

D 4.1.2:  
Services and Digital Tools Development and Customization



## **Summary**

This report summarizes all the actions that are taking by the LP (i-BEC) to customize the tools/services that are provided to the partners-end users-public administrative bodies in order to meet their needs/requirements. In particular, the three tools/services are: 1) Precision irrigation: a digital model for the application of precise irrigation in space and time which is further upgraded, customized and applied within the Greek and Albanian territories, 2) application of Codes of Good Agricultural Practices (CGAP): a digital tool for the evaluation of the implementation of CGAP in Cyprus and North Macedonia territories and 3) application of soil erosion risk assessment: a digital model for large-scale risk assessment of soil erosion is customized for use within the Bulgarian territory.

**ACRONYMS**

The following acronyms have been used in this document:

<b>BMP</b>	Best Management Practice
<b>CGAP</b>	Codes of Good Agricultural Practices
<b>i-BEC</b>	interBalkan Environment Center
<b>LP</b>	Leader Partner

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# 1 INTRODUCTION

The Re-Source project tackles the need for improved transnational governance capacity in relation to the following three fields:

1. Irrigational water management
2. Codes of good agricultural practices (CGAP) and
3. Soil erosion risk management.

The overall objective of the project refers to the enhancement of the capacity of the public administration in five Balkan-Med countries, in relation to soil and water resources management, environmental protection and related legal framework implementation.

In agreement with the directions of the BMP framework, the project aims to capitalize on results from past projects, namely digital tools/services produced within the “Digital Convergence” framework and the “AGRO-LESS” project (ETCP Greece-Bulgaria 2007-13) and expand/customize their use into the territories of five Balkan counties: Greece, Bulgaria, Albania, Republic of North Macedonia and Cyprus in order to promote governance capacity and legal framework delivery in the three aforementioned fields.

The project exhibits a high level of transnational cooperation. The main co-operational channel among them will be brought forward by the LP (i-BEC) which aims to act as a transnational hub for the delivery of services, tools and know-how towards the rest of the partners and in close collaboration with them during all implementation phases. The transnational partnership/consortium of the project has the potential to bring changes on a wider-than national level, through the specification and development of common/harmonized definitions, methodologies and targets in the currently highly unspecified – in regulatory terms – environmental fields tackled by the project.

## 2 DEVELOPMENT AND CUSTOMIZATION OF SERVICES AND TOOLS

### 2.1 Main Objective

The main objective of the present material is to present all the actions that are taking for customizing the services/tools developed by the LP in order to meet the requirements and needs of the partners-end users-public administrative bodies.

The three existing tools are customized on the basis of the findings of the present state analysis actions (legal framework, current practices, end user requirements) and, in particular, they are properly modified in order to match the circumstances of each individual application (precision irrigation in Greece and Albania, soil erosion assessment in Bulgaria, CGAP in North Macedonia and Cyprus).

### 2.2 Development and customization procedure

The three aforementioned tools were developed and customized based on the legal and institutional frameworks as well as on the present state and end-user requirements analyses.

#### 2.2.1 Legal and institutional framework analysis

The legal framework in every country and for each respective environmental field (irrigational water management, soil erosion risk management and codes of good agricultural practices) was analysed in order to assess the present status of regulatory requirements deriving from national and European commitments, as well as the current monitoring methods and legislation delivery practices that are applied by the public authorities in charge.

The fields tackled by the project are not clearly defined on a regulatory level, neither nationally nor in the EU, and thus the analysis was yield insightful information regarding the existing institutional context and provided clues on the specific requirements for the establishment of a framework promoting sustainable practices in the above fields.

#### 2.2.2 Present state and end user requirements analysis

The present state analysis that was carried out included the study of the existing practices that are applied in each country and environmental field within the purpose of assessing their current degree of sustainability regarding the use of natural resources.

The findings and outputs from the above two actions significantly contributed to the determination of the services/tools requirement specifications that need to be provided to end users – public administrative bodies participating in the project, in order to assist them within the framework of natural resources monitoring and management.

The services/tools requirement specifications concerned mainly the methods of their provision to end users, their methods of application and the type and amount of data required in order for them to work properly.

In addition, in the case of Greece and Albania territories where large-scale strategic precision irrigation feasibility studies will be conducted, requirement specifications included also the required data for their proper implementation (soil, irrigational methods, climate, crop types etc.) and the identification of available data sources. The latter action involved both office work and field surveying for the acquisition of a wide array of data such as topography, agricultural practices, crop characteristics, irrigational practices, soil properties, climate, water and soil quality and protected areas.

During the kick-off meeting of the project that took place on July, 25<sup>th</sup> 2019, LP presented the development procedure of guidelines, methodologies and best practices of the project's provided services for end users and stakeholders. In particular, LP provided: (a) guidelines for each one of the services and tools (precision irrigation, good agricultural practices and soil erosion risk assessment), (b) protocols methodologies and Best Practices as guides for the application of each service and (c) data collection, debugging processing and harmonization protocols guidelines. The development and delivery of a set of guidelines for each service and tool as well as the combination of selected literature, LP's expertise and basic rules of the legal and institutional framework analysis have been completed and provided to all partners.

LP has completed the investigation of the needs and requirements of corresponding partners through communication and feedback as well as the study of the project's key points including the legal framework, the current practices and the end user requirements regarding the services in demand (precision irrigation, soil erosion model, codes of good agricultural practices). Furthermore, LP has established a methodology for digital tools customization in order the corresponding services to be successfully provided, and also LP developed and customized these tools according to the needs of the partners.

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