AGROLABS HANDBOOK

of the Project:

“AgroFood Innovation Clusters”

(“AgroLabs”)

Co-financed by Transnational Cooperation Programme Interreg Balkan – Mediterranean 2014 – 2020

Prepared by:
Municipality of Razlog – (PP7)

2020
Project cofunded by the European Union and National Funds of the participating countries
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1. General Scope of the Document

The present deliverable constitutes the “AgroLabs Handbook” and is being developed in the context of the Project “AgroFood Innovation Clusters” with the acronym “Agrolabs”. The AgroLabs project is being implemented under the “Transnational Cooperation Programme Interreg Balkan - Mediterranean 2014-2020” and is co-funded by the European Union and National Funds of the participating countries.

The “AgroLabs Handbook” includes a summary of the project activities and what the project has accomplished (e.g. outcomes, results, etc.). It is uploaded on the website and has been distributed at the Final Transnational Conference; also, it is available to all Project Partners for reprinting.
2. Introduction

For Balkan Med region, the agro food sector has an important social and economic role –especially in rural communities- and is emerging as a central element for the region’s development. Despite the diversity of production systems and the different degrees of obstacles, Balkan Med territories are facing common challenges that limit the development of the agro food sector and weaken especially the small ones. Most constraints are common in rural Balkan Med areas, such as lack of innovation and productivity, quality and food safety, difficulties in promoting typical products, access to funding and the structure of the value chain at a regional level. On top of that, agricultural policies implemented by Balkan Med countries in recent decades have led to their increasing dependence on imports and to their total exposure to volatile international markets.
2.1 The AgroLabs Concept

AgroLabs Project aimed to foster the production and distribution of innovative agro food products of the Balkan Med area by organising local value chains, supporting SMEs and producers in their development projects and creating new markets for their products. To achieve these aims towards the sustainable growth of the Agro Food sector, all relevant parties were engaged. The promotion of sustainable agro-food development requires promoted and maintained "enabling environments", in particular those aimed at ensuring innovation, continuing human resource development and capacity building. This was achieved through the development of Agro Food innovation clusters, a place where research, industry and authorities can meet to co-create the Balkan Med area’s competences in innovation of agro-food sector. This can contribute to the organisation of agro-food value chains, support SMEs and producers and promote their products in local and international markets.
The outputs benefit producers, SMEs (Small and Medium-sized Enterprises) and all parties in the Agro food value chain, local/regional authorities and the participating regions. The innovative “bottom-up” approach of AgroLabs allowed to meet the needs and the aspirations of the involved stakeholders and to ensure the appropriation of the AgroLabs clusters by building a joint strategy through cross-border exchange of experience. This led to the creation of the Balkan Med network of agro-food clusters. In addition, AgroLabs partners acting as facilitators provide stakeholder support throughout the project lifetime.
2.2 The AgroLabs Partnership

The beneficiaries that constitute the AgroLabs partnership are presented at the following table:

**Table 2.1: The AgroLabs Partnership**

<table>
<thead>
<tr>
<th>Partner No.</th>
<th>Partner</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>LP</td>
<td>Special Account for Research Grants (ELKE) of the University of West Attica</td>
<td>Greece</td>
</tr>
<tr>
<td>PP2</td>
<td>Region of Central Macedonia</td>
<td>Greece</td>
</tr>
<tr>
<td>PP3</td>
<td>Cyprus University of Technology</td>
<td>Cyprus</td>
</tr>
<tr>
<td>PP4</td>
<td>Development Agency of Lemesos</td>
<td>Cyprus</td>
</tr>
<tr>
<td>PP5</td>
<td>Agricultural University of Tirana, Department of Agroeniviroment and Ecology</td>
<td>Albania</td>
</tr>
<tr>
<td>PP6</td>
<td>Municipality of Fier</td>
<td>Albania</td>
</tr>
<tr>
<td>PP7</td>
<td>Municipality of Razlog</td>
<td>Bulgaria</td>
</tr>
<tr>
<td>PP8</td>
<td>Sofia University &quot;St. Kliment Ohridski&quot;, Faculty of Biology, Department Ecology and Environmental Protection</td>
<td>Bulgaria</td>
</tr>
</tbody>
</table>
4 AgroLabs
Clusters were developed

Cluster in the regional unit of Fier (ALBANIA)
Cluster in the regional unit of Imathia (GREECE)
Cluster in the regional unit of Blagoevgrad - Razlog (BULGARIA)
Cluster in the region of Limassol (CYPRUS)

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2.3 AgroLabs General Scope

AgroLabs Project supported cross border cooperation in the agro-food sector by promoting innovative technologies, strategies and products as well as it support and increase the know-how of agro-food SMEs and parties in the entire value chain. This lead to a more competitive Balkan Med region. Further expected results of AgroLabs are:

- Improvement of innovation performances of food enterprises, institutions and research bodies, through the definition and application of analytical and intervention tools, oriented to manage know-how for achieving an effective and more intensive application of R&D and innovation.

- New concrete projects for building innovation capacity as well as improved products and processes in agro food sector, by converging SMEs needs, skills of research bodies and institutional support, obtaining the critical mass able to participate more effectively in R&D EU Programmes.
- Stronger collaboration and relationships among research bodies, institutions and agro-food enterprises at local and cross border level.
- Reinforcement of existing transnational cooperation networks and establishment of new ones without distorting the market, through a “transnational horizontal network” among the involved Balkan-Med regions and opening to other EU areas.

As it is evident, the results of AgroLabs are directly contributing to the result indicator of the SO 1.2. SMEs introducing product or process innovations, since AgroLabs contribute to support agro food enterprises to introduce new products through the cooperation with research institutions.

2.4 Deliverables and Milestones

AgroLabs Project includes 5 Work Packages (WP).

**WP1** aimed in the overall coordination and management of the project in administrative, financial, and technical level based on the PRINCE2 methodology. Additionally, the WP1
includes the continuous monitoring and evaluation of activities and results of the project, internal communication and coordination between partners and with the JTS. The activities of WP1 remain constant throughout the duration of the project.

**WP2** aimed to disseminate the project and its results towards a broad target audience. Effective dissemination of the project is made possible through the development and implementation of a detailed communication plan and appropriate dissemination activities. The activities of WP2 are constant throughout the duration of the project.

**WP3** aimed to assess and provide an integrated diagnosis of agro food value chain of AgroLabs’ targeted regions (Central Macedonia, Limassol, Blagoevgrad and Fier). The methodology that has been followed includes an inventory of the agro food chain, literature review, identification of local stakeholders; field surveys interviews and working meetings with experts and key stakeholders.
**WP4** aimed to define strategic priorities which ensure the development of the industry and proposals of ways forward to create agro food clusters. It included joint conceptualisation of clustering solutions as well as innovative products and processes. The methodology to be followed is the stakeholders’ consultation. Upon the completion of WP3, AgroLabs partnership shared the conclusion of the diagnosis with key stakeholders on regional level. An open transnational event (Innovation Summit) brought together multiple stakeholders from each region and captured, shared and transferred the knowledge and experiences from the stakeholders’ consultation on regional level. All lessons learned were summarized in 4 Local Action Plans, and these also served as an operational plan for the establishment of AgroLabs in WP5.

**WP5** aimed at the development and operationalization of the 4 AgroLabs as a transnational network. AgroLabs’ operation involves support, monitoring, mentoring sessions and training activities so as to ensure the
sustainability of the cluster developed. Research partners in collaboration with agro food SMEs worked on case studies that involve innovative products, innovative processes or solutions that respond to the challenges of the pilot region identified in WP3 with consultation in WP4. Training activities followed on how to incorporate the innovative products in the SMEs production. The operation of the 4 AgroLabs is subject to constant evaluation.
3. Implementation stages that were follow during the entire procedure of the development of the AgroLabs cluster.

3.1. “Diagnosis of The Agrofood Value Chain Studies” - An integrated diagnosis of the Agro-food value chain in the AgroLabs’ target regions (Central Macedonia, Limassol, Blagoevgrad and Fier) was necessary in order to map the local production and the people involved, identify problems, collect data that can be used as tools for solutions, describe potential alternatives and achieve knowledge exchange. The methodology that has been followed includes an inventory of the agro food chain, literature review, identification of local stakeholders; field surveys interviews and working meetings with experts and key stakeholders. Secondary data that has been used: as studies in the focus groups, desk-analyses, studies on the Internet in order to meet the needs of stakeholders and to identify the strengths and weaknesses of the current situation.
3.2. “Transnational Synthesis Report and the Common AgroLabs Stakeholders Database” - The “Transnational Synthesis Report and the Common AgroLabs Stakeholder Database” aimed to gather in one deliverable all data, findings and conclusions of the four “Diagnosis of the AgroLabs value chain studies” in order to have a more complete and collective view on the current situation of the agro-food sector in the four target areas (Central Macedonia, Limassol, Blagoevgrad and Fier) and also depict the needs and problems of the actors in this sector. All four “Diagnosis of the AgroLabs value chain studies” in the four target regions (Central Macedonia, Limassol, Blagoevgrad and Fier) - collect all data, findings and conclusions were composed in the Transnational Synthesis Report.

The same statistical indicators that have been described at the four Diagnosis Studies (namely: percentage, average arithmetic value, standard deviation, and qualitative analysis) were calculated in the Transnational Synthesis Report.

This Report also included conclusions regarding the needs of the actors in the agro-food sector in the four areas, the
challenges and the problems that they face, the current situation in the agro-food sector in the four areas.

3.3. “AgroLabs Workshop” - The AgroLabs Workshops enabled multi-stakeholders’ joint conceptualization and development of pilot agro-food innovation clusters. In particular, the AgroLabs Workshops disseminated the knowledge gathered in Transnational Synthesis Report to SMEs and producers in the agro-food sector and also to relevant stakeholders of the agro-food sector, aiming mainly in the participants’ understanding of the importance of cluster development. The participants were informed of the development potential/ dynamics of their region, the importance of clustering for their business sector and the benefits that derive from participating in a cluster. The workshops also focused on the exchange of information, opinions and experiences among participants. The feedback from the participants in the context of the Workshops was considered a very important element in the successful organization of the AgroLabs clusters.
Workshop in Imathia (Greece)
Workshop in Limassol (Cyprus)
Workshop in Fier (Albania)
Workshop in Razlog (Bulgaria)

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3.4. **AgroLabs Innovation Summit** - The AgroLabs Innovation Summit - a transnational conference that involved key stakeholders from each region; the aim of the Summit organization was to promote the transnational exchange and networking, discuss challenges and develop common solutions and strategies concerning the growth of the agro-food sector in the Balkan-Med region. The Innovation Summit brought together multiple stakeholders from each region and captured, shared and transferred the knowledge and experiences from the stakeholders’ consultation on regional level (Workshops). In the context of the Summit, networking was promoted, challenges in the sector were discussed and common solutions and strategies concerning the growth of the agro-food sector in the Balkan-Med region were developed.
3.5 AgroLabs Local Action Plan - Four Local Action Plans were developed in WP4; they gathered the result of stakeholders’ consultation activities and they aimed at
building joint strategy at regional level. They served as the operational plan for the establishment of AgroLabs cluster. All lessons learned from the interaction with the local stakeholders at regional level and the conclusions of the Workshops and also the experience gained from the Innovation Summit were summarized in 4 Local Action Plans, which served also as an operational plan for the establishment of AgroLabs local clusters. The Local Action Plans essentially were guides towards the solution of the problems that had been already identified.

3.6. Pilot Case Study - All research partners in collaboration with agro-food SMEs and local producers worked on case studies that involve innovative products, innovative processes or solutions that respond to the challenges of each of the pilot region that were identified in WP3 and consultation in WP4.

3.7. AgroLab Cluster developed - Agro-Food Innovation clusters (AgroLabs) serve as physical place where industry (agro-food enterprises, producers, actors in the value chain etc.), research institutions and public authorities meet.
AgroLabs’ operation involved supporting, monitoring, mentoring sessions and training activities so as to ensure the sustainability of the cluster developed, incorporate innovative products in the SMEs production and enhance typical products’ commercialization etc. The 4 AgroLabs are not only operating as units but also as a transnational network.

The innovative approach of AgroLabs allowed to meet the needs and the aspirations of the involved stakeholders and to ensure the appropriation of the AgroLabs clusters by building a joint strategy through cross-border exchange of experience. This led to the creation of the Balkan-Med network of agro-food clusters. In addition, AgroLabs partners acting as facilitators provide open and free support to relevant stakeholders throughout the project’s lifecycle.

The AgroLabs clusters (physical establishment) will continue their operation after the project has been finalized. The AgroLabs clusters will continue to provide support to agro-food SMEs to facilitate the delivery of concrete solutions for common problems by pooling
resources and expertise and strengthening innovative capacity, without distorting the market.

3.8. AgroLabs Assessment - The AgroLabs Assessment comprises the monitoring and evaluation of the AgroLabs Clusters. It aimed to monitor the progress of the AgroLabs Clusters development and the evaluation of their operation, in order to provide information to the responsible partners about the clusters’ functionality. That way they were informed about any weaknesses that might come forth or challenges that may arise and therefore they have the opportunity to take corrective measures in time.

4. Main outputs and results of AgroLabs project:
   - *Four Diagnosis of the agro-food chain* of Imathia, Lemesos, Blagoevgrad and Fier regions were developed;
   - *Seven AgroLabs Workshops* were organized on the territory of each project partner so as to enable
multi-stakeholders’ joint conceptualisation and development of pilot agro-food innovation clusters;

- **Four Local Events** were organized in order to create awareness and disseminate the Project outputs. Key stakeholders on the local level were invited to attend these events;

- **Final Transnational Conference** was organized by PP2 – Region of Central Macedonia in the city of Veria, Greece.

- **Participation to International Conferences (6)** - participation/presentation by members of the PP3 team, regarding research results/ outcomes, in
order to increase the AgroLabs outreach; In: Milan-Italy, Liege-Belgium, Ghent-Belgium, Marrakesh-Morocco, Belgrade-Serbia, Dresden-Germany:

- **AgroLabs Innovation Summit** was held in Fier, Albania which was a transnational conference that involved key stakeholders from each region, in order to promote the transnational exchange and networking, discuss challenges and develop common solutions and strategies concerning the growth of agro-food sector in Balkan-Med region;

- **Four Local Action Plans** were developed that were the results of stakeholders’ consultation activities and aimed at building joint strategy at regional level. They served as the operational plan to establish the AgroLabs cluster;

- **Four Pilot Case Studies** were developed. All research partners, in collaboration with agro-food SMEs and local producers worked on case studies that involved innovative products, innovative processes or
solutions that respond to the challenges of each of the pilot regions identified in WP3 and WP4;

- **Four AgroFood Innovation clusters** have been created. AgroLabs clusters serve as physical places where industry, research institutions and public authorities meet. The four AgroLabs clusters led to the creation of the Balkan-Med network of agro-food clusters.

### 4.1. Communication tools:

Throughout project’s lifecycle, a wide range of channels were used in order to address target audiences and maximize the dissemination of the project AgroLabs Innovation Clusters. Several tools were used, depending on each target audience category, in order to achieve communication adaptability.

- **AgroLabs project identity** – project logo;
- **AgroLabs poster** – posters were placed on visible place on each project partner organization;
- **AgroLabs website** – an official website of the project has been created – [www.agrolabs.eu](http://www.agrolabs.eu);

- **AgroLabs social media** - Facebook, Twitter and LinkedIn accounts were created for the project AgroLabs Innovation Clusters;

- **AgroLabs brochures** – the brochures were developed and distribute in English and in the national languages of the participating countries;

- **AgroLabs Electronic Newsletters** – 4 AgroLabs E-newsletters were developed thorough the project lifecycle;

- **AgroLabs video** was created;
- **AgroLabs Handbook** was developed and includes a summary of the project activities and what the project has accomplished;

- **AgroLabs Stickers** were placed in a visible place in all equipment that was purchased in the context of the AgroLabs Project;

- **Four Scientific article** were written by members of the PP3 team, regarding research results/ outcomes, in order to increase the AgroLabs outreach


- **Event materials** were developed. Each set include a paper folder, a note pad, the AgroLabs brochure (as was mentioned before) and a pen.
5. **Four AgroLabs clusters.**

5.1. **AgroLabs Cluster in Imathia, Greece** – The AgroLabs Cluster in Imathia is located in Veria, at the premises of the Regional Unit of Imathia. The core of the Cluster are fruit producers and in particular, producers whose production includes mostly peaches and nectarines.

The Region of Central Macedonia (PP2 in the Project) aims to assist the Cluster members (i.e. producers of peaches and nectarines) to integrate innovation into their production through the AgroFood Innovation Cluster.

The strategic framework is based on the Local Action Plan, which was previously developed by Region of Central Macedonia; the Cluster’s Strategic Areas of Focus are the following:

I. Cluster Creation, Cluster awareness, Business Culture, Entrepreneurship
II. Training Production, value chain integration
III. Business models, Cooperative Schemes, Synergies
IV. Legislation
V. Marketing, distribution chains integration.
Particularly important have been the efforts to ensure that the AgroLabs Cluster will remain the local implementation tool for the Agro-Food sector policy decided in regional level. This will ensure that the actions of the Local Action Plan, already aligned with the relevant RIS3 and the RCM ROP (Regional Operational Programme), can be adapted and incorporated in the Region of Central Macedonia’s funding schemes and thus be viable in the long term.

The operation of the Agro-Food Innovation cluster (AgroLabs Cluster) for Imathia Prefecture involves a variety of activities including among others the support, monitoring, mentoring sessions and training activities so as to ensure the sustainability of the developed cluster, the incorporation of innovative products in local SMEs production and the enhancement of typical products’ commercialization.

In the business aspect of the AgroLabs project, the focus is placed on the business and marketing applications of the Cluster’s Innovation, namely the improvement of storage and packaging results of peaches and nectarines, which
was the result of the Pilot Case Study developed by the University of West Attica, LB in the Project.

5.2. AgroLabs Cluster in Lemesos, Cyprus - AGROLABS CLUSTER FOR MEDICINAL AND AROMATIC PLANTS IN THE REGION OF LEMESOS, CYPRUS

The AgroLabs Cluster in Cyprus is located in the agricultural area of Lemesos. In the Agrolab Cluster are participating producers of agro food sector, especially from Aromatic, Pharmaceutical and Herbs sector. According to the Local Action Plan Analysis in the area of Agrolabs Cluster there are no organized value chain systems and distribution channels. The movement of products is either directly from producers in local markets, or from producers in retail centres, or from producers to traders.

The Cluster support diversification of the production and the distribution of innovative food products and services by supporting producers in their development projects and creating new markets for their products. All clusters members are committed to achieving these sustainability targets for the Agro-Food sector.
The objectives of the cluster are to minimise value chain and to develop direct and closer contact between the producer and the consumer. This is expected to contribute both to improving the competitiveness of primary sector producers and to balancing market prices, as well as to maintaining the locality of products by creating local shops and markets.

The strategic goals of the AgroLabs Cluster are:

- Improving the competitiveness of Aromatic, Pharmaceutical and Herbs producers using innovation methods
- Reorganization of the supply chain
- Diversification of agricultural products in the primary and secondary sectors

5.3. AgroLabs Cluster in Fier, Albania - The main objectives of the AGROLABS Local Cluster in Fier area in Albania, are the following:

- improvement of innovation capacities and sustainability performances of all stakeholders, farmers, food enterprises, local institutions, research/technology bodies at local and national level,
• proposition and pilots of new concrete projects and mechanisms for building innovation and technology capacity for improved products and processes in the agrofood sector,
• establishment of mechanisms for stronger collaboration and relationships among Ministries, Local government, research bodies, institutions and agrofood enterprises at local and cross border level and finally,
• reinforcement of existing transnational cooperation networks and establishment of new ones, through a “transnational horizontal network” among the involved Balkan-Med regions and opening to other EU areas.

The strategic viewpoint of the implementation has been focused in creating the first Albanian Cluster for Smart Specialization in Agriculture, as an integrated online portal that involves all potential partners with 2 core Strategic Pillars:
• Pillar 1: Pilot small scale “Smart Agriculture” demonstration project involving GIS technologies, geostatistical analysis, sensors and other sources of data to support the decision making
• Pillar 2: Lifelong Learning for farmers and stakeholders through training sessions, digital online libraries, online catalog of the stakeholders and cluster members, as well as the farmers information and news portal.

5.4. AgroLabs Cluster in Razlog, Bulgaria - The AgroLabs cluster is directed to dairy sector on the territory of Blagoevgrad province with center the town of Razlog (Municipality of Razlog). Production of milk and dairy products, which includes:
- production of fresh milk - pasteurized, sterilized and / or UHT-treated (aseptic method for processing milk at ultra-high temperature);
- production of milk based beverages;
- production of cream of fresh milk;
- production of condensed milk;
- production of dried milk and powdered cream;
- production of milk butter and other milk fat;
- production of yoghurt;
- production of white cheese, cheese and cottage cheese;
- production of whey;
- production of casein or lactose

Municipality of Razlog aims to assist dairy producers and processors to integrate innovation into their production through the development of AgroFood Innovation Cluster. The cluster with the center - the town of Razlog covers all municipalities of Blagoevgrad region.

The strategic framework has been developed on the basis of identified problems and needs of the region in the project studies and as a result of the wide stakeholder discussion campaign.

The strategic goals of the AgroLabs cluster are:

- To provide support for the development and modernization of the dairy sector on the territory of Blagoevgrad region;
- Increasing the attractiveness of the dairy sector and the marketing of milk and dairy products depending on the quality of the production.

For the whole region, the agrofood sector has an important socio-economic role - especially in rural communities, where it is a key element in the development of the region.
6. Conclusions.
The project supported the production and distribution of innovative food products and services by supporting producers in their development projects and creating new markets for their products. All stakeholders are committed to achieving these sustainability targets for the Agro-products sector. Promoting the sustainable development of agriculture requires the promotion and maintenance of "favorable conditions", in particular those aimed at ensuring innovation, continuing development of overseas resources and capacity building. This was achieved by building innovative clusters of "Agro Food" - a place where scientists, industry and authorities can meet to create changes in innovation in the agro-food industry.
The objective were achieved through the creation of innovation centers stimulating innovation and developing capacity for sustainable growth through cross-border cooperation between the cross-border
regions of Central Macedonia in Greece - Imathia, Cyprus - Lemesos, Blagoevgrad - Razlog and Albania - Fier. The project aimed to create opportunities for stimulating transnational small and medium-sized enterprises, research institutions and state and local administrations to work together.
Project cofunded by the European Union and National Funds of the participating countries.
AgroLabs Partnership

Lead Partner - Special Account for Research Grants (ELKE) of the University of West Attica, Greece

Project Partner 2 - Region of Central Macedonia, Greece

Project Partner 3 - Cyprus University of Technology

Project Partner 4 - Development Agency of Lemesos, Cyprus

Project Partner 5 - Agricultural University of Tirana, Department of Agroenvironment and Ecology, Albania

Project Partner 6 - Municipality of Fier, Albania

Project Partner 7 - Municipality of Razlog, Bulgaria

Project Partner 8 - Sofia University “St. Kliment Ohridski”, Faculty of Biology, Department of Ecology and Environmental Protection, Bulgaria