



ALSÓ-TISZA-VIDÉKI VÍZÜGYI IGAZGATÓSÁG

**Lower-Tisza District Water Directorate
Wasserwirtschaftsdirektion Nieder Theiss Tal**

Postacím: H-6720 Szeged, Stefánia 4. Telefon: 62 / 599-500 * e-mail: titkarsag@ativizig.hu



IRRINOVATION

Innovative and eco-friendly irrigation technologies and other adaptation methods to face climate change impacts on the environment and agriculture in the Danube catchment area

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General issues

- The application has been submitted under the first call for proposals of Interreg CENTRAL EUROPE Programme on 13th April 2015. Waiting for the pre-selection of step 2. Formal check has been done!
- Programme priority: 3. Cooperating on natural and cultural resources for sustainable growth in CENTRAL EUROPE
- Programme priority specific objective: 3.1 To improve integrated environmental management capacities for the protection and sustainable use of natural heritage and resources
- Project duration: **36 months** (from 2016-04-01 to 2019-03-31)
- Indicative total project budget: **1 871 336 €**



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Partnership

(Further partners can be involve in step 2)

Partner	Partner Abbreviation	Country
South Great Plain Regional Development Agency	SGPRDA	HUNGARY
Lower Tisza District Water Directorate	ATIVIZIG	HUNGARY
National Agricultural Research and Innovation Center	NARIC	HUNGARY
Leibniz Institute for Agricultural Engineering Potsdam-Bornim	ATB	GERMANY
Slovenian Institute of Hop Research and Brewing	IHPS	SLOVENIA
Regional environmental agency of Emlia-Romagna	ARPA ER	ITALY
French-Slovak Chamber of Commerce	FSOK	SLOVAKIA
National agricultural and food centre	NPPC	SLOVAKIA
European Regional Centre for Ecohydrology of the Polish Academy of Sciences	ERCE PAS	POLAND



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Project summary

- The project focusing on sustainable use and long-term improvement of natural heritage and resources.
- Dissemination of innovative solutions for agri- and horticultural problems will help to reach better quality of environment in the targeted countries.
- The versatility of countries (with different natural resources but similar problems) gives also strong pillars to adapt project results afterwards to other regions especially covered by the most affected Danube river basin area.
- The project provides effective solutions by defining a **joint water management** and **irrigation strategy** for the problems foreseen in several studies on climate change.
- Our aim is to gain modern knowledge in the field of **new irrigation methods** and raise these know-how **databases** on international level.



Objectives and results

- The main objective of the project is to identify **water and energy saving irrigation methods** and techniques for sustainable irrigation strategies in connection with the Europe 2020 Strategy.
- The specific objective of the project is to extend environmental friendly technologies of irrigation to ensure efficient agricultural production while reducing water and energy consumption.
- The project also has an effect on increasing the competitiveness of agriculture: less energy and water consumption used for irrigation due to the solutions offered by the project might result in lower prices.

The objectives will be achieved through the following actions:

- building** a strong **cooperation** between the key actors;
- sharing good practices** (know-how) for increasing effectiveness of water-saving: best water- and energy- efficient technologies and practices, better utilization of the ground-water reservoir capacity;
- studies of renewable energy using for irrigation systems in different regions; **recommendations** about the required water quality for irrigation purposes;
- examination of the collected practices through **PILOT project** using water balance and soil water movement modelling; elaboration of a **Joint Irrigation Strategy** for CE regions;
- dissemination of the project results** to propagate sustainable irrigation methods.



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Work packages

WP type	WP number	WP title	WP leader
General WP	WP0	Project preparation	SGPRDA (HU)
General WP	WP1	Project management	SGPRDA (HU)
General WP	WP2	Communication and dissemination	IHPS (SLO)
Thematic WP	WP3	Exchange of experiences by collecting, analyzing best practices and stakeholders involvement	ATIVIZIG (HU)
Thematic WP	WP4	Pilot testing and demonstrating of state-of-the-art irrigation techniques and Water Balance Model applications	NARIC (HU)
Thematic WP	WP5	Trainings	FSOK (SLO)
Thematic WP	WP6	Elaboration of joint irrigation strategy based on project results	ATB (GER)



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WP3

Exchange of experiences by collecting, analyzing best practices and stakeholders involvement

The work package deals with eco-friendly irrigation management from perspective of water scarcity and drought and climate change. The working group would exchange and transfer of know-how between partner regions.

- 3.1.) **Collecting best practices** and preparing a handbook which cover two activities:
 - 3.1.1) Identifying and collecting the existing experiences. Know-how in the field of irrigation, learning from each other's experiences. Collecting the criteria of irrigation water quality in the different regions of Europe and other standards and regulations from partner regions. Measuring efficiency of rainwater and grey water use or waste water reuse in different EU countries.
 - 3.1.2) Editing a best practice handbook. The handbook will emphasize the differences of legislations and standards that must be harmonized within EU. Handbook will include the best practises from different CE regions.
- 3. 2.) **Stakeholders involvement** within the framework of workshops.
 - 3.2.1) Determination of local users and stakeholders, final beneficiaries, decision makers.
 - 3.2.2) Involvement of stakeholders and decision makers.



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WP4



Pilot testing and demonstrating of state-of-the-art irrigation techniques and Water Balance Model applications

WP deals with testing (**Pilot Test Experiment**, PTE) and demonstrating (**Pilot Demonstrational Farm**, PDF) of eco-friendly, water and energy saving irrigation techniques.

- 2.1 Identifying of PDFs: having state-of-the-art irrigation techniques in PPs countries
- 2.2 Identifying of WBM: Identifying and comparison of irrigation control methods to test on PTE's for validating a web-based WBM application.
- 2.3 Design, installation and testing of eco-friendly irrigation systems by 5 PTEs
- 2.4 Web-based WBM application: Based on the results of PTEs, PP will create a web-based WBM application that help users to determine the most effective irrigation method and provide an irrigation schedule based on water balance modelling.
- 2.5 Pilot Synthesis: Elaboration of a synthesis report based on PTEs and PDFs results



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WP5



CCI FRANCO-SLOVAQUE
FRANCÚZSKO-SLOVENSKÁ
OBCHODNÁ KOMORA

Trainings

Training activities will focus on the users of irrigation systems and on the institutions who act as decision makers. The establishment of effective irrigation methods in each region will be achieved via training the users of irrigation systems and control of irrigation techniques developed in the project. The training will be conducted through meetings and events in each of the investigated regions based on the good practice handbook developed and the results of the PILOT projects. The overall goal is to enable users of irrigation systems to optimize water usage while assuring quality of their agricultural products. Actions:

- 5.1. **Training for the users** of irrigation systems
- 5.2. **Training for institutions**/decision makers



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WP6



Elaboration of joint irrigation strategy based on project results

The work package uses results, experience and data found in partner regions to elaborate a joint irrigation strategy, that helps decide which irrigation method is the most effective in relation to conditions in different regions.

- The **strategy** will include proposals, recommendations and practical examples (PILOT) for environmental friendly and energy-efficient irrigation technologies and economic analyses. Furthermore benefits and costs, irrigation water quality, ecological aspects (water productivity, water use efficiency, energy consumption, renewable energy sources, greenhouse gas emissions, mitigation of environmental damage), feedbacks from PILOT experiments and future developments.
- **Study** on the adaptational possibilities of renewable energy sources into the irrigation practice will be prepared.

The document can be used to improvement of irrigation policies in project partner regions and all regions that are characterized by similar conditions.



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Thank you for your attention!

