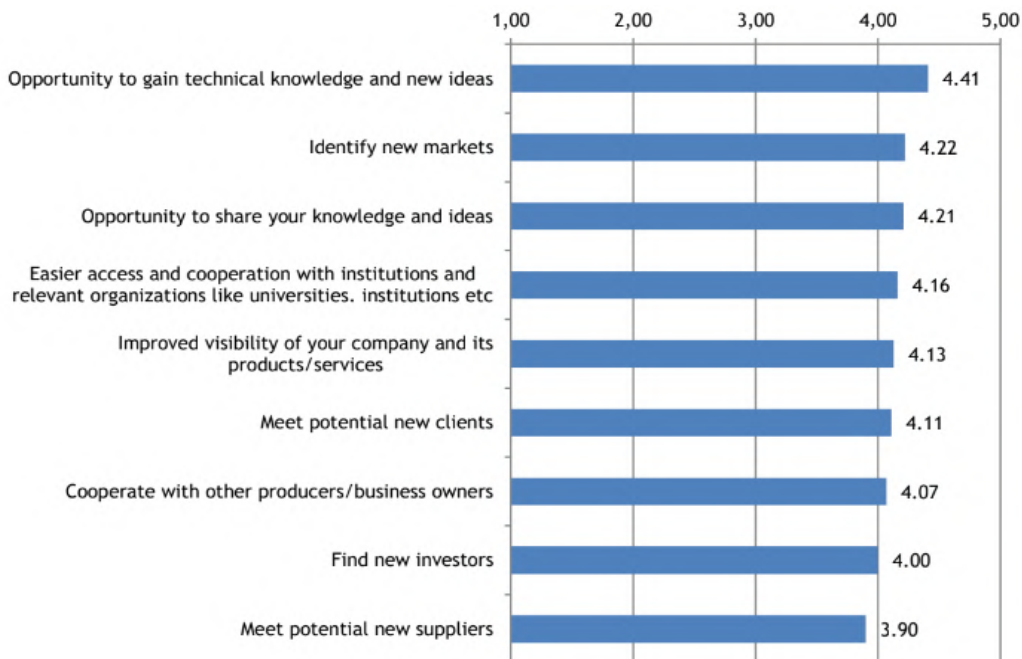


Figure 7: Stakeholders' motivations for participation in HEGO Forum Conferences

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As shown in Table below, almost half of the Greek participants are willing to participate in a cross-border Cluster. Responders expect that their participation in a cross-border Cluster will facilitate their access to new ideas and innovations and their cooperation with other businesses.

Willingness to participate	Greece (%)	Moldova (%)	Georgia (%)	Armenia (%)	Total (%)
Extremely unlikely	6,67	2,04	0,00	2,50	2,63
Unlikely	0,00	2,04	6,06	12,50	5,26
Neutral	6,67	16,33	24,24	7,50	13,82
Likely	53,33	30,61	45,45	52,50	44,08
Extremely likely	33,33	48,98	24,24	25,00	34,21

Table 3: Willingness (%) of stakeholders to participate in a cross-border Cluster

Moreover, they expect that it will reinforce their common participation in exhibitions and trade fairs, training and education initiatives and their negotiating power (Fig.8).

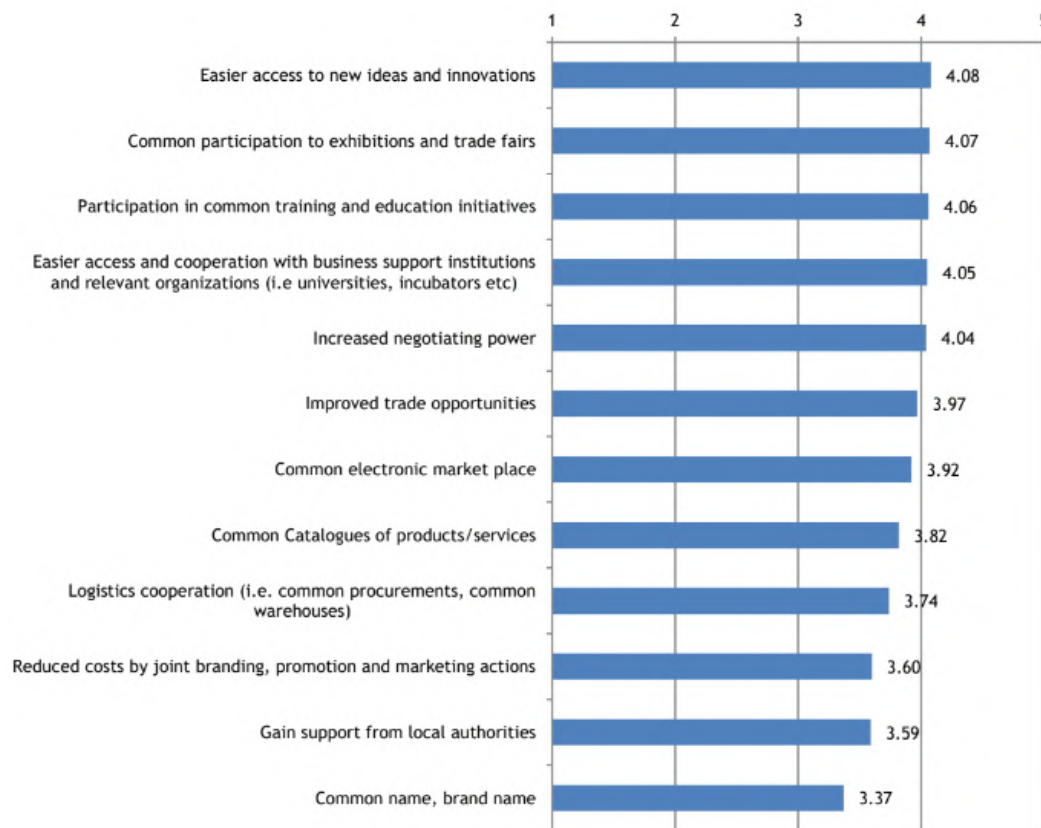


Figure 8: Stakeholders' expectations from a cross-border Cluster



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6.2 SWOT Analysis

Having in mind the positive responses gained from the participants on HEGO’s survey (which was elaborated for the purposes of Deliverable D.T1.5.1 “Final Cross-country Report on Market Research Surveys results”) for their willingness to participate and engage in Clusters, HEGO consortium decided to proceed with the conduction of SWOT Analysis (Strengths, Weakness, Opportunities, Threats), as part of the present deliverable. Conducting a SWOT Analysis for Cluster Development, it is considered as crucial for the capitalization of strengths and opportunities and mitigating risk regarding weaknesses and threats.



Figure 9: SWOT Analysis for Cluster Development in the herb sector

Following the conduction of the SWOT Analysis, an initial identification of the benefits and risks that a Greek SME of the herbal sector can face from engaging into clustering activities and collaborations is presented below. As it is described below, the benefits from which Greek SMEs, aiming to engage into Cluster collaboration, can harvest from, overpass the risks that may occur.

The **benefits** arising for a SME in the agricultural and hence the herb sector, through its participation in a business cluster are the following:

- Establishing a well-known brand name;
- The networking and interconnecting with various local development institutions aiming at creating the necessary supporting infrastructure for matters related to administration, promotion, technology, integration of innovation in the process of production, new product design, etc.;



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- Improving the competitiveness of the enterprises by means of adopting and applying new innovative and productive technologies;
- Common planning and implementing of actions, which could hardly be effectively implemented when acting individually (e.g., advertisement, participation in exhibitions);
- Unification of business operations (e.g., supplies, distribution) and utilization of the arising economies of scale;
- Orientation towards exporting in international markets and especially in the European ones.
- The operation of clusters as a reference point for all enterprises which is characterized by professional administration and technocratic organization. Ability to standardize production and creation of a common quality assurance system.
- Reinforcement of the interconnections among other companies and networks aiming at establishing and utilizing new business ideas.
- Faster and more effective exchange of information and best practices as regards operational issues (suppliers, possible sources of financing).
- Allocation of new investment and new market entrance risk.
- Exchange of experiences and know-how among the enterprises as regards both the organization and the administration level.
- Completion of product variety through the complementarity of the various institutions.
- Facilitation of financing such investments that each individual enterprise would be unable to support on its own.

Moreover, benefits of developing agricultural Clusters may include boosting the farmers' competence by upgrading their skills through training, networking, and accessing relevant information. Further, the SMEs will increase the number of their customers since they will be sharing a common network. SMEs will achieve economic viability through the attainment of 'economies of scale', 'economies of scope', and 'cost efficiency'.

Besides all the above advantages, the participation in a cluster includes also a series of risks for the SMEs, which could gradually reduce their competitiveness:

- The specialization of businesses in a particular field can render them more vulnerable to some external factors and sudden changes of their operational environment.
- Reduction of competitive pressures among the participants and lessening of the need for innovations.
- Stopping being alert and obtaining a feeling of self-sufficiency and security, which in some cases can be quite misleading.



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- An inclination to excessive support to the members of the cluster can lead to abandoning any attempt to create connections with other institutions outside of the cluster.
- Flexibility in decision-making and direction-changing, which characterizes small enterprises, can be lost when the cluster gets bigger.

With the examination of the SWOT around the Clustering Schemes of Greece's Business World and the identification of best practices, HEGO Project aims to constitute the communication funnel between the development of clusters and the business world of Greece and more specifically the businesses engaging with the herb sector.

With this goal in mind, HEGO consortium is proceeding with the Group of Activity T4 "Preparatory Actions for "Black Sea Herb Cluster"" by implementing the AIDA Model, as a means of strategic communication and managerial plan for the diffusion of knowledge and raising awareness around the cluster concept.

6.3 AIDA Model in Theory and Practice

The AIDA Model, which stands for Attention, Interest, Desire, and Action model, is an advertising effect model that identifies the stages that an individual goes through during the process of purchasing a product or service. The AIDA model is commonly used in digital marketing, sales strategies, and public relations campaigns.

The model was developed and introduced to the Business World by the American businessman, E. St. Elmo Lewis, in 1898. The original main purpose was to optimize sales calls, specifically the interaction between seller and buyer concerning the product. However, over the years, each adaptation and establishment proceeded

The AIDA model is based on four individual stages that attract interested parties who are deciding on a product or service.



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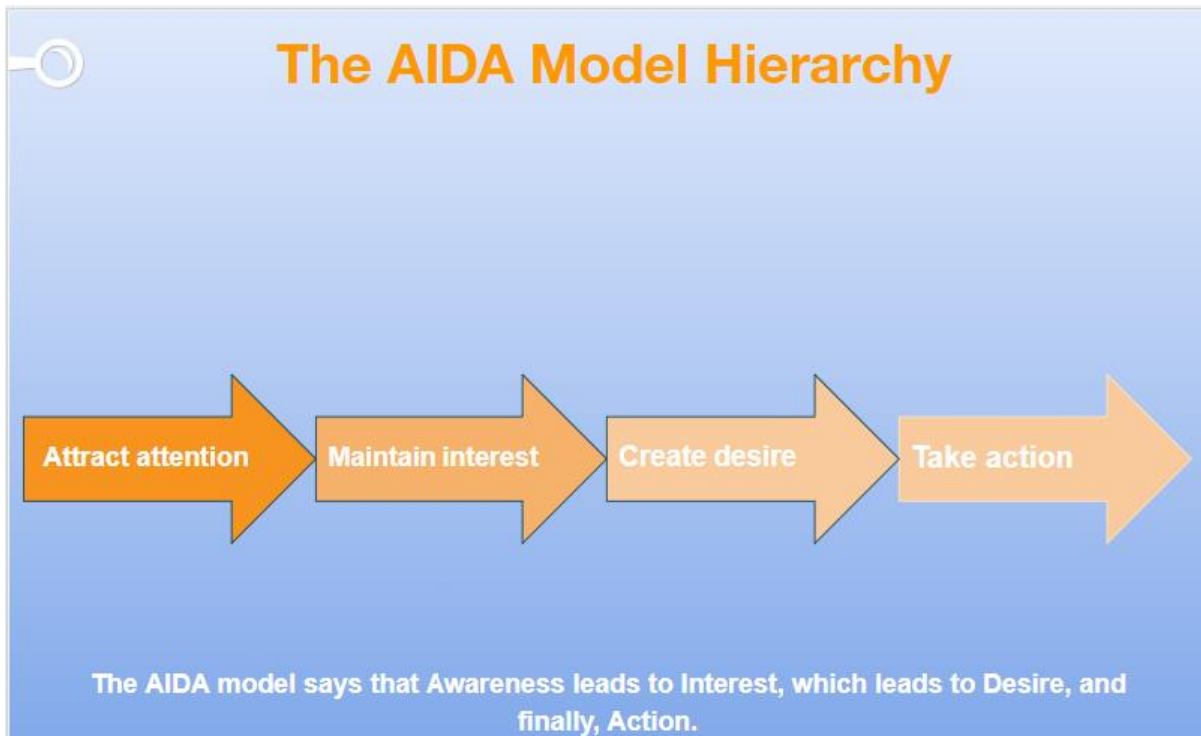


Figure 10: The AIDA Model Hierarchy

1. Attract attention: The product or service must attract the consumer's attention. This is done via the advertising materials. It is a type of "eyecatcher."
2. Maintain interest: In the first phase, the attention of the potential customer is piqued; their interest in the product or service should be aroused.
3. Create desire: If interest in the product or service is aroused, it is the seller's task to persuade the customer that they want to own this product. In the best-case scenario, the advertisement or the product itself creates the desire to purchase.
4. Take action: As soon as the desire to buy is aroused, this must be transferred into an action, that is, the purchase.

HEGO consortium through project's work packages is establishing an AIDA Approach in order to further promote and empower the Cluster Concept in the Business World of Greece to projects' end-users.



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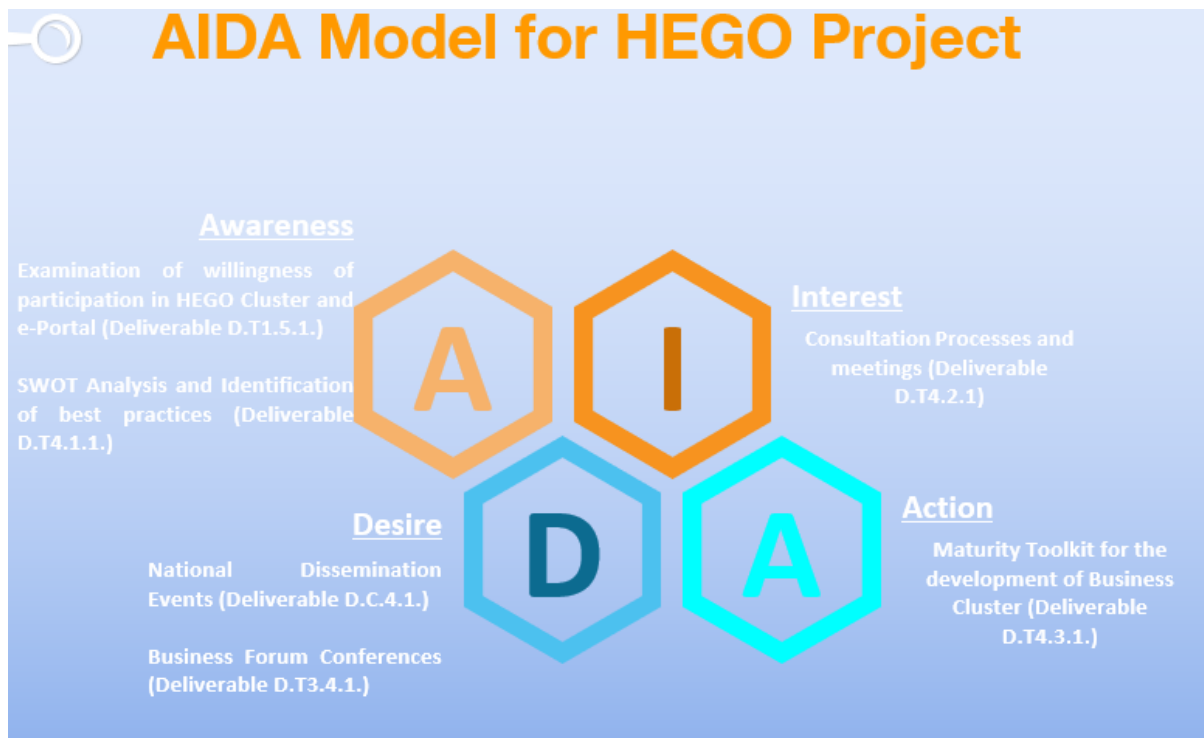


Figure 11: The AIDA Model for HEGO Project

The Figure above imprints the AIDA Model in the HEGO Project. Following AIDA's hierarchy HEGO Project will take measures towards Clusters establishment in the Greek Business World.

More specifically, guided by AIDA's steps:

1. Attention: HEGO project, attracted attention around the Cluster idea in Greece's Business World at the beginning of project's lifecycle. In the framework of WP T1 and more specifically throughout its activities, a questionnaire was elaborated, which included questions to project's target groups referring to their willingness to participate in HEGO Cluster and e-Portal. These questions achieved their goal, meaning attracting attention around the existence of Clusters. Even more, HEGO's consortium gained valuable information from survey respondents of their willingness to participate in. Moreover, in the framework of the present Activity A.T4.1. "Review Report on case studies with clusters" HEGO project raised awareness around the Cluster Conceptualization through the examination of its strengths, weaknesses, opportunities and threats.
2. Maintain interest: Following further empowering of the awareness raised will be achieved through Activity A.T4.2. "Consultation process and discussion on the aims, objectives and structure of the Cluster with stakeholders and end beneficiaries".



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3. Create desire: After the interest around cooperation, networking, creating linkages and hence cluster development will have been established into the stakeholders and end-users, HEGO project will cultivate the desire of participating in such innovation, through the promotion of the competitive advantage and benefits clusters have to offer to their members, during HEGO National Dissemination Events (Activity A.C.4. “Public Events”), as well as HEGO Business Forum Conferences (Activity A.T3.4. “Organization of Conferences of Business Forum in Greece, Armenia and Moldova”).
4. Take action: HEGO project through the Activity AT4.3. “Development of the maturity toolkit for Black Sea Herb Cluster” will assist stakeholders in taking action and actually engage into cooperation and hence clustering schemes creation with the preparation of a Maturity Toolkit for the development of clusters.



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7. Conclusion

Clustering is a recognized strategy to strengthen and consolidate SMEs through promoting interconnectedness, competition, and cooperation. Policymakers take interest in the cluster-based SME development because of the evidence that SMEs may enjoy competitive advantage and economies of scale by sharing and cooperating.

Farmers and agro-SMEs can benefit from participation in agro-based clusters as a well-developed concentration of related agribusiness spurs increased productivity through specialized inputs, access to information, synergies, and access to public goods and more rapid innovation through cooperative research and competitive striving. Also, clusters can contribute to developing national and regional brand identity. Moreover agro-based cluster growth seems to have positive spill-over effects on local and rural development. However, agro-based clusters need to be induced and fostered through public and private entities owing to lack of managerial competence and information among the stakeholders.

Clusters' concept, philosophy, vision and idea constitute an innovative, cost - effective, sustainable solution towards empowering SMEs economic stability, profitability and position into the markets, at National as well as at international level. Case studies of clustering schemes in Greece, which flourished even during the COVID - 19 pandemic, reinforce the reliability and effectiveness of these cooperation schemes. With the tangibility of their success approaching certainty, a cluster approach might be the catalyst which will act as a mitigation measure facing agricultural sectors' uncertainty nature.



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4. Clustering Case in Moldova

1. Introduction

1.1 The Moldova SME sector

SMEs in Moldova play an important role in terms of output and employment. In a consumption-oriented economy, trade dominates and drives the SME sector.

According to the National Bureau of Statistics (NBS), there were around 57.200 enterprises in 2020, 98,6% of which were micro, small, and medium-sized enterprises, which in turn employed 316.800 persons (60,1% of all employees). The definition of micro, small, and medium enterprises is given by the Law on Support to the SME sector and is based on three parameters: number of employees, annual turnover, and total assets.

	Average number of employees	Average annual turnover	Average annual total assets
Micro	Up to 9	Up to MDL 9m	Up to MDL 9m
Small	10 - 49	Up to MDL 25m	Up to MDL 25m
Medium	50 - 249	Up to MDL 50m	Up to MDL 50m

Classification of micro, small and medium enterprises according to Moldovan legislation

According to the NBS, in 2018 the small and medium enterprises sector contributed to the formation of Gross Domestic Product (GDP) in the proportion of 50.2%. Among the economic activities of SMEs that have the majority share in the formation of GDP for the SMEs sector (over 80%) are: internal trade (27.5%), industry (13.6%), agriculture (11.2%), construction (8.5%), transport and storage (5.4%), education, health and social assistance (5.3%), real estate transactions (3.7%), professional, scientific and technical activities (3.6%), information and communications (3.6%), etc.

1.2 The “herbs”/ “herbaceous plants” definition in Moldova

The term “herbs” includes all aromatic medicinal plants, berries, fruits, roots, and seeds. According to the Ministry of Rural Development and Food Industry in the Republic of Moldova, the “Aromatic & Medicinal plants” are considered those which are used in their initial form, or through their secondary products, based in their multiple properties, in therapeutic, as flavourings, in cosmetology, in food, beverages, healthy food products etc. In addition, they constitute the basis of processed products of high added value, such as essential oils or extracts.



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To assure a common understanding of the term, within the HEGO Project - “**herbaceous plants**” means the set of different plant species by appearance, name, habitat, term of existence, which are found in every natural area and on any continent, and includes all medicinal, aromatic, spicy herbaceous plants, tinctorial, decorative, berries, non-wood products of the forest, parts of plants such as roots and seeds. “Herbaceous plants” are considered those plants that are used in their original form, or through their by-products, based on their multiple properties such as: therapeutic, cosmetic, aromatic, oily, tinctorial, food, beverages, healthy food, etc. In addition, they form the basis of high value-added processed products such as essential oils, plant extracts, organic plant products (BIO / ECO), cosmetics, medicines, etc. In the Republic of Moldova, herbaceous plants are regulated by the Law of the Vegetable Kingdom No. 239 of 08.11.2007, which establishes the legal framework in the field of conservation, protection, restoration and use of objects of the vegetable kingdom. The term “Object of the Vegetable Kingdom” includes in itself: the community of spontaneous plants that are naturally found on a territory in the Republic of Moldova; rare, vulnerable and endangered plant species from the Red Book of the Republic of Moldova, as well as the List of plant species with special protection regime; medicinal, food, aromatic, tanning, colouring and ornamental plants of wild flora, whole or in the form of roots, rhizomes, bulbs, stems, branches, bark, flowers, leaves, fruits, seeds and buds and other plants and species of wild flora or parts and products thereof, whether or not live, fresh or semi-processed.

1.3 The herbal sector as a pillar for economic growth

Endowed with fertile soil and moderate climate, bearing the tradition and historical culture developed in the growth, collection and use of herbaceous plants, the Republic of Moldova has a competitive edge in herbs. Being in the South-eastern Europe, between Romania and Ukraine with an area of 3,384,300 ha, the territory of the Republic of Moldova consists of three main Eco-regions of Europe - the mixed forests of Central Europe, the Pontic steppe and the Eastern European forest - steppe. The relief is hilly, with a maximum altitude of 430 meters. Diversity of plant species is quite high throughout the country, there are over 850 species in the forests, about 650 species in meadows, and in the steppes over 600 species. Around 74% of the total area of Republic of Moldova is agricultural land, and almost 90% of it is officially privatized, under various collective farming forms.

In the traditional Moldavian cuisine from ancient times, several plants were used such as: celery, sorrel, marjoram, parsnip, hops, lemon balm, mustard, asparagus, garlic, nettle, sesame, black wormwood, mint, rosehip, marigold, thyme, rosemary, rosehip, mouse tail, horse tail, romance, lavender, etc. From old national tradition, rose flowers were used in the preparation of syrups and jams, and is a good remedy for respiratory diseases, especially in wintertime. This tradition is maintained and preserved in present, as well as rose petal jam presenting a select product, characterizing the gastronomic traditions of the people of the Republic of Moldova. Rose petal jam is included in the National Register of Intangible Cultural Heritage, is a Bio product, made from raw material grown under the Protected



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Geographical Indication (PGI), complying rigorous quality requirements, specific cultivation methods, and using only organic fertilizers. Some herbs were used in households for obtaining technical plants, but which have been forgotten, mainly because they have not adapted to intensive cultivation and have been considered non-profitable. In the present, National Botanical Garden is holding a plant genome of about 11 thousand species, including the following plants: subtropical and tropical plants - 2517 species, flowering plants - 1150; medicinal plants - 300; aromatic plants - 350 species; non-traditional fodder plants - 350 species; woody plants - 2000. The herbarium of the National Botanical Garden is of 185,000 types of herbaceous plants from the spontaneous flora of the Republic of Moldova, as well as from different regions of the Earth.

During the Soviet period, on the territory of the Republic of Moldova were 20 big enterprises specialized in herbaceous plants processing, which were producing about 200 tons of essential oils, annually. The traditional species of cultivated herbs were: rose, mint, lavender, dill, fennel, but there were also fields of crops such as hyssop, thyme, iris, wormwood etc.

In this context, the following industries based on herbaceous plants and crops with commercial value added are continuing to be mostly developed in Moldova:

- Cosmetics and perfumery industry (aromatherapy and production of essential oils);
- Medical and pharmaceutical industry (medicinal products, phytotherapy and pharmaceuticals);
- Food industry (teas and spices, being considered the best natural preservatives, which are considered the best natural preservatives);
- Production of vegetable dyes;
- Production of natural fertilizers, which are used in organic farming;

This sector has a high potential for further growth thanks to the environment and climate conditions, to the opportunities offered by the developments in food retail, cosmetology, medical and pharmaceutical industries, and international markets. At the same time, the signing of the Association Agreement between the European Union (EU) and Moldova in 2014 significantly improved access of Moldovan producers to EU markets. The EU is the country's most important trading partner, attracting almost 70% of Moldovan exports in 2019. In general, the integration of Moldovan companies in global value chains and clusters will allow producers to scale up, strengthen their productivity, and ultimately enhance the sector's contribution to the economic development of Moldova. As the OECD Enterprise Survey¹ shows, Moldovan producers are anxious to integrate into global value chains: 77% of interviewed companies expressed interest in starting or expanding co-operation with retail chains, and 85% indicated an interest in starting to export or further increasing their exports.

¹ <https://www.oecd.org/eurasia/competitiveness-programme/eastern-partners/Promoting-Exports-and-Supply-Chain-Linkages-in-the-Food-Industry-in-the-Republic-of-Moldova-ENG.pdf>



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However, small producers often struggle to integrate into the supply chain of large retailers and to expand in international markets. As the OECD Enterprise Survey highlights, among small-medium sized food processors, less than 50% directly supply supermarkets and more than 40% do not generate any turnover from exports. The reasons for this situation are multi-fold: the overall low competitiveness of smaller producers, concerns about safety standards, limited managerial skills, limited access to financial resources, and lack of dedicated support programmes that obstruct the integration of small-medium herb processors into global value chains.



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2. The regulatory and institutional framework

2.1 The legal and policy framework

Developing SMEs and supporting SMEs' integration into global value chains and clusters is one of the priorities of Moldova's SME policy. Existing initiatives focus both on horizontal reforms (i.e., streamlining regulation or improving business conditions) and on targeted support to the SME sector (i.e. on the abilities of SMEs to reach foreign markets). On the other hand, the herbs sector has a specific regulation to assure the environmental and sustainable growth, collection, and processing activities.

2.1.1 The regulatory framework in the herb sector

✓ **The Land Code Nr. 828/1991**

https://www.legis.md/cautare/getResults?doc_id=111939&lang=ro

The land registry together with the Constitution of the Republic of Moldova and other legislative acts, issued in accordance with the given Code, regulates the land relations, the scope of the use and protection of other natural riches: the subsoil, the forests, the waters, the vegetal and animal kingdom, the atmospheric air, which is regulated by the special legislation in force.

✓ **The Forest Code nr. 887-XIII/1996**

https://www.legis.md/cautare/getResults?doc_id=118482&lang=ro

It aims to regulate the sustainable management of the forest fund through the rational use, regeneration, protection and protection of forests, the maintenance, conservation and improvement of forest biological diversity, the provision of current and future needs of society with forest resources based on their multifunctionality.

✓ **Law nr. 1515/1993 on the protection of the environment**

https://www.legis.md/cautare/getResults?doc_id=112032&lang=ro

The law constitutes the basic legal framework for the elaboration of special normative acts and instructions on special issues in the field of environmental protection.

✓ **Law nr. 1102/1997 on natural resources**

https://www.legis.md/cautare/getResults?doc_id=109389&lang=ro

The law regulates the use of natural resources. It regulates the relations that occur within the use of natural resources such as: objects, phenomena, natural conditions, and other factors, usable in the past, present and future for direct or indirect consumption, which have consumption value and contribute to the creation of material and spiritual goods.

✓ **The law nr. 1538/1998 on the fund of natural areas protected by the state**

https://www.legis.md/cautare/getResults?doc_id=108578&lang=ro

The law establishes the legal bases of creation and functioning of the fund of natural areas protected by the state, its principles, mechanism and mode of conservation,



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- as well as the attributions of central and local public authorities, non-governmental organizations and citizens in this field.
- ✓ **The law on seeds nr.68/2013**
https://www.legis.md/cautare/getResults?doc_id=106318&lang=ro
The law establishes the legal framework on production, processing, quality control and certification, marketing of plant seeds and seedlings.
 - ✓ **The Law nr. 325/2005 on the Red Book of the Republic of Moldova**
https://www.legis.md/cautare/getResults?doc_id=107193&lang=ro
The Red Book is the basis for the elaboration and implementation of programs (action plans) for the protection and restoration of plant and animal species included in it.
 - ✓ **Law nr. 1381/2002 for the ratification of the Cartagena Agreement on Biosafety to the Convention on Biological Biodiversity;**
https://www.legis.md/cautare/getResults?doc_id=2617&lang=ro
The law ratifies the Cartagena Protocol on biosecurity to the Convention on Biological Diversity, concluded in Montreal on January 29, 2000 and signed by the Republic of Moldova in New York on February 14, 2001.
 - ✓ **Law nr. 94/2015 on the accession of the Republic of Moldova to the International Treaty on Plant Genetic Resources for Food and Agriculture;**
https://www.legis.md/cautare/getResults?doc_id=77425&lang=ro
The law regulates the promotion and proper implementation of this treaty. The mission of conservation, exploration, collection, characterization, evaluation, and elaboration of documents on plant genetic resources for food and agriculture.
 - ✓ **The law vegetal kingdom nr. 239/2007**
https://www.legis.md/cautare/getResults?doc_id=107020&lang=ro
The regulatory scope of this law extends to the objects of the vegetal kingdom that grow in natural conditions, as well as to the objects of the vegetal kingdom maintained in culture conditions to regenerate and preserve the genetic fund.
 - ✓ **Law nr. 612/1999 on plant protection**
<http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=311699>
The legislation on plant protection regulates the relations between the state and the economic agents in the field, establishes a unitary legal, economic and organizational system of plant protection in order to prevent the mass spread of pests, diseases and weeds, avoid the losses of the harvest and obtain an ecologically pure production.
 - ✓ **Law nr. 105/2005 on botanical gardens**
https://www.legis.md/cautare/getResults?doc_id=26870&lang=ro
This law regulates the legal relations related to the creation and functioning of botanical gardens, establishes the principles, mechanism and manner of their functioning and management, of protection, conservation, and rational use of the diversity of the vegetal world.
 - ✓ **Law nr. 1041/2000 for afforestation improvement of degraded land**
https://www.legis.md/cautare/getResults?doc_id=64408&lang=ro



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- The provisions of this law shall be reflected on the degraded lands, regardless of the type of property, which can be improved by afforestation works to protect the soil, restore the hydrological balance and improve the environmental conditions.
- ✓ **Law nr. 115/2005 on organic agri-food production**
https://www.legis.md/cautare/getResults?doc_id=26873&lang=ro
This law regulates the social relations related to the obtaining of ecological agro-food products without the use of synthetic chemical substances, as well as the sale of ecological products of vegetal and animal origin.
 - ✓ **Government Decision nr. 1203/1998 on the creation of the Center for Vegetal Resources in the Republic of Moldova**
https://www.legis.md/cautare/getResults?doc_id=46182&lang=ro
Republican research, information and coordination institution with the purpose of conservation of the autochthonous genetic fund of the crop plants, efficient mobilization of the world genetic resources in the national economy, ensuring the food security.
 - ✓ **Government Decision nr. ANRE Alliance of No 782/2000 for the approval of the framework regulations of national parks, natural monuments, resource reserves and biosphere reserves**
<http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=304680>
The national parks represent one of the categories of the natural areas protected by the state, which includes representative natural spaces with various geographical landscapes, objects and natural complexes, a wide diversity of native floristic and faunal species.
 - ✓ **Government Decision no. 434/2010 on the approval of the Technical Regulation "Edible vegetable oils"**
The technical regulation "Edible vegetable oils" lays down minimum quality requirements for the marketing of vegetable oils for foodstuffs, which are intended for human consumption, from both domestic and imported production.
 - ✓ **Framework regulation on nature reserves**
https://www.legis.md/cautare/getResults?doc_id=73203&lang=ro
The framework regulation on areas with multifunctional management establishes the organization and functioning of areas with multifunctional management.
 - ✓ **Framework regulation on the botanical garden.**
https://www.legis.md/cautare/getResults?doc_id=45995&lang=ro
establishes the organization and functioning of botanical gardens.

2.1.2 Regulatory framework for SME policy

Moldova has developed a well-structured institutional and regulatory framework containing all the main building blocks of a proactive SME policy. Progress since the 2016 has been moderate, with more marked improvements in the area of regulatory reform and regulatory impact analysis (RIA) application. Moldova has broadly aligned its SME policy with the guidelines set by the European Union's Small Business Act for Europe (SBA). The country's



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SME definition, reviewed in 2016, follows on the EU definition. Its SME strategy, covering the 2012-2020 period was designed according to the EU SBA framework, and the principles/pillars are taken into consideration within the upcoming period. The policy approach is mainly horizontal, placing a particular emphasis on improving the business climate and reducing administrative burdens, encouraging entrepreneurship (particularly among women and in the less developed area of the country) and improving access to finance for SMEs. The SME development strategy is aligned with the country's mid- and long-term development strategies, "Moldova 2020" and the upcoming "Moldova 2030". The Ministry of Economy is in charge of SME policy and supervises the overall implementation of the strategy, while ODIMM, the national SME Development Agency, is responsible for the implementation of most of the planned actions, according to bi-annual action plans. Regulatory reform and the reduction of administrative burdens have been a high priority for the government. Moldova was one of the first countries to introduce the regulatory guillotine process and a number of rounds have taken place, starting from a strictly regulated business environment and having to deal with a complex, inefficient and often corrupted inspection system. Overall, those actions have produced a number of tangible results.²

At the same time, the reference legal framework for SME and clustering development are the following:

- ✓ **Law No. 179 /2016 on small and medium-sized enterprises**
https://www.legis.md/cautare/getResults?doc_id=120932&lang=ro#
The law defines the framework for the SME sector development, as well as the clusters. It also stipulates that cluster initiatives will be supported through "State Programs to support the development of the SME sector" through a complex of activities, aimed at achieving a well-determined objective within the state policy on stimulating the development of micro, small and medium-sized enterprises, financed from budgetary financial means, including from foreign donations. At the same time, to strengthen the technological capacity of small and medium-sized enterprises and increase their involvement in international markets, the competent authorities will facilitate the cooperation between SMEs both with large companies and with other relevant key actors.
- ✓ **Governmental Decision no. 614/2013 on the Concept of clusterial development of the industrial sector of the Republic of Moldova**
https://www.legis.md/cautare/getResults?doc_id=5566&lang=ro
The present concept determines the necessity and possibility of implementation and development of a mechanism of association of economic agents, in the form of a cluster, for the efficient and competitive development of the industrial branches of

² <https://www.oecd-ilibrary.org/docserver/d1afa5b8-en.pdf?expires=1636202094&id=id&accname=guest&checksum=61835B9FD553EFE5B55ED09C12602707>



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the country's economy. It defines the main objectives, activities and elements of clusterial development.

2.2 The institutional framework

The cluster approach goes beyond the linear concept of a transaction-oriented value chain and is based on a more integrated and systemic perspective, considering both formal and informal interactions.

2.2.1 Institutions in charge of clustering related policy

Thus, at the level of government policy in the development of cluster initiatives, the following ministries have a key role in this regard:

- ✓ **Ministry of Economy** - key responsible for the overall development of policies in the field of entrepreneurship, including the development of SMEs and clusters
- ✓ **Minister of Agriculture and Food Industry** - responsible for development policies in agriculture and food industry
- ✓ **Ministry of Health** - responsible for health policy development
- ✓ **Minister of Infrastructure and Regional Development** - responsible for regional development policies and assurance of the necessary infrastructure
- ✓ **Ministry of Culture** - responsible for the development of policies in the field of culture and tourism
- ✓ **Other ministries** - responsible for policies complementary to the development of the business environment and the implementation of clustering policies, which have various responsibilities and tasks.

2.2.2 Supporting agencies and institutions

In addition, at all stages of the process of elaboration and implementation of cluster and herb policy, as central institutions to support the government's clustering policy are (or have the potential to be involved) other supporting agencies/institutions:

- ✓ **The Organization for the Development of the Small and Medium Enterprises Sector in Moldova (ODIMM)** - can provide support for cluster initiatives at all stages of training, by providing consultative, training and financial support assistance, within the development programs of SMEs and clusters.



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- ✓ **The agency for attracting investments** - can ensure the promotion of cluster brands and domestic companies, as well as facilitate the attraction of investors in order to develop them.
- ✓ **Institute of Economy, Finance and Statistics (IEFS)** - can provide scientific-methodological support in the process of cluster policy development and development.
- ✓ **National Agency for Research and Development (ANCD)** - can provide support for the innovative development of clusters.
- ✓ **Universities, higher education institutions and dual education institutions, etc. training institutions** - can provide special research and training of professional staff considering the requirements of the market and of the members of the clusters.
- ✓ **Regional Development Agencies** - can ensure the creation of the communication network with the representatives of the business environment as well as will carry out the development policy at regional level.
- ✓ **Chambers of commerce and industry, profile associations, business incubators** - can facilitate connections with the business environment and promote the concept of clustering.
- ✓ **Moldsilva Agency** - Ensures the implementation of the state policy in the field of forestry and genetics for the purpose of sustainable development of the forestry sector, ensuring the protection and protection of flora and fauna, maintaining, and preserving the biodiversity of the Republic of Moldova.
- ✓ **State Ecological Inspectorate** - acts at district level to enforce environmental legislation.
- ✓ **National Agency for Food Safety and the Plant Protection Directorate** - are responsible for the elaboration of proposals on modification, updating of the legal framework in the field of plant protection; Coordinates the development and implementation of pest and plant protection products monitoring programs; international standards, specific requirements in the field concerned; Organizes plant protection activities, including phytosanitary quarantine, according to unitary concepts to ensure the health of cultivated plants, forests, pastures, natural meadows and other forms of useful vegetation, as well as of stored agricultural products; Supervises phytosanitary measures to control harmful organisms of plants and plant products; Regulation and supervision of the control process and phytosanitary certification of plant production for export.
- ✓ **Institute of Genetics Physiology and Plant Protection** - is managing the genetics, physiology, protection, and improvement of plants. It is responsible for the completion, complex assessment, and conservation, as well as for the development



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- of harmless ecological means for the protection of plants from diseases, pests, and processes of their application in organic and conventional agriculture.
- ✓ **Research Institute for Field Crops "Selection"** - is responsible for the development of sustainable agriculture systems, including organic. Improving the cultivation technologies of field crops in terms of reducing expenditure from non-renewable energy sources and their derivatives. Long-term experiments are carried out on rotations, permanent crops, various systems of work, fertilization and irrigation of the soil in the crop rotation. Research on the transition to a new system of organic agriculture in the Republic of Moldova.

2.2.3 Clustering and association examples in herb sector from Moldova

The framework regulating the concept of "Cluster" in the Republic of Moldova is so young that there are no specific legislative regulations. However, there is a modest number of Clusters as well as trends to implement new collaboration methodologies institutionalizing the cluster concept. Thus, the following "relevant" initiatives for the herb sector from Moldova should be highlight:

- ✓ *The cross-border organic agriculture cluster RO-MD-UA "BIO-DANUBIUS", created in 2017 to promote organic agriculture, through the association of bio producers and local authorities from Ismail, Ukraine and Cahul, Moldova.*
- ✓ *INAGRO cluster in the field of ecology and intensive agriculture, created in 2008, through the association of 4 partners, at the proposal of which the Scientific-Technological Park "INAGRO" was created.*
- ✓ *A clustering initiative that is at the emerging stage is the segment "baciferous breeders" in the Ungheni region was created.*

Other relevant association examples in the herb sectors are:

- ✓ **The Association of berries producers "Berries of Moldova"** - it brings together crop producers (of berries), which were not previously grown on an industrial scale. The association has over 300 members, of which 70 are entrepreneurs-producers of raw materials and was motivated by the common impediments encountered during a decade of activity.
- ✓ **The Association of Lavender Growers and Processors of Moldova** - has 36 members and is a collaboration in the sector of medicinal, aromatic, essential plants, and the production of plant products with commercial added value.



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3. Defining the cluster development needs and the path for the cluster conceptualization

3.1 Defining the clusters

Currently, in the European Union and in general in the world clusters are considered not only concentrations of companies, but also of authorities involved and R&D entities. This model of broad cooperation is called **TRIPLE-HELIX**. Thus, the definition of clusters "has widened" from mere "geographical concentrations" to "geographical cooperation between the 3 key actors' groups: firms, public authorities and R&D-innovation organizations.

At the same time, in many countries and regions, where these three actors have little experience and major difficulties in initiating and maintaining a pro-active level of cooperation and collective guidance of activities based on an assumed common vision and plan. For such situations, an **alternative model** was developed and promoted - "**FOURCLOVER/FOUR-LEAF CLOVER**", which is distinguished by the addition of an external facilitator (catalyst organization) represented by a technology transfer and innovation center, chamber of commerce, consulting company or local / regional public administration entity.

The economic success of a region depends on its ability to create favorable conditions for the private sector to develop profitable businesses. This ability of regional economies to create favorable conditions for business development is called regional competitiveness. In other words, the strengthening of regional competitiveness factors is the foundation of interventions to promote regional economic development. In this context, one of the basic tools currently used to stimulate the factors of regional competitiveness and smart economic specialization is the interventions for the development and consolidation of **CLUSTERS**.

In the specialized literature, in parallel with the term "cluster" (of Anglo-Saxon origin) can be found the parallel use of some synonymous terms or with certain specific features, including:

- ≈ Industrial District (Italian term)
- ≈ Competitiveness Pole (French term)
- ≈ Business Congestion
- ≈ Industrial agglomeration

There are multiple analyses and studies that prove an economic regularity, according to which small and medium-sized enterprises (hereinafter - SMEs) become much more competitive and dynamic when they operate in a region where many other companies in the same economic field operate and with which they form a common ecosystem. And conversely, as a rule, firms lose competitiveness, when they are in a territory where there are no other firms and institutions in their field of activity.



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✓ **The definition of clusters by the European Union:**

Clusters represent groups of independent companies (innovative start-ups, SMEs) and research organizations, which activate in a certain field and in a certain region in order to stimulate innovative activities, by promoting intensive interactions, access to common facilities, exchanges of experience and knowledge and by contributing to technology transfer, networking and information dissemination.

✓ **Definition of clusters by the United Nations:**

Clusters represent geographical concentrations of interconnected enterprises and institutions, which have to face similar challenges and opportunities.

Clarification to avoid confusion of interpretation:

Each cluster is unique and requires an individual approach, there are dozens of types of clusters, which differ radically from each other. Respectively, the "conceptualization" of each individual cluster must be a separate analysis exercise. This is more so because depending on the type of cluster, development support intervention policies will also be conceptualized, which can vary significantly from one type of cluster to another. In other words, understanding the diversity of possible cluster forms is very important to avoid confusion and misinterpretation in the context of discussions and cooperation between the different actors involved in the process.

3.2 Types of clusters

Most clusters in the world have emerged and are developing in an organic way, under the influence of *the* "invisible hand" of the market". Respectively, most of the clusters continue to develop on the same "organic" path, without a formalized development plan, without being organized institutionally and without having a common management entity.

However, international experience shows that clusters develop much better, when there is an assumed common plan and a common management organization to guide collective actions. Moreover, in the context in which the authorities initiate certain support programs for the development of clusters, it is very important to have an associative structure for dialogue and interaction. That is why, in the context of cluster support policies and interventions, a very important aspect that must be considered at a development phase, following the stakeholders assessment and willingness to cooperate is the INSTITUTIONALISATION OF CLUSTERS.

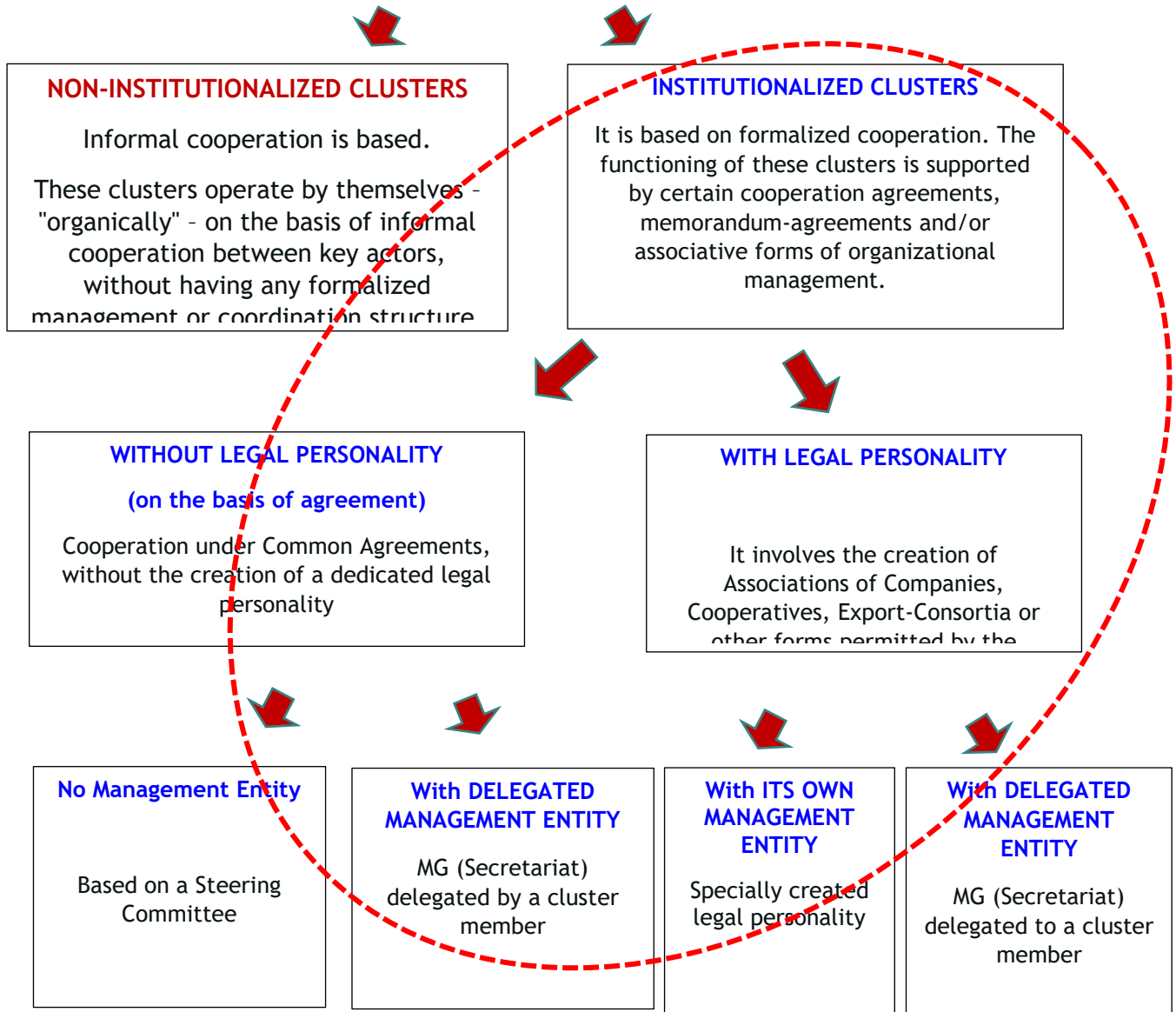
In this regard, there are two large categories of clusters:

CLUSTERS

Common borders. Common solutions.



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3.3 The HEGO market research findings - needs in the "Networking and establishing trade linkages" sphere

As a result of the research activity conducted in 2021 in the HEGO project³ in the herbaceous plants sector and based on the survey among the sector target group from the Republic of Moldova regarding the willingness and readiness in participation or association in a specialized Cluster, a number of needs of the actors in this field were found, being necessary an overall approach to the sector of growth, production promotion and

³ <https://hego-project.com/>

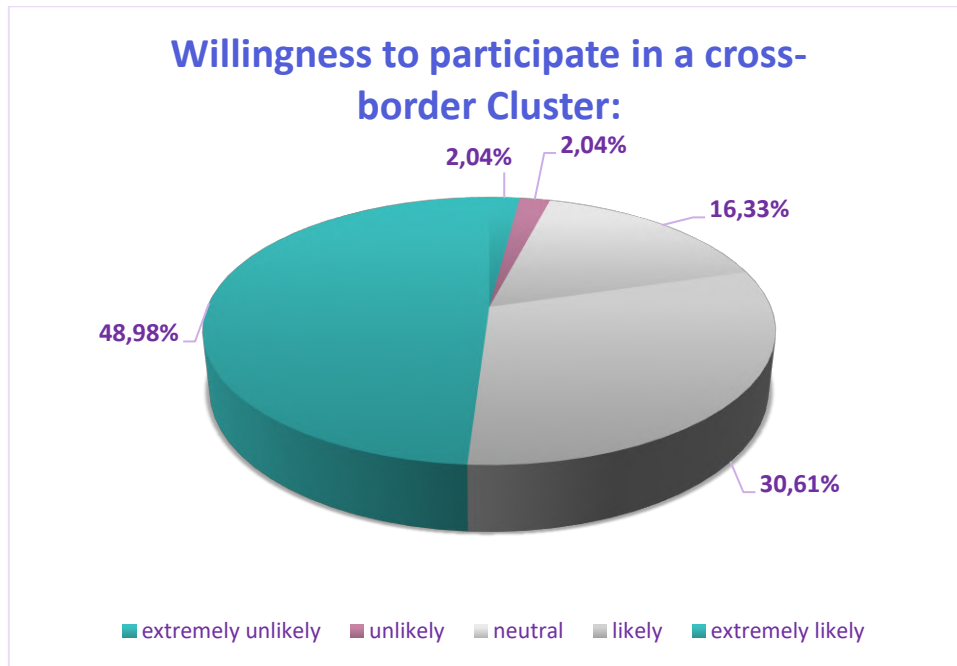


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marketing of plants and plant products, in order to remove gaps and barriers in the development of the sector.

The below tables showcase the interest shown by the target group in participating in a Cluster in the herbaceous plant sector and in the conferences in the field:



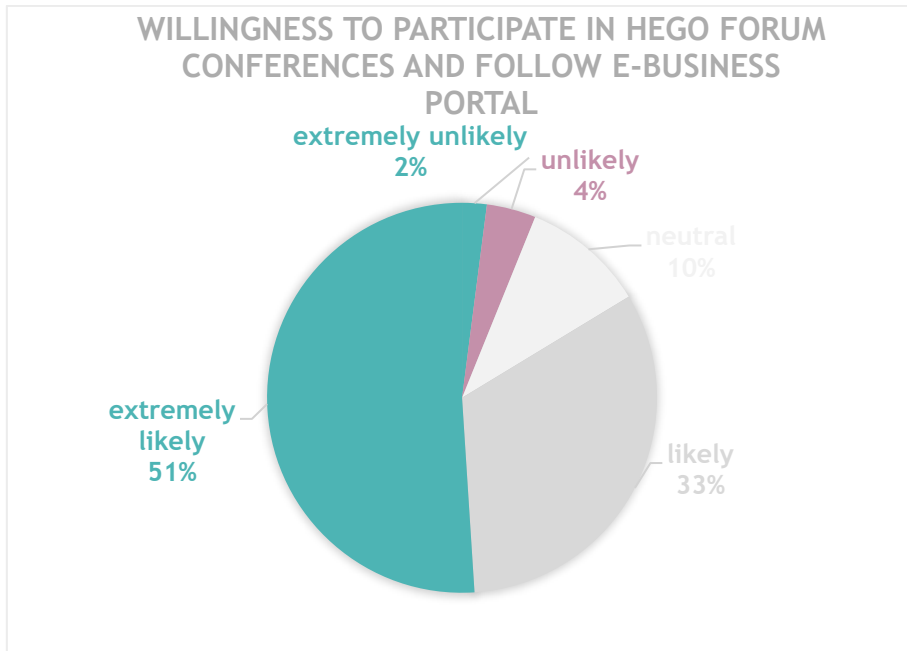
By participating in a Cross-border Cluster, the HEGO target group from the Republic of Moldova, might pursue the following opportunities:

- Increasing the bargaining power;
- Joint participation in trade shows and fairs;
- Participation in joint training and education initiatives in the herbaceous sector;
- Common catalogues of products /services;
- Common online market;
- Improved trade opportunities;
- Easier access and cooperation with business support institutions and organisations relevant to the herbaceous sector (universities, incubators, research centres, etc.).

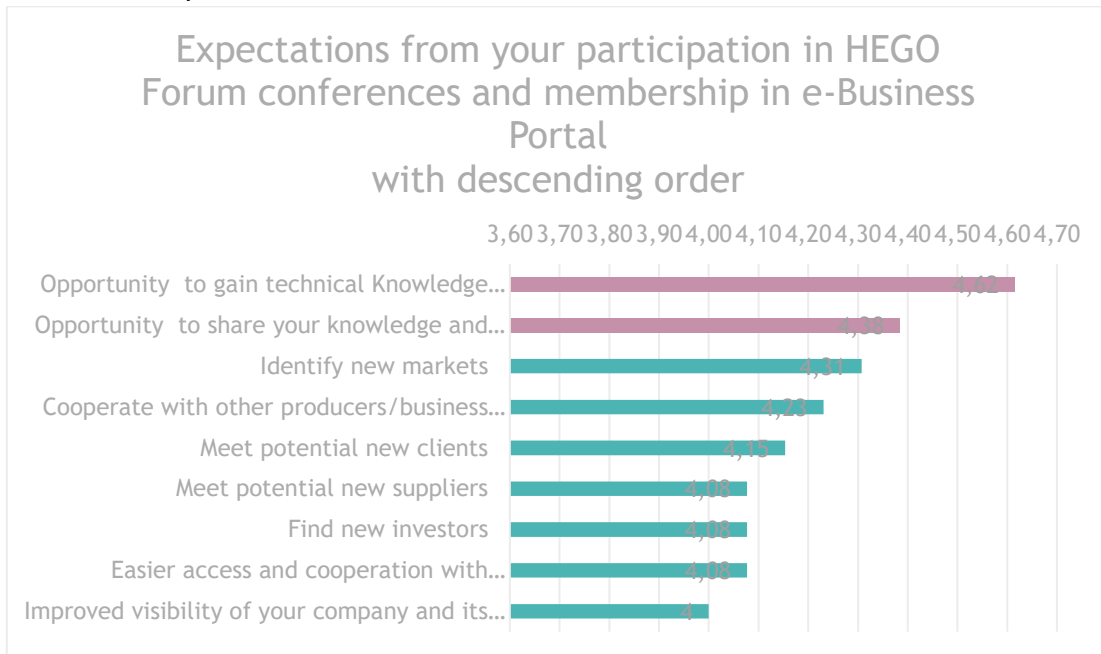
Also, the target group mentioned other important expectations of the herbaceous sector, but due to the lack of knowledge and lack of experience, entrepreneurs in the field are not aware of what needs, skills and opportunities they would need for the modernization of the sector of growth, production, promotion and marketing of plants and high commercial plant products.



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- The expectations of the target group from the participation in the Clusters, conferences of the HEGO Forum and the HEGO e-Business Portal, from the herbaceous plant sector / producers, companies, etc.



The target group from the Republic of Moldova shows a high interest in participating in international conferences, especially the events of the HEGO Forum, and has high expectations from being members of the e-Business portal, where they will be able to interact with other companies and producers of medicinal plant products. Thus, the following needs and expectations were outlined, in order to modernize the local enterprises:



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- ✓ The possibility to acquire new technical knowledge and ideas;
- ✓ The opportunity to share the knowledge of the ideas and experience gained with other entrepreneurs from the Black Sea Basin countries;
- ✓ Identification of new outlets;
- ✓ Regarding the participation in a cross-border cluster, 49% of the respondents would like to participate in a cross-border cluster, 39% of the respondents - are interested, and 16% of the respondents at the time of the survey provided a neutral response.



Among the most obvious expectations of entrepreneurs, the following were highlighted:

- Increased bargaining power;
- Joint participation in specialized trade exhibitions and fairs;
- Joint participation in trainings in the field, and in other education initiatives;
- Presentation of products through common catalogues of products and services;
- Common electronic market.

Most enterprises operating in the sector of growth, production, promotion of herbaceous plants and plant products, do not have relevant experience and cooperation skills in international markets. Many entrepreneurs face a number of difficulties and gaps in the promotion of their products and in international trade procedures. In this context, most producers are forced to make their products obtained only on the local market, in a small quantity and at a lower price compared to the opportunities offered by foreign markets. Most companies have experienced a low or even faulty level of communication and interaction with national and local authorities, encountering barriers in understanding the legislation in the field, as well as difficult procedures in the process of registration and certification of products.



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It is worth mentioning that the majority of the participants in the research and analysis survey of the herbaceous plant sector, are aware of the importance of cross-border cooperation in the herbaceous plant sector, and have shown a high degree of interest in order to develop their businesses, to promote and develop trade links, as well as to meet international quality standards, which will influence to improve the commercial value of herbaceous plants and plant products, and will offer the possibility of marketing them on international markets.

Analysing the needs and expectations of the respondents to the questionnaire, it was found that entrepreneurs from the Republic of Moldova do not have enough knowledge on the formation of managerial, commercial and marketing skills in the field, the procedures for the certification of plant products and the quality requirements on the international markets for plant products. Most survey respondents lack practical knowledge and skills to develop elements that contribute to improving the commercial value of plant products. In this context it is appropriate to build knowledge on:

- Innovations in marketing and trading in foreign markets with herbaceous plants;
- The skills of the global review of the supply and demand of herbaceous plants, which directly influences the cost of products;
- Improving the visibility of products and their more detailed presentation;
- Cooperative power - as an important element in negotiating in the markets with plant products;
- Traceability of products from herbaceous slopes;
- Reducing the number of intermediaries involved in the marketing of products;
- The purchase of modern and cost-effective equipment;

As regards participation in a cross-border cluster, respondents showed interest in the benefits that a cluster could offer, but most of them require entrepreneurial initiation and training to:

- Development of interaction skills in electronic plant markets;
- Joint public procurement;
- Cooperation in the field of logistics;
- Conduct joint branding and promotion actions such as "common name" / "common brand" for herbal products.



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3.4 The SWOT analysis for cluster development

Based on the survey among stakeholders from the herb sector, as well as on the frameworks in Moldova, the following challenges and opportunities were identified:

<i>Strengths</i>	<i>Advantages</i>
<ul style="list-style-type: none"> • Traditions and historical experience (outstanding results at regional level/former Soviet space) in the cultivation of herbaceous plants and activities related to the herbaceous plant branch and crops with added commercial value; • The Republic of Moldova has soils and climatic conditions favorable for the extensive cultivation of herbaceous plants and crops with added commercial value; • Logistical advantages due to the geographical location close to the European Union markets, as well as the CIS countries; • Moldova has a liberalized trade regime with the E.U., Turkey, South-Eastern Europe, CIS countries; • Increased interest shown by international producers for the ecological raw material grown in the Republic of Moldova. 	<ul style="list-style-type: none"> • The continuous increase in global demand for natural food, herbaceous and medicinal plants, seeds and natural essential oils; • Opening up to new external markets, in particular overseas markets, in Asia and the Middle East; • Access routes to the Giurgiulesti International Port, as well as the geographical proximity of the European Union; • The Republic of Moldova being located in an area where the maximum summer temperature reaches + 40 ° C with increased dry air, and the minimum winter temperature is -32.7 ° with a small amount of snow cover, it is perfect for the construction of nurseries and acclimatization of a large number of plants, providing the possibility of adaptation and survival in natural conditions. • The growing interest of the entrepreneurial environment in the development of business in the sector of herbaceous plants and crops with added commercial value. • The growing trend of shift to recyclable or biodegradable types of packaging.
<i>Weaknesses</i>	<i>Threats</i>
<ul style="list-style-type: none"> • Limited access to innovation and development; • The lack of specific programs and strategies to promote the field of herb sector in the Republic of Moldova; • Land fragmentation. Currently, as a result of land fragmentation in the Republic, some entrepreneurs have difficulty in organizing and strengthening them as private property; 	<ul style="list-style-type: none"> • Climate change reducing water resources for irrigation and unfair management of cross-border waters • Lack/ insufficiency of support and entrepreneurial training in the herbaceous branch. • Minimum marketing, branding and promotion capabilities on foreign markets of domestic products based on herbaceous.



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<ul style="list-style-type: none"> • Limited access to aquatic resources, or lack of irrigation systems; • Difficulties in continuously insuring with skilled labor; • Insufficient development of the production infrastructure according to modern standards and technologies, which is practically non-existent in our country (underdeveloped infrastructure: field equipment, post-harvest warehouses, sorting and packaging lines, modern greenhouses; packaging); • Difficulties in accessing credit and attracting investment in the herbaceous plant sector and plant products with commercial added value; • Limited cooperation between producers in the herbaceous plant and plant products sector with high value. These situations are rooted mainly due to historical factors, the lack of communication platforms regarding this sector, but also due to the lack of legal and financial incentives; • The lack of "sample models" of successful producer groups, which would stimulate the association of producers of herbaceous plants and plant products with added commercial value from the Republic of Moldova. 	<ul style="list-style-type: none"> • Experience and practice of entrepreneurs in the field of herbaceous exports reduced to a minimum. This lacuna leads to the sale of high-quality raw materials at a reduced price, compared to the average on the market. Thus, the export of herbaceous products is carried out by intermediary companies from Romania and Bulgaria, which record the profit, and domestic enterprises, which collect the plants in the most frequent cases, register financial losses (budget deficit). • Insufficient state assistance to facilitate access to international markets. • Administrative barriers and incidences of corruption in the procedure for obtaining the appropriate documents of origin and phytosanitary.
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3.5 Black Sea Herbs Cluster conceptualization/ initiation phase

1. Review of the clustering potential of the Republic of Moldova

The evaluation will be carried out through the following actions:

- Review and evaluation of the relevant international experience in promoting clustering in Moldova (in particular the experience of the EU and Romania);
- Identification of the most relevant clusters with a similar field of activity abroad for comparative analysis, networks and exchange of experience in the field;
- Review and evaluation of previous experiences in Moldova in the field of cluster development.

Based on national experiences and evaluated international models viable for the Republic of Moldova, the necessary actions for generating clusters will be outlined and a Report will



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be developed that will form the basis of the conceptualization and development of clusters in the herbaceous plant and plant products sector in the Republic of Moldova. The report will include the following elements:

- ✓ International experience and cluster models relevant in promoting the clustering initiative in the Republic of Moldova;
- ✓ List of potential similar clusters in the EU and Romania that will be taken into account in the cluster creation process in Moldova;
- ✓ The framework algorithm in supporting the development of clusters (with special attention to the dilemmas of legal institutionalization);
- ✓ Mapping clustering potential and cluster initiatives in Moldova.

2. *Conduct a process of consultation and evaluation of key actors to identify and develop clustering initiatives at national level.*

- Promoting the cluster initiative among key actors and potential members;
- Identification of ca. 30-60 potential members of the cluster (SMEs, business support associations, public institutions, research and development institutions, etc.);
- Conduct consultations at national level with entrepreneurs, institutions, and organisations active in the herbaceous plant growing sector and the production of plant products, with a view to creating a cluster in the herbaceous plant sector. Evaluation of the experience of the target group and of the perceptions regarding the development of a cluster in the field.
- Assess the availability and motivation of key actors to engage in the creation of a cluster in the herbaceous plant sector.

Following the consultation process, the Report on consultation process will be developed, which will provide a clear picture of the sectors with premises for the creation of clusters, and the identification of clustering/support initiatives for the business environment in the herbaceous plant sector.

3. *Identifying cluster initiatives / Cluster mapping*

- Establishing the typology of the expected cluster;
- Mapping and showcasing the geographical representation of the cluster members;
- Identifying and defining the products / services created / products within the cluster;
- Establishing the challenges and opportunities offered within the cluster;
- Organizing information sessions and exchanging experiences for the purpose of developing the Cluster.

4. *Development of the Maturity toolkit for the Black sea Her cluster, as a set of tools and proposals on the creation and functioning of the cluster in the herbaceous plant sector in the region*

- Establishing the typology of the expected cluster in the Black Sea Region;



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- Geographical representation of the cluster members in the Black Sea Region;
- Products / services created / products within the cluster in the Black Sea Region;
- Establishing the challenges and opportunities offered within the cluster in the Black Sea Region;
- Defining the key commitments of each member in the cluster and the relationship between the cluster members;
- Elaboration and signing of the Memorandum on the creation of the cluster by the cluster members.



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4. The funding opportunities and tools adjusted to clusters' needs

Moldova has taken certain steps to facilitate SMEs' access to finance, although no state program to support cluster initiatives was yet approved, it is worth mentioning that a National Clustering Support Program was drafted and is to be approved by the Government by the end of 2021. At the same time, notable policies include an expansion of the registration system for movable assets, which has improved the ecosystem for registering collateral. The consolidation of the banking sector has shown palpable results, with international investors returning to the country along with the first signs of credit growth recovery. Support for SME finance is heavily donor-dependant, though the expansion of the Credit Guarantee Fund is a positive step in mitigating the perceived risks of SME lending. A 2018 law on non-bank financial institutions is a positive step in diversifying sources of financing for SMEs, though available statistics show limited market penetration of these instruments⁴.

4.1 Sources of external finance for SMEs (bank financing, non-bank financing and venture capital)

Banks represent the primary source of financing for local SMEs in Moldova. This segment was therefore particularly affected by the sector crisis of 2014-15, as reflected by four subsequent years of decreasing domestic credit provided to the private sector (from 35.7% of GDP in 2013 to 22.8% in 2017) (World Bank, 2018[19]). Positive credit growth returned in 2018 in a first sign of recovery, though this has been led primarily by consumer and mortgage lending. However, the sector does show signs of consolidation, revitalisation, and stabilisation, as well as international investor interest. SME support programmes are offered through virtually every major bank, though they tend to be both donor-funded and targeting a very specific segment or use. Government support schemes also include interest rate subsidies, which are generally considered to be a less sustainable mechanism. A positive development since the last assessment is the 2018 expansion of the Credit Guarantee Fund, both in monetary terms and in terms of its design and offerings; improved monitoring and evaluation of the Fund should aid in improving the scheme where most needed, while complementary assistance and training services aim to create a holistic support programme for SMEs previously considered less bankable. Information on both public and private sector support measures is available on a central, donor-funded web portal, providing information on the ecosystem of financing and support mechanisms available to the various SME segments. In the sphere of non-bank financing, a notable improvement has been the 2018 law on “nonbank credit institutions”, which brings various forms of alternative finance under

⁴ <https://www.oecd-ilibrary.org/docserver/d1afa5b8-en.pdf?expires=1636202094&id=id&accname=guest&checksum=61835B9FD553EFE5B55ED09C12602707>



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one regulatory umbrella. For example, leasing regulations have been strengthened and all oversight consolidated under the National Commission for Financial Markets. Due to a lack of up-to-date and methodologically consistent statistics, it is difficult to judge the uptake of this financing mechanism, though the existing data suggests an increase. Microfinance institutions have a long tradition in Moldova, which has a continuously growing number of MFIs and a largely self-sustaining industry. The increase in MFIs has been accompanied by a 15-20% annual growth in loan volume, though the vast majority of loans (83%) continue to go to individuals, with business entities accounting for a combined EUR ~39 million in total annual volume. While substantive improvements have been made, this shows that microfinancing still has a very long way to go to be considered a realistic alternative source of finance for a large segment of SMEs. In the field of factoring, dedicated regulation is in place, though it could be further improved through the inclusion of additional elements, such as provisions for electronic factoring. Additionally, no statistics are available to assess market penetration of this instrument. Lastly, plans to introduce a dedicated legal framework for venture capital have existed for years, but they have yet to materialise.

4.2 Business Development Support

The Government of Moldova has a well-defined vision of business development services (BDS) that is integrated into the relevant policy planning framework and documents and the corresponding Action Plan. ODIMM is the main institution in charge of developing and implementing SME support programmes and projects according to the action plan. The various programmes - which target a wide range of beneficiaries including women, young entrepreneurs and rural startups - consist of training and mentorship, financing and business support infrastructure development (11 Business Incubators, 8 Multifunctional Industrial Platforms). General information on state provided support, including the financial support and specialised BDS programmes is disseminated through two ODIMM online portals (<https://businessportal.md> and <https://odimm.md>) and through the SMEs financing guide <https://www.odimm.md/ro/suport-in-afaceri/ghidul-resurselor-financiare> - that was elaborated, published and disseminated to relevant stakeholders.



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5. Clustering Case in Georgia

1. Scope of the present Protocol

The specific Group of Activities T4 (**WP T4: Preparatory actions for “Black Sea Herb Cluster”**) is allocated under the responsibility of LP (ANETXA). Therefore, as the responsible partner, LP, besides monitoring the whole progress of all Activities under WP T4, elaborates the present **Protocol for the review and consultation process**, which will be provided to the rest of the consortium for assisting them in the implementation of the Review on case studies with clusters (D. T4.1.1.) in their project countries and the subsequent Consultations (D. T4.2.1.), respectively.

This is the 1st version of the Deliverable, which will be updated during the course of the project’s progression and especially during the implementation of Activity T4.

2. Consortium’s involvement to the implementation of GA_T4

More specifically, in the framework of GA T4, LP ANETXA SA will initially produce the **Review on case studies with clusters** in Greece (D. T4.1.1.) and, at a later stage, will conduct the extended **Consultation process** by organizing 100 meetings with respective number of enterprises (D. T4.2.1.) and producing the relative Report. Finally, ANETXA SA will produce the **Maturity toolkit for “Black Sea Herb Cluster”** (D. T4.3.1.) based on the previous findings of DT4.1.1 and DT4.2.1. The Toolkit will constitute a useful tool after the end of the Project to create clusters with similarities with Black Sea Herb Cluster.

The involvement of the other PPs in the implementation of GA4 activities will be as follows:

- **PP2 (AUTH)** will contribute to the consultation process by implementing 50 consultation meetings especially with agricultural enterprises (A.T4.2)
- **PP3 (ODIMM)** will perform the review for cluster schemes in Moldova (A.T4.1), will implement 60 consultation meetings with enterprises (A.T4.2) and will provide feedback, support and material to LP for the maturity toolkit of the Cluster (A.T4.3)



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- **PP4 (GFA)** will perform the review for cluster schemes in Georgia (A.T4.1), will implement 60 consultation meetings with enterprises (A.T4.2) and will provide feedback, support and material to LP for the maturity toolkit of the Cluster (A.T4.3)
- **PP5 (CARD)** will perform the review for cluster schemes in Armenia (A.T4.1), will implement 60 consultation meetings with enterprises (A.T4.2) and will provide feedback, support and material to LP for the maturity toolkit of the Cluster (A.T4.3).

3. Aim of the Review Report on Case Studies with Clusters in the framework of GA_T4

The general aim and the expected main **output** of Group of Activities GA T4 - “Preparatory actions for “Black Sea Herb Cluster” is to develop the concept and the **Maturity toolkit** for the preparation of a cross-border Cluster in herb sector in Black Sea Project countries (extended after the end of the HEGO Project funding), which will engage enterprises from collection/ production, processing, marketing and promotion, trade as well as research organizations and local/ regional/ national public organizations from Black Sea Project countries.

The objective of the Cluster will be the promotion of the environmentally responsible economic activity with reference to herb plant species as well as the improvement of trade and exporting opportunities of high value herb products produced in Black Sea Project countries.

More specifically, under Activity A. T4.1 “Review on case studies with clusters in Black Sea Project countries” an extended review research will be performed in national level so that Partners **will identify best practices and specific clustering schemes of collaboration among enterprises.** Based on this review, Partners will evaluate:

- the aims and objectives of these clustering schemes,
- their activity,
- their experience gained from the operation of these schemes,



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- their difficulties and barriers,
- the legal framework and
- the funding opportunities and tools adjusted to clusters’ needs.

It is expected that the final feedback Country Reports in national level will be delivered with **findings and recommendations**.

4. Materials and methods performed

The Review on case studies with clusters will be conducted using a mixture of:

- an extended **desk review** research of existing success stories of clusters (in past or on-going projects) and
- **primary research**, based on the List of Target Contacts. Each PP will communicate with stakeholders and target groups’ representatives in order to explain the purpose of the review and to identify potential knowledge about existing clusters or cluster schemes and keep records (Communication Minutes) of these contacts. It is advised that all Partners take into account the recommendations/guidelines as described in HEGO’s Communication Plan (*Deliverable D.C.1.1*), which for Activity GA_T4 prescribes the following:

GA_T4	Preparatory actions for “Black Sea Herb Cluster”
Activities	<p>A. T4.1 - Review on case studies with clusters in Black Sea Project countries</p> <p>A. T4.2 - Consultation process and discussion on the aims, objectives and structure of the Cluster with stakeholders and end beneficiaries</p> <p>A. T4.3 - Development of the maturity toolkit for Black Sea Herb Cluster</p>



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<p>Deliverables</p>	<p>D.T4.1.1 - Review Report on case studies with clusters D.T4.2.1 - Report on consultation process results D.T4.3.1 - Maturity Toolkit for Black Sea Herb Cluster</p>
<p>Partners Involved</p>	<p>Responsible PP for GA: PP4_ANETXA Input by: All Partners</p>
<p>Communication Target Groups</p>	<ul style="list-style-type: none"> • Farmers, Herb producers/enterprises • Local public authorities • Regional public authorities • National public authorities • Sectoral agencies • Interest groups including NGOs • Higher education and research • Education/training centres and school • SMEs • Business support organisations • Others



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<p>Communication actions - Key Message</p>	<p>The present GA consists of the following Activities:</p> <ul style="list-style-type: none"> A. T4.1 - Review on case studies with clusters in Black Sea Project countries A. T4.2 - Consultation process and discussion on the aims, objectives and structure of the Cluster with stakeholders and end beneficiaries A. T4.3 - Development of the maturity toolkit for Black Sea Herb Cluster <p>In the context of the Implementation GA4, Project Partners will mobilize the organizations attracted during GA1, GA2 and GA3 as well as during Communication GA. The engagement of the identified target groups will be mainly implemented during the A.T 4.2 extended consultation process in all Project countries, under which 330 members of the selected target groups will be approached via meetings and will be <u>interviewed</u>. The overall engagement of target groups in this GA will be implemented with the following practices and tools: Project Partners will address to organizations and enterprises from their direct and wider environment and communicate the establishment of the network via mobilization meetings, information & publicity tools and social media communication tools. PPs will identify and approach all major relevant stakeholders playing a significant role in herb sector as well as any interested individual or organization who is interested in participating the HEGO Cluster. Especially for local, regional and national authorities, sectoral agencies, interest groups including NGOs and business support organizations: all Project Partners involved preserve direct links and established connections and relations with such organizations. The established relations will facilitate Project Partners to effectively attract these organizations to participate in the HEGO Cluster and provide their feedback. Especially for individual farmers, SMEs and training centers, similar connections will facilitate the communication and dissemination of GA4 outputs.</p> <p><u>Suggested Messages:</u></p>
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	<p>PPs are encouraged to use messages that are directed <u>mainly</u> towards <i>expert</i> audiences and the <i>general public</i> so as to motivate them to participate in the HEGO Cluster, such as:</p> <ul style="list-style-type: none"> ✓ Stimulation of interest in HEGO’s Cluster ✓ Awareness Raising ✓ Motivation for Participation in HEGO’s Cluster ✓ Dissemination for Understanding <p><u>Suggested Communication Tools:</u></p> <p>In order to reach the above-mentioned Target Groups, PPs are encouraged to use predominately interpersonal, two-way communication targeted towards expert audiences, such as:</p> <ul style="list-style-type: none"> • 1 on 1 telephone calls, • E-mail information service, • Voip communications <p>and to a lesser extent mass media, one-way communication, such as:</p> <ul style="list-style-type: none"> • Announcements via PP’s websites, • Public free announcements via newspapers, • Press releases, • Social media communication
<p>Timeframe</p>	<p>January 2021 - December 2022</p> <p><i>(Months 7 to 30)</i></p>

The final deliverable will contain a) the findings of the desk research enriched and updated according to b) the information gathered through the primary research (recorded in Communication Minutes) and c) updated List of Target Contacts in the level of each project country.

5. Review’s structure - Table of contents

1. Introduction: Description of the GA T4 in the project context (up to 1 page/A4)



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Hint: You can use a combination of the 1st paragraph (Consortium's involvement) of the present document along with the GA's structure would be sufficient.

The objective of the GA T4 is to develop the concept and the maturity toolkit for the preparation of a cross-border Cluster in herb sector in Black Sea Project countries, which will engage enterprises from collection/ production, processing, marketing and promotion, trade as well as research organizations and local/ regional/ national public organizations from Black Sea Project countries. The objective of the Cluster will be the promotion of the environmentally responsible economic activity with reference to herb plant species as well as the improvement of trade and exporting opportunities of high value herb products produced in Black Sea Project countries.

The following activities will be implemented under GA T4:

A. T4.1 Review on case studies with clusters in Black Sea Project countries: in each country, an extended review research will be performed in national level so that Partners will identify best practices and specific clustering schemes of collaboration among enterprises. Based on this review, partners will evaluate the aims and objectives of these clustering schemes, their activity, their experience gained from the operation of these schemes, their difficulties and barriers, the legal framework and the funding opportunities and tools adjusted to clusters' needs. Final feedback reports in national level will be delivered with findings and recommendations.

A. T4.2 Consultation process and discussion on the aims, objectives and structure of the Cluster with stakeholders and end beneficiaries: an extended consultation process in national level will follow the review activity aiming at discussing in depth and assessing the stakeholders' and end-users' perceptions with reference to the scenario of a future development of a cluster scheme in herb sector. During the consultation process, members of target groups will be directly engaged in the planning process of such an initiative with specific scenarios on its potential operation, structure, legal framework, training and trade opportunities and linkages with training and trade promotion enterprises.

A. T4.3 Development of the maturity toolkit for Black Sea Herb Cluster: after the findings, the conclusions, the suggestions and the recommendations from review and consultation process, a toolkit with all the necessary legal and operational documents will be developed. This maturity toolkit will be used after the end of the project as a strong sustainability tool for the whole HEGO project.



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2. Aim of the Review Report on Case Studies in (up to 1 page/A4)

Hint: You can do a rephrasing of the respective paragraph of the present document with your personal elaboration would cover this section.

The aim of Deliverable D. T4.1.1. - “Review Report on case studies with clusters” is to identify best practices and specific clustering schemes of collaboration among enterprises on national level in project countries. For this reason, an extended review research will be performed by project partners and based on this review, partners will evaluate 1) the aims and objectives of these clustering schemes; 2) elaborated and planned activities; 3) experience gained from the operation of these schemes; 4) difficulties and barriers faced to these schemes; 5) the legal framework and the funding opportunities and tools adjusted to clusters’ needs.

3. Materials and Methods performed (up to 1 page/A4)

Hint: You can use the respective paragraph presented in this protocol as a basis. Each partner shall elaborate more specifically the tools and means of each researching approach (desk & primary) used.

i.e. Be specific regarding the entity of the Target group approached, the platform used for teleconferences, the searching devices used, etc.

GFA conducted a desk research to identify existing case studies with clusters from past or on-going projects related to herbs sector elaborated by international and local organizations, reviewed relevant existing reports, publications, baseline studies, scientific articles about cluster schemes and communicated with representatives of SMEs, NGOs, educational and research institutions in order to explain the purpose of the review and to identify their potential knowledge about existing clusters or cluster schemes. The platforms used for communication were **Zoom Meetings**, **phone calls** and the main searching device for desk research was **Google Search**.

4. Findings and Recommendations

The main section of the Case study Review report should be divided into the following chapters.

→ Identify best practices (Chapter 1)

Each partner will search and review the case studies of Clusters, in its country, regardless of the sector of engagement, in order to identify and highlight the best practices implemented that contributed to the success



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of the Clusters. If partners identify practices, that with a certain differentiation, could lead to success stories of Clusters they shall capture their proposition as a recommendation.

In order to search and review the case studies of clusters in Georgia, GFA conducted both desk and primary research. Based on results obtained from desk research and communication with target groups, GFA identified the best practice of cluster scheme related to herbs sector in Georgia. Association “Forest Product”, established in 2021 is a non-commercial legal entity, whose main goal is to promote the development and protection of the following forest-related sectors in Georgia: timber and non-timber forest products, eco and forest tourism, as well as biomass and green economy.

- Identify specific clustering schemes of collaboration among enterprises (Chapter 2)

Schemes of collaboration among enterprises, or Target groups in the Clusters will be distinguished by each partner. Proposed clustering schemes of collaboration that could flourish and cultivate synergies, which promote an environmentally responsible economic activity with reference to the herb sector, shall be recommended.

Currently, Association “Forest Product” remains the only scheme of collaboration among enterprises related to herbs sector in Georgia. The association supports sustainable commercial use of forest products, which is carried out in cooperation with private, cooperative, sectoral, state and public interests between individuals and legal entities collecting, cultivating, producing and marketing raw materials. The association also creates a collaboration platform to ensure business participation in the strategic planning and management processes of the sector.

- Evaluate the aims and objectives (Chapter 3)

In this chapter, after the identification of the aims and objectives that operated the development of the Cluster cases, an evaluation of them is also expected, by each partner. In cases, where the aims and objectives weren't stated clearly, or weren't realistic and achievable, facts that caused the abandonment of the clusters shall be mentioned. Questions such as, “Why they weren't succeeded «and “How we could have made them more realistic” are encouraged to be answered by the partners.



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The aim of association “Forest Product” is to develop commercial use of forest products and support individuals and legal entities employed in the sector - through improving access to raw materials, production facilities, markets and finances, ensuring cooperation, sustainability, raising theoretical and practical knowledge of green business, advocacy-lobbying and political dialogue.

Association is actively working with state organizations and private sector to ensure that the extraction, processing and sale of forest products take place in a regulated environment. The association also promotes the activities of main actors in the sector, as well as seeks to reduce the negative impact on the environment caused by unsustainable harvesting, maintain decent working conditions, promote gender balance, fair trade and fair wild principles.

With reference to Chapter 3, it will be divided in the following five (5) subchapters. Each partner has to present the findings referring to each one of the subchapters, while on the same time shall reflect to find ways to present those findings as a basis to be followed for the optimization, development and sustainability of the clusters and potential new ones.

Activity

Association “Forest Product” elaborates different activities such as:

- Creating a support organization tailored to the interests of business organizations and local people in the field of forest products production;
- Establishing a regulated and sustainable business environment;
- Actively promoting the sale of forest products in export and local markets;
- Raising the awareness of main actors involved in the forest products sector;
- Encouraging the production of value-added products;
- Obtaining, processing and sharing relevant information about world-proven manufacturing and marketing practices with association members;
- Assisting its members in the introduction of modern production standards and technologies;
- Introducing and popularizing the practice of cultivating commercially profitable, wild-growing forest products;



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- Connecting raw material suppliers, processing and distribution companies and fostering their future relationships;
- Actively promoting PPP (Public-Private Partnership) and PPCP (Public-Private-Community Partnership);
- Increasing access to information and education about sustainable management of forest resources;
- Developing and introducing exclusive educational modules and closely collaborating with responsible agencies to expand existing education programs and information materials (extension centers, professional development programs, training courses);
- Creating a quality mark;
- Collaborating with certification bodies to create international brand (s) with social and environmental priorities;
- Supporting state organizations to fulfill international agreements, the Sustainable Development Agenda and other international commitments, increasing the effectiveness of existing environmental and socio-economic programs;
- Collaborating with the LEPL National Food Agency to promote laboratory research and practical application of food safety standards;
- Communicating with forest management bodies (National Forest Agency, Agency of Protected Areas, Adjara Forest Agency, local self-governments) for the development of mutually beneficial cooperation with the business sector - for the conservation and realization of high economic and environmental values of Georgia;
- Communicating with Development Agencies (Rural Development Agency, Run in Georgia, Start-up Georgia, Georgian Innovation and Technology Agency), support for new and potentially interesting areas of green business and diversification of rural economy plans and priorities reflected in Georgia's 2021-2027 rural development strategy;
- Supporting the local population to create additional sources of income for households and increase legal employment opportunities;
- Collaborating with the youth to promote green entrepreneurship and responsible business in the next generation;
- Collaborating with vulnerable groups;
- Finding and promoting small entrepreneurs;



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- Finding and sharing industry-relevant, industry-relevant grant projects with member companies.

Experience gained

During 2021, the association mobilized the private sector and about 40 companies became members of the association. Regarding the new Forest Code, the Association elaborated a document of recommendations, which was submitted to the Ministry of Environment Protection and Agriculture and with the participation of member companies of the Association, consultation meetings were held with the National Forest Agency and representatives of the respective Ministry. At the meetings with the Ministry, the recommendations offered by association members regarding the right of forest management, fees, certificate of origin and the rules of the auction were discussed and summarized. As an outcome, the final document proposed by the Ministry contains recommendations on the rules of the auction and the right to use the forest, which means obtaining the right to use the forest without an auction in the relevant forest areas.

Moreover, with the active participation and involvement of the association and private sector, a document of symbolic fees was submitted to the environmental committee of Georgian Parliament, which was prepared by the association in cooperation with business, and was approved by the Parliament in the third hearing.

The association participated in the Krtsanisi Forest Park international event, where locally produced herb products were presented by companies to European partners and donors.

A strategy for communication with retail chains and a unified catalog for trade chains of non-timber forest products have been developed by association.

At the 2021 Green Entrepreneurship Exhibition, for the first time, the Association of Forest Products was presented with separated stand. 14 companies producing forest non-timber products participated in the exhibition-sale. A catalog was also printed and all the participating companies were included in it in order to popularize the producers of non-timber forest products separately.

In September 2021, the Association, with the assistance of the Embassy of the Netherlands, launched the Green School of Economics project. Within the project, the authors of the best applications selected from 50 students underwent a three-month training course, with the



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opportunity to collaborate with forest products companies and develop their business ideas according to the green (circular) economy model.

Within the framework of the "Rural Entrepreneurship Development" program, the Association "Georgian Forest Product" revealed and awarded 3 winning business ideas of the Green Economics School undergraduate and graduate competition, the graduate competition.

At the end of 2021, a cooperation agreement was signed with the Fair Trees Fund for youth projects in the Racha-Lechkhumi region.

Difficulties and barriers

The importance to establish association "Forest Product" was stipulated by the economic potential of herb products in Georgia, the ongoing reforms in the sector and the existing challenges at all stages of the value chain. After appearing on the market association has been actively working to address common problems in the sector and discusses ways to solve these problems and develop the sector in general. Nevertheless, as association is newly established, it is facing difficulties such as scarcity of financial resources. Currently, association receives finances from its membership fees and founder organizations, which hardly sustains the association. Low awareness of herb products in the local market is considered to be another significant challenge for association. To overcome this challenge, association is actively participating in exhibition events held in Georgia to raise awareness of local population about the benefits of herb products. Low interest in herb products by local retailers is another challenge for association, as retailers mostly focus on exported products and have insignificant interest to sell locally produced similar products on their markets. Barriers for association to develop further can be considered the low interest from donor and government organizations in the herbs sector, which is mainly caused by lack of awareness and knowledge about herbs and their economic potential. Inefficient work of the government in terms of improving legislation causes significant barriers to sector. Despite the fact that regulation about consumption of herb products was introduced in 2021, it still needs to be improved significantly as many vital factors (resource assessment) are not yet considered in the regulation, which makes it less effective for the development of the sector.

Legal framework



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According to the Agriculture and Rural Development Strategy of Georgia for 2021-2027, with a projected budget of GEL 2.0 billion, the term "agriculture" is defined by the European Classification (NACE Rev. 2), which is also used by National Statistics Office of Georgia (NACE Rev. 2. Section A) Rural, forestry and fish farming. This section [A] covers the use of plant and animal natural resources both on agricultural land and in the natural environment.

The Green Budget Project (Parliament of Georgia, 2020) views this record as a condition for expanding business incentive government programs that have so far been implemented by the Rural Development Agency (RDA) only in agriculture. Among them: "Introduce the future" of cooperatives, equipping with relevant tools, promoting tea production, co-financing the purchase of harvesting equipment for farmers, developing quality schemes at the national and regional levels, co-financing credit / leasing, etc. Opportunities for providing extension services to farmers and expanding vocational education programs are also being considered.

The new Forest Code, which officially entered into force on January 1, 2021 and State Regulation N221 on Forest Use, entered into force on May 18, 2021 regulates the extraction of non-timber forest products, in particular, the new legislation, among other things, will establish rules for personal and commercial use of non-timber forest products, which has not been done before.

One of the main goals of the Association is to effectively analyze this legislation and provide accurate information to its member and other target stakeholders. Association is also closely cooperating and has constant communication with state structures for further refinement of above-mentioned legislation.

Funding opportunities and tools

The primary source of financial stability of the Association "Forest Product" is the membership fees, and the policy of the Association aims at promoting member and potential member companies and creating real opportunities for them. This approach is considered to be motivating factor for member and potential member companies in the sector and will increase their interest in the Association as a facilitator of their activities.

For financial and organizational sustainability, the Association constantly cooperates with local state institutions and international organizations, which implement grant programs in various directions in the field of forest products in Georgia and / or in the future envisage this direction as one of the beneficial sectors.



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The grant programs will focus on developing the capacity of both the Association and its staff, as well as member organizations. To this end, a memorandum of understanding was signed with state institutions, as well as with international organizations. In addition to the Memorandum, Association is working actively to join the existing councils in various ministries and parliamentary departments, which will increase the Association's awareness at the official level and also, the Association will be able to establish and defend its position (as an official representative of the sector) in all directions.

The goal of the Association is to create a dialogue format for grant projects, in which the Association will be presented as a mediator between donor organizations and the private sector. In this case, the association should be able to convey the needs and challenges of the private sector to state and international organizations through a dialogue format, resulting in the expansion of grant projects and programs by funding organizations according to sectoral needs.

5. Conclusions

- **Hint:** This chapter of the review, will be a summary of the information gained during both the desk and the primary research. You should present the existing situation of Clusters in your countries, (meaning are they a trend? do they have supporters?), the findings of your research around the best practices, clustering schemes, activity, experience gained, difficulties and barriers, legal framework, funding opportunities and tools and your recommendations referring to these parameters, so they could be used as tools for the for the optimization, development and sustainability of the clusters and potential new ones.

GFA conducted a desk research to identify existing case studies with clusters from past or on-going projects related to herbs sector elaborated by international and local organizations, reviewed relevant existing reports, publications, baseline studies, scientific articles about cluster schemes and communicated with representatives of SMEs, NGOs, educational and research institutions in order to explain the purpose of the review and to identify their potential knowledge about existing clusters or cluster schemes. The platforms used for communication were **Zoom Meetings, phone calls** and the main searching device for desk research was **Google Search**.

Association “Forest Product”, established in 2021, which is a non-commercial legal entity, remains the only cluster scheme of collaboration among enterprises related to herbs sector



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in Georgia. Its main goal is to promote the development and protection of the following forest-related sectors in Georgia: timber and non-timber forest products, eco and forest tourism, as well as biomass and green economy.

The association supports sustainable commercial use of forest products, which is carried out in cooperation with private, cooperative, sectoral, state and public interests between individuals and legal entities collecting, cultivating, producing and marketing raw materials. The association also creates a collaboration platform to ensure business participation in the strategic planning and management processes of the sector.

Association is facing various difficulties that exist in the herb sector, such as scarcity of financial resources, insignificant interest in herb products by local retailers, low interest from donor and government organizations in the herbs sector, which is mainly caused by lack of awareness and knowledge about herbs and their economic potential, inefficient work of the government in terms of improving legislation.

One of the main goals of the Association is to effectively analyze the relevant legislation in herbs sector and provide accurate information to its member and other target stakeholders. Association also closely cooperates and has constant communication with state structures for further refinement of above-mentioned legislation.

The primary source of financial stability of the Association "Forest Product" is the membership fees, and the policy of the Association aims at promoting member and potential member companies and creating real opportunities for them.

For financial and organizational sustainability, the Association constantly cooperates with local state institutions and international organizations, which implement grant programs in various directions in the field of forest products in Georgia and / or in the future envisage this direction as one of the beneficial sectors.

For the sustainable development of the association, in the future, it is recommended to consider the possibility of establishing a social enterprise, which will introduce the practice of cultivating wild crops, develop nurseries and seed farms for further sale, and at the same time, this approach will help to present potential investment in the sector.

For the successful activity of the Association and the development of the sector, it is important to record the statistics of forest products extracted, processed and sold in Georgia. For this purpose, the Association may cooperate with the National Statistics Office



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of Georgia and register statistics in cooperation with them. Such an approach will make the sector more transparent and, at the same time, promote the sustainable production of forest products, which in turn will lead to the introduction of environmental practices and the proper use of natural resources.

In order to implement successful and proven international practices, it is important to train the Association's staff, companies and collectors working in the sector and to share with them the practices of sustainable forest products extraction. For this purpose, it is important to invite a foreign expert who will share their practical and theoretical knowledge with the interested audience.



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Annex 1 - Template of Best Practices

General information	
Title of the practice	Association "Forest Product"
Does this practice come from an ENI Black Sea Basin Project?	No

If the answer is 'yes':

Please provide the project acronym and Title	N/A
--	-----

Main organisation involved	Non-commercial legal entity - Association "Forest Product"	
Location of the practice	Country	Georgia
	Region/District	Tbilisi
	City/Town	Tbilisi

Detailed description	
Detailed information on the practice	<p><i>[max 2000 characters].</i></p> <p><i>Provide information on the practice itself. In particular:</i></p> <ul style="list-style-type: none"> - <i>Addressed problem</i> - <i>Objectives, achievements, main actions</i> - <i>Main stakeholders and beneficiaries</i> <p>Establishment of association "Forest Product" was stipulated by the low interest and insufficient knowledge about economic potential of herb products in Georgia, the ongoing reforms in the sector and the existing challenges at all stages of the value chain.</p> <p>Main stakeholders and beneficiaries of this practice are enterprises engaged in collection, production, marketing and trade of herb products as well as research and educational organizations and local/ regional/ national public organizations.</p> <p>The main objective of the Association is to promote the development and protection of the following forest-related sectors in Georgia: timber and non-timber forest products, eco and forest tourism, as well as biomass and green economy.</p> <p>Accordingly, Association supports sustainable commercial use of forest products, which is carried out in cooperation with private, cooperative, sectoral, state and public interests between</p>



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	<p>individuals and legal entities collecting, cultivating, producing and marketing raw materials.</p> <p>The association also creates a collaboration platform to ensure business participation in the strategic planning and management processes of the sector.</p> <p>The main actions of the association are to establish a regulated and sustainable business environment in herbs sector, promote the trade of forest products in export and local markets and raise awareness of local consumers about the benefits of forest products, promote the production of value-added herb products, assist its members and other target stakeholders in the introduction of modern production standards and technologies, introduce the practice and techniques of cultivating commercially profitable, wild-growing herb products, increasing access to information and education about sustainable management of forest resources and etc.</p>
<p>Resources needed</p>	<p><i>[max 400 characters]</i></p> <p><i>funding/financial resources used and/or human resources required</i></p> <p>The primary source of financial sustainability of the Association "Forest Product" is the membership fees. For financial and organizational sustainability, the Association constantly cooperates with local state institutions and international organizations, which implement grant programs in various directions in the field of forest products in Georgia and / or in the future envisage this direction as one of the beneficial sectors.</p> <p>Advisory Board of association consists of representatives of business associations, private businesses, non-profit organizations and state institutions operating in Georgia. The main functions and responsibilities of the Board are: consulting, advice, promoting communication of the Association and participation in the management of the Association.</p> <p>The Board provides significant assistance to the Association's team in achieving their common goals, providing both expert and informational assistance. Discusses important issues with the association team and help the team form a common opinion and third in delivery to the party.</p> <p>Association has its Chairman of the Board which is elected for a term of 2 years (by the members of the Association) and Executive Director, elected by the General Assembly (members of the Association).</p>



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	<p>As association will develop further, it is plan to increase the number of team members and hire consultants for different directions.</p>
<p>Timescale (start/end date)</p>	<p>January 2021 - ongoing</p>
<p>Evidence of success (achieved results)</p>	<p><i>[max 600 characters]</i> <i>Why is this practice considered as good? Provide evidence that demonstrates its success or failure (e.g., measurable outputs/results).</i></p> <p>In 2021, the association mobilized the private sector and about 40 companies became members of the association, including small and medium processing enterprises, start-up companies and etc.</p> <p>Association coordinated the consultation meetings between private sector and the Ministry of Environment Protection and Agriculture, regarding Forest Code and Regulation on Forest use and the recommendations were provided by association members regarding the right of forest management, fees, certificate of origin and the rules of the auction were discussed and summarized. As an outcome, the final document proposed by the Ministry contains recommendations on the rules of the auction and the right to use the forest, which means obtaining the right to use the forest without an auction in the relevant forest areas.</p> <p>A strategy for communication with retail chains and a unified catalogue for trade chains of non-timber forest products have been developed by association.</p> <p>At the 2021 Green Entrepreneurship Exhibition, the Association of Forest Products was presented with separated stand. 14 companies producing non-timber forest products participated in the exhibition. A catalogue was also printed and all the participating companies were included in it in order to popularize the producers of non-timber forest products separately.</p> <p>In September 2021, the Association, with the assistance of the Embassy of the Netherlands, launched the Green School of Economics project. Within the project, the authors of the best applications selected from 50 students underwent a three-month training course, with the opportunity to collaborate with forest products companies and develop their business ideas according to the green (circular) economy model. Within the framework of the "Rural Entrepreneurship Development" program, the Association "Georgian Forest Product" revealed and awarded 3 winning business ideas of the Green Economics</p>



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	School, elaborated by undergraduate and graduate students of different universities.
CRITERION Sustainability	1
<i>1.a) Impact on safeguarding herbs biodiversity</i>	<p><i>[max 400 characters]</i></p> <p>Association was fully involved and played an important role to moderate the processes between state and private sectors during the adoption of State Regulation N221 on Forest Use, which entered into force on May 18, 2021 and regulates the extraction of non-timber forest products for personal and commercial purposes. During the adoption of the law, association and its members actively highlighted the importance of sustainable management of herbs biodiversity and provided recommendation to safeguard these resources.</p> <p>The Association considers the possibility to cooperate with the National Statistics Office of Georgia and register statistics of extraction, production and trade of herb products in Georgia. Moreover, this approach will make the sector more transparent and, at the same time, promote the sustainable production of forest products, which in turn will lead to the introduction of environmental practices and the proper use of natural resources.</p> <p>Association is also willing to cooperate with foreign experts who will train the Association's staff, companies and collectors working in the sector share with them the international practices of sustainable forest products extraction.</p>
<i>1.b) Economic viability</i>	<p><i>[max 400 characters]</i></p> <p>The association actively communicates with forest management bodies (National Forest Agency, Agency of Protected Areas, Adjara Forest Agency, local self-governments) for the development of mutually beneficial cooperation with the business sector - for the conservation and realization of high economic and environmental values of Georgia. Association is actively involved in promoting the trade of forest products in export and local markets. For this purpose, association organizes and participates with its members in different exhibition events, where local and start-up companies are presented.</p> <p>Association also encourages the production of value-added herbs products and obtains, process and share relevant information about world-proven manufacturing and marketing practices with association members and target stakeholders.</p>
<i>1.c) Social impact</i>	<i>[max 400 characters]</i>



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CRITERION Transferability	3
<p>3.a) <i>Organisational model</i></p>	<p><i>[max 400 characters]</i></p> <p>The association is managed by advisory board, which includes the representatives of business associations, private businesses, non-profit organizations and state institutions operating in Georgia.</p> <p>The Board provides significant assistance to the Association's team in achieving their common goals, providing both expert and informational assistance. Discusses important issues with the association team and help the team form a common opinion and third in delivery to the party.</p> <p>Association has its Chairman of the Board which is elected for a term of 2 years (by the members of the Association) and Executive Director, elected by the General Assembly (members of the Association).</p> <p>As association is planning to increase the number of team members and hire consultants for different directions.</p>
<p>3.b) <i>Policy making process</i></p>	<p><i>[max 400 characters]</i></p> <p>A member of the Association "Georgian Forest Product" can become any legal or physical body registered in Georgia, for example, processing enterprise (large, medium and small), large collectors, cooperatives, partnerships who share the vision, goals and objectives of the Association. In addition to commercial legal entities, non-profit organizations, whose contribution can be positively used in the activities of the Association, will also be eligible for membership. The organizational (involvement of members and the board, election of the chairman and members of the board) and financial (membership fee, projects, service fees) management systems of the association is transparent and in accordance with the law.</p>
<p>3.c) <i>Specific tools (e.g. training, financing, management)</i></p>	<p><i>[max 400 characters]</i></p> <p>Association is planning to develop and introduce exclusive educational modules and closely collaborates with responsible agencies to expand existing education programs and information materials (extension centers, professional development programs, training courses). Association is also planning to cooperate with different educational institutions in order to help popularize the field among the younger generation, while helping the association in its long-term development, which implies the presence of qualified staff in the country. Moreover, Association with the cooperation of international institution organizes the Green School of Economics and Green</p>



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	<p>Entrepreneurship programs for undergraduate and graduate students interested in environmental protection.</p>
<p>3.d) Risk management</p>	<p><i>[max 400 characters]</i></p> <p>Despite the existing risks, which the Association faces namely, the scarcity of financial resources, low interest in herb products by local retailers and consumers, insignificant interest from donor and government organizations in the herbs sector and inefficient work of the government in terms of improving legislation, Association manages to overcome these challenges by showing its vital role to state and private organizations as moderator of cooperation, especially in terms of legislation. Moreover, Association is actively working with development Agencies (Rural Development Agency, Run in Georgia, Start-up Georgia, Georgian Innovation and Technology Agency) to promote and raise awareness about the economic importance of herbs products in Georgia.</p>
<p>Difficulties encountered & lessons learned</p>	<p><i>[max 600 characters]</i></p> <p>Since its establishment, association has encountered various difficulties such as scarcity of financial resources, as it receives finances from its membership fees and founder organizations, which hardly sustains the association. In addition to this, low awareness of herb products in the local market still remains significant challenge for the sector and association itself. Low interest in herb products by local retailers is another challenge for association, as retailers mostly focus on exported products and have insignificant interest to sell locally produced similar products on their markets. Barriers for association to develop further can be considered the low interest from donor and government organizations in the herbs sector, which is mainly caused by lack of awareness and knowledge about herbs and their economic potential. Inefficient work of the government in terms of improving legislation causes significant barriers to the sector. Despite the difficulties, association has done significant work, especially in moderation processes between state and private organizations in terms law enforcement, trade and harvesting of herb products.</p>
<p>Potential for learning or transfer</p>	<p><i>[max 500 characters]</i></p> <p><i>Explain why this practice (or some of its aspects) would be considered as being potentially interesting for other areas to learn from (e.g. through information on key success factors for a transfer or factors that could make a transfer difficult).</i></p> <p>Association “Forest Product” is considered to be interesting practice as it managed to become vital organization in herbs</p>



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	<p>sector only within one year after its establishment. Currently, no political decision is made by state organization without the active involvement of the Association as a main moderator between state and private organization operating in herbs sector. The association managed to raise awareness of local retailers and consumers about the benefits of locally produced herb products by representing this production on various exhibition events, farmers markets and etc. Association managed to persuade and unite 40 companies to become its members and on the daily basis, it provides relevant information about the on-going processes in herbs sector both on national and international scale. With the active participation and involvement of the Association, a document of symbolic fees was submitted to the environmental committees, which was prepared by the association in cooperation with business, and was approved by the Parliament in the third hearing. Association is also planning to cooperate with different educational institutions in order to help popularize the field among the younger generation, while helping the association in its long-term development, which implies the presence of qualified staff in the country, which is essential for the development of the sector.</p>
Further information	<p>https://gfp.org.ge/en/</p>

Contact details (for this document)	
Name	XXXXXXXXXXXXXXXXXX (for this document)
Organisation	XXXXXXXXXXXXXXXXXX
Email	XXXXXXXXXXXXXXXXXX



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6. Clustering Case in Armenia

1. Introduction

This review research is performed in national level in Armenia to identify best practices and specific clustering schemes of collaboration among enterprises. Based on this review, the aims and objectives of these clustering schemes will be evaluated by identifying their activity, their experience gained from the operation of these schemes, their difficulties and barriers, the legal framework and the funding opportunities and tools adjusted to clusters' needs. Final feedback reports in national level is to be delivered with findings and recommendations to LP to develop the Protocol for conducting the review and share it with the other Partners. Potential feedback from Partners will be included. Based on the List of Target Contacts (the list is provided), CARD Armenia team communicated with stakeholders and target groups' representatives (face to face, via telephone calls and emails) in order to explain the purpose of the review and to identify potential knowledge about existing clusters or cluster schemes. In parallel, desk research in past and on-going Projects is performed.

The deliverable of Review Protocol includes the case studies review in a national level, about the best practices of collaboration. The report also includes the communication minutes.

More specifically, in the framework of GA T4 CARD Armenia team will initially produce the Review on case studies with clusters in Armenia (D.T4.1.1.) and, at a later stage, will conduct the extended Consultation process by organizing 60 consultation meetings with key stakeholders (D.T4.2.1.) which will be described in Progress Report. Finally, ANETXA SA will produce the Maturity toolkit for "Black Sea Herb Cluster" (D.T4.3.1.) based on the previous findings of DT4.1.1 and DT4.2.1. The Toolkit will constitute a useful tool after the end of the Project to create clusters with similarities with Black Sea Herb Cluster.

The implementation of GA4 activities in Armenia will be as follows:

- ✓ The review for cluster schemes in Armenia (A.T4.1)
- ✓ Implementation of 60 consultation meetings with enterprises (A.T4.2)
- ✓ Feedback, support and material will be provided to LP for the maturity toolkit of the Cluster (A.T4.3).



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2. Aim of the Review Report on Case Studies in Armenia

The general aim and the expected main output of Group of Activities GA T4 - “Preparatory actions for “Black Sea Herb Cluster” is to develop the concept and the Maturity toolkit for the preparation of a cross-border Cluster in herb sector in Black Sea Project countries (extended after the end of the HEGO Project funding), which will engage enterprises from collection/ production, processing, marketing and promotion, trade as well as research organisations and local/ regional/ national public organisations from Black Sea Project countries. The objective of the Cluster will be the promotion of the environmentally responsible economic activity with reference to herb plant species as well as the improvement of trade and exporting opportunities of high value herb products produced in Black Sea Project countries.

More specifically, under Activity A.T4.1 “Review on case studies with clusters in Black Sea Project countries” an extended review research is performed in national level so that Partners will identify best practices and specific clustering schemes of collaboration among enterprises. Based on this review, CARD has evaluated:

- ✓ the aims and objectives of these clustering schemes,
- ✓ their activity,
- ✓ their experience gained from the operation of these schemes,
- ✓ their difficulties and barriers,
- ✓ the legal framework and
- ✓ the funding opportunities and tools adjusted to clusters’ needs.



Under the Activity A.T4.1 “Review on case studies with clusters in Black Sea Project countries” CARD performed also primary research of the best practices to identify the SMEs involved in similar projects which had the aim to promote market cooperation and contributed to the success of the Clusters. The filled templates of the Best Practices are provided below as Annexes.



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The final feedback Country Reports in national level will be delivered with findings and recommendations.



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3. Materials and Methods performed

The Review on case studies with clusters has been conducted using a mixture of:

- an extended **desk review** research of existing success stories of clusters (in past or on-going projects)
- **primary research**, based on the List of Target Contacts. CARD team communicated with stakeholders and target groups' representatives in order to explain the purpose of the review and to identify potential knowledge about existing clusters or cluster schemes. Communication Minutes of these contacts are presented below. CARD team followed the recommendations/guidelines as described in HEGO's Communication Plan (*Deliverable D.C.1.1*). We used predominately interpersonal, two-way communication, 1 on 1 telephone calls and E-mail communication.

During the secondary search the similar programs were revealed that have been implemented in Armenia or are still in the implementation phase. The results, the final reports as well as the findings of the secondary research were revealed and studied. After the study, the relevant projects' implementation teams were contacted, with whom the goals, results and relevant data of the projects were discussed. As a result of the discussion, the HEGO program was also presented with its goals, the steps taken to achieve the goals and the further steps that will be implemented. As a result of the primary research, we also contacted the companies that had clustering practice in the scope of implementation of relevant projects.

Below is presented some of the above mentioned projects with communication minutes of the meetings with the implementation team members.



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4. Findings and Recommendations

Relevant projects in Armenia

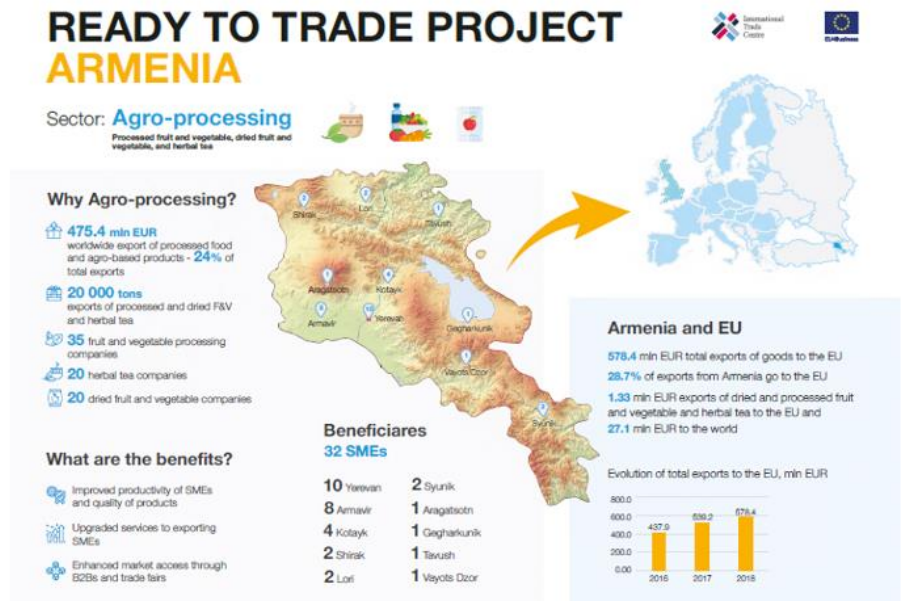
Ready to Trade

Donor: European Union

Time-frame: 2017-2021

About: The Eastern Partnership Ready to Trade project assists small and medium-sized enterprises (SMEs) from Armenia and other European Partnership countries to access new markets with a focus on the European Union (EU).

Beneficiaries: Small and Medium-sized Enterprises (SMEs), relevant business support organizations (BSOs) and other sector representative bodies in Armenia.



Main benefits for small and medium-sized enterprises:

- Enhanced capacities to produce goods in accordance with global and EU market demands through advisory services, coaching and trainings on certification, packaging, production, marketing, branding, promotion and others
- Increased awareness of the requirements for access to international and EU markets through various workshops and seminars
- New business linkages with the EU through participation in trade fairs, study tours, buyer/seller meeting and other

Main benefits for business support organizations:

- Improved business development services through capacity-building activities on sectoral trade intelligence, quality management and certification procedures
- Expanded skills and network as a result of participation in trainings and consulting events for SMEs



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Target sector: Agro-processing

Specific target product groups:

- Processed fruits and vegetables
- Dried fruits and vegetables
- Herbal teas
- Apparel (to a smaller extent)

The project assisted exporting and export-ready SMEs along the whole value chain in producing value added goods in accordance with international and EU market requirements and links these SMEs to international markets. In particular, the programme aims at:

- Developing roadmaps for selected value chains in Armenia
- Providing targeted capacity-building, market access and other advisory services
- Enhancing capacities of sectoral BSOs to provide SMEs with quality and relevant services along the value chain
- Creating business linkages
- Supporting SMEs' participation in international trade fairs

Results:

- Greater export flow of goods from Armenia to the EU market
- Enhanced competitiveness of Armenian SMEs
- Improved business-development services provided by national BSOs

Agreen- Cross-Border Alliance for Climate-Smart and Green Agriculture in the Black Sea Basin

Duration: June 2020 - 2023

Donor: ENI CBC Black Sea Basin Programme

About: The project is implemented in cooperation with Dobrudzha Agrarian and Business School (lead partner, BG), Ovidius University of Constanta (RO), Tekirdag Namik Kemal University (TR), ELKANA (GE), Development Agency of Eastern Thessaloniki Local Authorities (GR). The project is granted within the ENI CBC Black Sea Basin Programme.

Common borders. Common solutions.



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AGREEN contributes to the increase of cross-border links for trade and modernization of agricultural and connected sectors in the Black Sea Basin. The outputs shall bring benefits to farmers and the enterprises in agriculture, young farmers, and professionals, in particular, business sectoral organizations, interest groups (NGOs), higher education, and research institutions.

Within the project, a community of practice and Alliance of organizations for regional branding, internet connectivity, and learning in climate-smart agriculture will be formed. The regional brand will be developed for agricultural products originating in the Black Sea Basin and produced in a climate-smart way. The project will shape an interactive map of logistic centers for wholesale and retail trade in sustainably delivered agricultural produce from the Black Sea Basin. Experimental plots shall be sustained during the project and climate-smart crop models will be disseminated free of charge. Internet Platform for liaising sustainable producers will be established. Integrative blended mobility training “Entrepreneurship for Climate-smart Agriculture in the Black Sea Basin will be conducted and 3 international business conferences on climate-smart agriculture will be organized.

Project name: Jointly preparing the conditions in the agricultural and connected sectors in the BSB area for the digital transformation BSB Smart Farming

Project duration: 20 months

Project partner countries: Lead partner - Greece, Bulgaria, Armenia, Romania, Georgia, Moldova

About: The main objective of the project is to develop and implement a highly replicable and transferable model for preparing the conditions for ensuring the digital transformation in agriculture and connected sectors in the area. It encompasses actions to be deployed in 6 partner countries with partial outputs to be made accessible for 2 more countries. It will contribute to foster a significant change in the preparedness of the agricultural and connected sectors in the BSB area for the digital transformation, improving the capacities of the farming community, academia, public institutions, industry actors and entrepreneurs for cross-border trade opportunities. It supports sweeping away some of the main Black sea basin countries demerits related to the upcoming digital transformation, boosting entrepreneurship with a well-planned and relevant activities to a number of challenges and opportunities arising from the main territorial running processes in three dimensions.

The first dimension is related to the support for changing the conditions for the modernization of the agriculture and connected sectors in the area as smart digital farming is listed as the highest-ranking technology opportunity in terms of its expected positive impact.

The second dimension is related to the challenges before the main driver of economy and local people welfare - the SMEs in the region. The project improves stably the conditions



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for supporting the SME's in the regions operating in the agriculture and connected sectors to stay in line with the leading industrial tendencies and fertilizes the grounds for stemming new ventures in the most promising new industrial trends and needs with a strong cross-border effect, thus answering the regional disparities. The project ensures a sustainable territory for further supporting the knowledge and ventures exchanges between the countries at different levels of deployment of the innovative SMEs' ecosystems. The third dimension is answering the socio-economic challenges in the area - the brain and skill drain and the brain waste, the migration flows, the regional disparities related to urbanization and rural areas depopulation. The project takes into consideration these trends and answers them offering a model for improving the opportunity high-skilled people to become interested in farming, or working with farmers, supporting the retention of young people in their birthplaces, creating and nourishing opportunities for start-ups as a much desired and needed alternative against the low-skilled seasonal or farmers' fields work. The project also reacts to the depopulation and ageing processes and the unplanned migration pressure unfolding opportunities for the usage of ICT skills and competencies even in the most underdeveloped areas in the BSB area.

Main activities:

- Approval of methodology, procedures, rules and plans
- Preparation for the investigation of the preparedness for smart farming in BSB partner countries
- Common research on the level of preparedness for Smart farming of BSB area countries

The research will identify examples of smart technologies to mitigate the agricultural needs of the communities in BSB for the domains of crop farming, weather

forecasting, wildlife management, forestry, livestock farming, market identification and rural financing. The research will serve as a model to be replicated in further similar actions across BSB area. One of the main activities is the establishing a map of digital agriculture stakeholders to get an inventory and understanding of the level of the preparedness for digital agriculture amongst stakeholders and encourage the creation of partnerships. The mapping process will be crucial for the project success as the attraction of important and influent stakeholders will add value and sustainability to the planned activities and outputs. The map will not only ensure the data base with contacts that will be used through all GA's but also will show the interconnections between stakeholders, their influence on public driven innovations in the farming digital transformation, their possible contribution on

BSB908 SMART FARMING

Smart Farming represents the application of modern Information and Communication Technologies into agriculture, leading to what can be called a Third Green Revolution.





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policy improvement for a smarter agriculture in the less developed rural areas in BSB countries.

- Preparation of a BSB Smart Farming Platform Specification
- Official launch of the BSB Smart Farming platform in Armenia

The Smart farming platform will be a one-stop-shop for disseminating and making the use of the SF technologies easier in the BSB area supporting modernisation in trade opportunities. It will pave the way towards data-drive farming that is capable of providing higher production yields in a more sustainable and environmentally-responsible way, while also making the BSB farming sector more competitive in an increasingly globalized world. The Platform will be open to all stakeholders, setting up an open community focusing on BSB area farming specific issues and solutions where these groups can interact to jointly increasing cross-border trade opportunities for agricultural and agro-industrial product and services in smart farming.

- Ensuring stable conditions for the creation and functioning of the Smart farming network
- Regional Smart Farming roadmap workshops
- Preparation for Smart farming learning interactions
- International virtual learning interactions
- "Action learning" regional activities
- Regional Smart farming brokerage events
- Cross-border partner-to-partner brokerage events -Armenia

NABU Armenia

Naturschutzbund Deutschland (NABU) is a German non-governmental organization that mainly deals with the protection of nature in the country and abroad, such as protection of rivers, seas, forests or some species of animals.

The organization was founded in 1899 as the Bird Protection Association. It is one of the largest environmental associations in Germany. The organization implements special environmental programs, supports its own scientific institutes, implements environmental education and the media, and informs citizens about environmental issues.

Together with Bavaria's partner LBV, the organization has 664,000 members and 47,000 sponsors (status 2018). NABU is BirdLife International's national partner.



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Today, there are 15 regional, about 1,500 urban and local branches of the union in the world. There are branches of international projects in Brussels (Belgium), Addis Ababa (Ethiopia), Maikop (Russia), Bishkek (Kyrgyzstan) and Yerevan (Armenia).

The branch of the German Nature Protection Union (NABU) in the Republic of Armenia has been cooperating with the Ministry of Environment of the Republic of Armenia since 2001. In the first years of the partnership, priority was given to the implementation of international environmental conventions. Later, the cooperation expanded to include joint projects. In March 2007 (NABU) and the Ministry of Environment of the Republic of Armenia signed a cooperation agreement on the protection of biodiversity in Armenia.

Since 2010, we have been implementing programs aimed at preserving and protecting nature, biodiversity and the environment in Armenia. Our programs are built on several key pillars.

One of the most important goals is to create or improve the environment where animals and plants will be safe and secure, which will help protect human health. Around this idea, the "Human-Wildlife Conflict" program was created, within the framework of which studies are carried out in the northern regions of Armenia to find out the hot spots of the conflict, the causes, as well as the possible solutions. The program aims not only to resolve conflicts, to avoid socio-economic and human losses, but also to understand the problems of wildlife and the environment and to develop a strategy for their protection. It was this idea that led us to place photo traps in different parts of Armenia, especially in Dilijan National Park, to better understand our nature and create the right strategy for its protection.

The NABU Armenia branch attaches great importance to the implementation of various events, the aim of which is to raise public awareness, as well as to make the existing problems more audible. We have carried out and continue to campaign, such as "Clean Shore, Clean Spring", "Start Yourself", "Crane Year", "Falcon", "Eagle", "Vulture" and more. We introduce people to the protected areas and biodiversity of Armenia through various eco-educational events.

Apart from all this, we do not forget about agriculture, tourism and community development. We have "Rural Tourism Development" and "Organic Agriculture Development" programs, which contribute to the development of agriculture and tourism throughout Armenia, without harming the environment at the same time. We encourage the production of organic food, the presentation of Armenian culture and rural color in rural communities.

As a result of years of work and many programs and campaigns, we have been able to create a team that is trying its best to contribute to the study of biodiversity in Armenia, nature protection, as well as community development. We have been able to establish strong and reliable ties with many organizations, individuals and government bodies both inside and outside Armenia.



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We bring together goals and ideas, create new programs, implement many events, and all these *FOR PEOPLE AND NATURE*.

Enterprise Europe Network

Donor: EU

Duration: Since 2016

About: The Enterprise Europe Network is a European initiative, aimed at providing innovation and business support to all businesses across the European Union and beyond. The EEN comprises of around 600 partners in more than 60 countries offering a wide range of services to businesses.

Starting from 2016, the Small and Medium Entrepreneurship Development National Center of Armenia in consortium with the National Academy of Science of the Republic of Armenia, hosts the Enterprise Europe Network in Armenia.

The activities of EEN in Armenia are directed to the internationalization of Armenian entrepreneurship and to development of their capacity for entering the European market. Main services offered by the EEN Armenia include:

- Sharing information on European legislation, policies, standards, possible sources of financing, business cooperation opportunities and other EU issues,
- Supporting SMEs to identify potential business partners and to establish new business cooperation in the European market,
- Dissemination of business and technological profiles of Armenian businesses in foreign countries,
- Provision of information and consultation on intellectual property rights and further commercialization issues,
- Organization of business cooperation events and support in organization of meetings with potential partners.

In order to promote the international cooperation, the Enterprise Europe Network periodically organizes regional, national and European level events.

Rural Economic Development - New Economic Opportunities (RED- NEO) Program

Donor: USAID

Implementing organisation: Center for Agribusiness & Rural Development (CARD)



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About: The “Rural Economic Development-New Economic Opportunities (RED-NEO)” program funded by USAID builds upon current and previous development projects, initiatives and activities that the government of Armenia, the U.S. government and USAID, and other donor and non-governmental organizations are implementing, to address economic challenges in rural Armenia.

RED-NEO activities promote inclusive, sustainable economic security and economic growth by supporting entities acting in the horticultural sector in at least 60 communities. The program will accelerate the growth of small- and medium-sized enterprises (including farms and cooperatives) in the regions; facilitate market linkages between producers and buyers; and establish networks to promote local economic development. It will foster the development of a competitive agriculture sector by improving the performance of rural businesses and cooperatives, and their ability to meet quality standards.

RED-NEO Program strives to achieve the following objectives:

- ✓ To identify value-added opportunities and translate them into sustainable economic activities
- ✓ To help farmers to increase incomes through sustainable access to markets

EU-Green Agriculture Initiative in Armenia (EU-GAIA)

Donor: Austrian Development Agency with exclusive funding from the Austrian Development Cooperation

About: The EU-Green Agriculture Initiative in Armenia (EU-GAIA) project is part of the EU’s Annual Action Programme for 2018 - Regional Development. The project is implemented within the framework of the EU-GAIA project with exclusive funding from the Austrian Development Cooperation, while the Austrian Development Agency is the main implementing partner for the EU programme. The project activities are mainly concentrated in Shirak, Lori and Tavush regions as envisaged by EU AAP 2018. These regions are located at high altitudes in border regions. They suffer from weak economic diversification, high poverty and unemployment rates and limited access to markets, as well as increased vulnerabilities of the rural population especially in remote and border parts.

UNDP is responsible for supporting three value chains: herbs, legumes and sheep in Tavush, Lori and Shirak regions.

Objective

Overall objective of EU-GAIA project is to contribute to the realization of shared and balanced inclusive growth in the northern regions of Armenia through boosting green agriculture and enhancing local value added.



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UNDP is implementing the major parts of EU-GAIA Specific Objective 3: “Selected agribusinesses are more competitive through a rights-based approach and access to inputs, equipment, infrastructures and services”

Components:

- ✓ Pipeline of investable and high added value agribusinesses with demonstrated commitment to an inclusive and rights-based workplace environment created;
- ✓ Agribusinesses have improved productivity through access to inputs, equipment, infrastructures and services;
- ✓ Increased productivity in selected Value Chains through application of resource efficient and resilient farming practices;
- ✓ Agribusinesses have improved access to local, national and international markets.

Results so far:

- ✓ Established 3 demo sites with innovative resource efficient and climate smart practices, including Sheep Genetic Center, Herbs Seedling Center and Sheep Pedigree Farm with RFID electronic weighing and counting system of sheep.
- ✓ 80 beneficiaries selected, 60 out which already received the necessary equipment and support
- ✓ Guidelines on cultivation of Herbs and Legumes developed, printed and shared among beneficiaries
- ✓ Support was provided to 15 beneficiaries for participation in 3 local festivals and 1 international exhibition
- ✓ More than 350 beneficiaries trained on sheep breeding, herb and legume cultivation practices
- ✓ More than 400 heads of new efficient meat breed sheep are imported from France and distributed among beneficiary farmers
- ✓ About 20 ton of Elite type of legume seeds distributed among beneficiaries, which produced more than 200 tons of legume seeds
- ✓ Business model calculation online tools were developed for each value chain: legumes, herbs and sheep



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- ✓ Number of promotional video and printed marketing materials were developed to promote the products of project beneficiaries
- ✓ One event for facilitation of market linkages was organized along the sheep breeding value chain.

The European Neighborhood Programme for Agriculture and Rural Development (ENPARD)

Donor: EU

Duration: October 2014 - September 2018

Implementing organizations: Ministry of Agriculture of the Republic of Armenia, the United Nations Industrial Development Organization, United Nations Development Programme and the Food and Agriculture Organization of the United Nations, local authorities and farmer groups.

About: The purpose of the project was to strengthen and establish primary producers' groups within the targeted value chains in selected regions of Armenia, improve their capacity and actively engage in value addition and provide direct assistance within the selected value chains that will benefit not only stakeholders of those value chains but also Armenian consumers locally and nationally. The project aims at improving the agricultural institutions, encouraging the development of farmers' associations and improving access to more affordable food.

EU Organic Agriculture Support Initiative (OASI)

Donor: EU co-funded and implemented by the Austrian Development Agency (ADA)

Duration: 2015-2019

About: December 2015 marked the start of an EU-funded project in Armenia. The Organic Agriculture Support Initiative (OASI) helped to unleash the potential of the Armenian organic agriculture sector over the next three years. The project was co-funded and implemented by the Austrian Development Agency (ADA), the operational unit of the Austrian Development Cooperation.

This project specifically aimed at increasing local value-added of Armenian organic products as well as assisting higher efficiency of relevant public and private institutions. It supported the RA Ministry of Agriculture with creating a clear and enabling legal environment for organic producers and processors in line with international standards. OASI also strengthened extension services for the promotion of organic technologies and support educational institutions through curricula development. The project had a budget of € 3.3 million and will be implemented over the course of three years.



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A big portion of the project support rolled out directly to Armenian producers and processors through a call for grant applications. Small grants were available for smallholder farmers seeking to start, diversify or expand organic production, while bigger grants were available to already established organic farmers, co-operatives and processors for enhancing productivity and market access.

Advice for Small Businesses

Implementing organisation: European Bank for Reconstruction and Development (EBRD)

Duration: 2010 - 2019

The programme aimed to promote good management in the small and medium-sized enterprise sector by providing technical assistance and consultancy, helping them to grow their businesses.

Objectives of the programme are:

- Contribute to improved access to finance for SMEs and enhance competitiveness of assisted SMEs.
- Strengthen and improve sustainability of local business advisory services infrastructure

The activities of the programme include:

- Provision of a business advice through international advisers and local consultants. This includes teaching and mentoring activities as well as the dissemination of commercial and technical know-how to key managers;
- Organisation of study visits;
- Provision of financial support.

The programme was implemented in all regions of Armenia. About 76% of assistance was provided to SMEs operating outside of Yerevan. The programme worked in almost all sectors of economy.

“Match&Grow” Project

Duration: July 2021 - December 2021

About: Within the framework of the EU funded program (under EU4Business: Connecting Companies project) the "Dobrich Chamber of Commerce and Industry" (DCCI) Bulgaria and the Fund "Investment Support Center" (Fund ISC) Armenia jointly implemented the "Match&Grow" Project.



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The Project lasts 6 months: started from July 2021 and finish at the end of December 2021. The direct beneficiaries of the Project were the SMEs, engaged in bio/organic food sector.

The Project's overall objectives were to organize successful and effective B2B meetings for Armenian and Bulgarian companies that are engaged in the above-mentioned sector.

The main activities were the organization B2B matchmaking face-to-face meetings with the participation of beneficiary SMEs, also visit Expos, as well as company visits for both countries' SMEs. Each Project beneficiary had an opportunity to have meetings with foreign food distributors, agents, wholesalers, and as a result of B2B meetings held, some beneficiaries had an opportunity to sign cooperation contracts with foreign partners.

Also, within the Project, the beneficiaries get some specific consultancy on branding, packaging, labelling, and other components of marketing.

The main obstacles to further cooperation and Project implementation are mostly the EU and EaP countries' legislations and/or export tax rates, duties, complex logistics, etc.

Mentoring GBIF Armenia - GBIF France

Duration: August 2021-July 2022

About: The project goal is to establish well developed national node infrastructure, to establish a national web portal for biodiversity data digitization and mobilization, to empower national and international GBIF committees through ALA. GBIF France will be mentoring the GBIF Armenia providing technical online workshops (capacity building on IPT, R, OR, ALA basic modules); designing and inventing a website and portal to be hosted by GBIF France. Data publication and dataset on the GBIF platform will be increased during the project. Training modules will be developed and e-learning modules will be re-used within the platform. This mentoring project should benefit the two nodes, acting as a mentor is also an important opportunity to foster the mentoring node's own capacities. The language of the mentoring will be English; this should facilitate interactions between nodes staff, decision-makers, members of the monitoring committee, and other stakeholders.

BioDATA-Biodiversity Data for Internationalisation in Higher Education

Funded by the Norwegian Agency for International Cooperation and Quality Enhancement in Higher Education (DIKU)

Duration: 2017-2021

About: The main objective of the project is to transfer and develop biodiversity data management and publishing modern skills and tools from Norway to higher education in Armenia, Ukraine, Belarus and Tajikistan within interested students and professionals in the sphere of biology, ecology, agronomy and bioinformatics. These skills are practically never



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taught in the present day university curricula, although they belong to the essential kit of a modern and digitally advanced biodiversity student and researcher. The project will have six events spread over a three-year period: i) Kick-off and coordination event in Oslo; ii) train-the-trainers event in Minsk, iii) intensive data course in Minsk, iv) intensive course in Dushanbe, v) intensive course in Yerevan, and vi) closing event and final coordination meeting in Oslo. The main element of the project is a GBIF data training course adapted to the project and each country's needs. The three intensive blended learning courses begin with a 2-week online component, then continue with a 4-day onsite workshop that includes on Day 1 Biodiversity informatics fundamentals (including introductions to Darwin Core) and data mobilization planning. Days 2-3 cover introductions to digitization, data management, data quality, data curation/transformation/formatting, and data publishing (using the Integrated Publishing Toolkit).

Day 4 is devoted to hands-on practice using use case exercises. It concludes with a month-long online component that again utilizes use case exercises to allow the participants to demonstrate the skills they learned. After successful completion, students are awarded a digital certification. Training of trainers and training of MSc and PhD students from Norway and Eurasian partner countries will enable digitisation of biocollections using standard databases and GBIF standards for international access to facilitate, enhance and internationalize research.

5. Conclusions and Recommendations

Studying the projects implemented in Armenia which also aimed to create clusters of cooperation between countries it is obvious that the projects implementation team members highly value and appreciate the implemented projects and the experiences gained. Due to the projects many cooperation ties have been established between different countries, the program participants have been given the opportunity to participate in many international exhibitions, to gain new markets. Within the framework of the programs, many international experts have consulted in relevant fields, experience exchange meetings have taken place. Beneficiaries of the projects received a variety of support, including technical support. Within the framework of the grant programs, many businesses have equipped their production with new equipment, which has made it possible to expand the products and enter the foreign market with more confident steps. There were consultations on marketing, branding by international experts, support on certification of organic products.

There are two projects Mentoring GBIF Armenia - GBIF France and BioDATA-Biodiversity Data for Internationalisation in Higher Education which are in the process of implementation.

Within the framework of these programs, a group of students will be taught the skills of using biodiversity data management and EOT tools. Priority will be given to the issue of biodiversity conservation, a national biodiversity platform will be created. We suggest to separate the most interested students from the given group of students and to include them in the HEGO training component. In this way, we will prepare future biodiversity experts,



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who in turn will have the opportunity to disseminate knowledge among producers and industry beneficiaries. Thus, the impact of our program will have bigger impact on the sector.

There were no obstacles, barriers and difficulties during the implementation of the projects. The main difficulties were connected to COVID-19 which lead to cancelation & delays of many project activities, especially cross-border events, which were conducted online at the end.

6. Notes

Joint Operational Programme Black Sea Basin 2014-2020 is co-financed by the European Union through the European Neighborhood Instrument and by the participating countries: Armenia, Bulgaria, Georgia, Greece, Republic of Moldova, Romania, Turkey and Ukraine.

Disclaimer

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Annex 1 - Template of Best Practices

Manana tea

General information	
Title of the practice	<i>Cooperation between Armenia and Germany</i>
Does this practice come from an ENI Black Sea Basin Project?	No

If the answer is 'yes':

<i>Please provide the project acronym and Title</i>	<i>NABU Armenia</i>	
Main organisation involved	<i>TeeGschwendner GmbH</i>	
Location of the practice	Country	<i>Germany</i>
	Region/District	<i>Rhein-Sieg district</i>
	City/Town	<i>Meckenheim Stadt</i>

Detailed description	
Detailed information on the practice	<p><i>Naturschutzbund Deutschland (NABU) is a German non-governmental organization that mainly deals with the protection of nature in the country and abroad, such as protection of rivers, seas, forests or some species of animals. Since 2010, they have been implementing programs aimed at preserving and protecting nature, <u>biodiversity</u> and the environment in Armenia.</i></p> <p><i>As a result of the implementation of the program in 2018, workshops were held aimed at creating a new market for tea producers in Armenia.</i></p> <p><i>In March 2018 a contract was signed between Fine Food LLC and TeeGschwendner GmbH. Manana tea production company exported organic certified wild mint to Germany.</i></p>



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	<i>The product was exported with an organic transaction certificate; no problems arose during the export. The main achievement was that the company gained new market.</i>
Resources needed	<i>No additional financial or human resources were needed to implement this cooperation. The workshop had 10 employees and enough raw materials to carry out the order.</i>
Timescale (start/end date)	<i>March 2018 - June 2018</i>
Evidence of success (achieved results)	<i>We can consider this practice as good because for the producer, any new connection or cooperation is very important. Wild organic mint was exported for 10.5 Euros per kilogram. Transportation costs were covered by the importing company.</i>
CRITERION 1 Sustainability	
1.a) Impact on safeguarding herbs biodiversity	<i>This collaboration has not affected the biodiversity, the plant is wild collected, the wild collection groups are provided with appropriate training on how to carry out wild collection, so that not only do not harm the biodiversity, but also hold wild collection that promotes plant reproduction.</i>
1.b) Economic viability	<i>This cooperation became the basis for another cooperation, a supply contract was signed with a store in Hamburg.</i>
1.c) Social impact	<i>By communicating with foreign partners, you gain new knowledge with each new partner. Each country has its own market culture, and both sides gain new knowledge</i>



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CRITERION Values	2	
2.a) Scientific		<i>When a new contract is signed with each new partner, new conditions are established. It contributes to the perception of new views, new rules of practice with different countries and companies</i>
2.b) Educational		<i>With each new contract and cooperation we gain new knowledge. We study the laws of different countries and the appropriate procedures and provide this information to our raw material supplier groups so that in the future the product will be more compliant with all standards</i>
2.c) Economic		<i>The possibility of new exports increases the recognition of the company and the possibility of acquiring new partners</i>
CRITERION Transferability	3	
3.a) Organisational model		<i>Every organization has its own way of working . We take good examples from each new collaboration and input the given work style in the work process of our own organization. This collaboration was quite easy because our companies worked in the same style.</i>
3.b) Policy making process		<i>The goods were exported in accordance with the existing laws and policy.</i>
3.c) Specific tools (e.g. training, financing, management)		<i>As a result of the implementation of the NABU project in Armenia various workshops and trainings were held aimed at raising the awareness in the herb sector and creating a new market for tea producers in Armenia.</i>
3.d) Risk management		<i>Export quantities and goods are always covered by compulsory insurance</i>
Difficulties encountered & lessons learned		<i>There were no difficulties during the cooperation. Our brand was registered in Traces, so there were no difficulties in the process of export.</i>



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Potential for learning or transfer	<i>Every new practice can be considered as potentially interesting. Every new practice brings something new to your business.</i>
Further information	<i>N/A</i>
Contact details (for this document)	
Name	<i>Tigran Sahakyan</i>
Organisation	<i>Fine Food LLC</i>
Email	<i>biouniversalllc@gmail.com</i>

Annex 1 - Template of Best Practices

Antaram teas

General information	
Title of the practice	<i>Herb products export to France</i>
Does this practice come from an ENI Black Sea Basin Project?	<i>NO</i>

If the answer is 'yes':

Please provide the project acronym and Title	<i>OASI Organic Agriculture Support Initiative</i>	
Main organisation involved	<i>L'HERBIER DU DIOIS</i>	
Location of the practice	Country	<i>France</i>
	Region/District	<i>Zone Artisanale, Guignaise, 26410 Châtillon-en-Diois</i>
	City/Town	<i>Châtillon-en-Diois</i>



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Detailed description	
Detailed information on the practice	<p><i>The cooperation was carried out between Antaram SC and the French company Herbier Du Diois. The main goal was to obtain high-quality, certified organic herbal teas that would be competitive in Western Europe.</i></p> <p><i>At the beginning of the cooperation, there were some problems like meeting the requirements of the product, availability of needed resources.</i></p> <p><i>The beneficiaries of the cooperation were the population of all the communities that participated in the process of wild collection and processing.</i></p>
Resources needed	<p><i>For the cooperation the company used own financial resources, we were able to contribute all the process from wild collection to export,</i></p> <p><i>Wild collection groups from different parts and marzes of Armenia were involved in the collection process, what about the processing besides our workers some other workers from the community were also involved</i></p>
Timescale (start/end date)	<i>June 2018 (ongoing)</i>
Evidence of success (achieved results)	<i>The cooperation is still in process. With each passing year we managed to double the export volume of the previous year. It has become a reality due to long-term daily work with the partner, issues identification and risk management.</i>
CRITERION Sustainability	1



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<p>1.a) Impact on safeguarding herbs biodiversity</p>	<p>The company carried out wild collection in different regions. We do not allow our collectors to do wild collection in the same area twice. We follow all the rules of wild collection to exclude the risk of damaging the herb.</p>
<p>1.b) Economic viability</p>	<p>Till now we cooperate with the company, the export volumes are increasing year by year. We are upgrading the production unit and capacities of our company to be able to get higher quality product, to export more and to gain new customers.</p>
<p>1.c) Social impact</p>	<p>In scope of the cooperation seasonal job opportunities are created not only for our community residents, but also for the people from other regions. Inflows, in turn, have a positive social impact not only on those directly involved.</p>
<p>CRITERION Values</p>	<p>2</p>
<p>2.a) Scientific</p>	<p>When collecting wild plants, it is necessary to know all about the types of wild-collected herb, to exclude the risk of damaging the endemic herbs or the herbs that are included in the Red book. So we highly follow the scientific information about the types we collect.</p>
<p>2.b) Educational</p>	<p>We educate our collecting groups about rules of wild collection.</p>
<p>2.c) Economic</p>	<p>Every cooperation and exporting opportunity has its positive impact on the economic sphere.</p>
<p>CRITERION Transferability</p>	<p>3</p>
<p>3.a) Organisational model</p>	<p>During every cooperation a unique organizational process model is developed. Now every step of the cooperation is agreed and adapted to the companies rules.</p>
<p>3.b) Policy making process</p>	<p>N/A</p>



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3.c) <i>Specific tools (e.g. training, financing, management)</i>	<i>Our organization is organic certified and we hold every year trainings for both our wild collection groups and for the workers of the processing unit.</i>
3.d) <i>Risk management</i>	<i>Every issue that arise is identified and is solved.</i>
Difficulties encountered & lessons learned	<i>At the beginning of the cooperation, there were some problems like meeting the requirements of the product, availability of needed resources. Now the product fully meets the order standards. Also our company has started to cultivate wild herb in greenhouse, which will help to have a larger quantities even in off-season and to promote the cultivation of the wild herbs.</i>
Potential for learning or transfer	<i>This collaboration has created an opportunity for us to acquire knowledge in parallel with the work process.</i>
Further information	N/A
Contact details (for this document)	
Name	<i>Areg Galstyan</i>
Organisation	<i>Antaram tea</i>
Email	<i>info@antaram.am</i>



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7. Conclusion

Speed, flexibility, adaptability, quality, innovation, networks, and critical mass are essential for surviving in the global market. This new way of conducting business necessitates a team approach at a local level - a clustering approach. The interaction of companies that are similar to one another, healthy competition, networking, and collaboration are all aspects of clustering. In addition to fitting with models of innovation and competition, cluster theory emphasizes the role of networks and relationships between the many components of a cluster rather than individual enterprises.

HEGO project's philosophy is based on the core principles of integration (of activities) and collaboration (of members) for mutual benefit, aiming to pave the way towards a cross-border cluster in the herb sector, while offering multi-level benefits to all the stakeholders that will be involved in this initiative.



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Programme: **Joint Operational Programme Black Sea Basin 2014-2020**

Project: **BSB-987 – Herbs for Growth / HEGO**

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