



# Interreg



EUROPEAN UNION

## Danube Transnational Programme

### **CAMARO-D**

## **Output T2.3 – Dialogues and workshops with relevant stakeholders**

Version 01

## Contents

**AGENDA / INVITATION**

**MINUTES**

**PARTICIPANT LIST**

## **Pilot Action Cluster 2 training session**

### **2<sup>nd</sup> Announcement**

#### **Municipality Ig, Banija 4, 1292 Ig**

The project CAMARO-D (Cooperating towards Advanced Management routines for land use impacts on the water regime in the Danube river basin) financially supported by European Union funds (ERDF, IPA) within the Danube Transnational Programme 2014-2020, develops recommendations towards a strategic policy for the implementation of an innovative transnational catchment-based “Land Use Development Plan” for the Danube River Basin.

By means of a new transnational guidance with a tailored, application-oriented toolkit for relevant stakeholders and decision-makers a sustainable protection of water resources and improved flood risk prevention shall be provided.

Newly developed best practices in function oriented sustainable land use management – considering also climate change issues – will be tested and documented within various Pilot Actions according to the different interdependences between land use/vegetation cover in torrential catchments. The pilot area “Iška River” in Slovenia is assigned to Cluster 2 dealing with land use and vegetation cover along torrents, small rivers & catchments – erosion, floods, soil compaction, surface runoff, invasive plant species, water pollution.

## Agenda

- 8<sup>30</sup> Bus from City Hotel (<https://goo.gl/phyKfT>) to workshop location in Ig (Banija 4, 1292 Ig, <https://goo.gl/Y7yWjM>)
- 9<sup>00</sup> Welcome reception
- 9<sup>30</sup> – 11<sup>00</sup> CAMARO-D project - Introduction
- Hydrotechnical measures mitigating flood risks & establishing of flood forecasting maps in torrential watersheds
- Nature protection (biodiversity conservation, control of invasive plant species) & water/wetland management & beaver management
- 11<sup>00</sup> – 11<sup>30</sup> Coffee break
- 11<sup>30</sup> – 13<sup>30</sup> Practical Guide to Spatial Planning in catchments and river stretches
- Tailored forest management in torrential watersheds (afforestation, forest fire, prevention,...)
- Awareness raising (knowledge transfer, workshops, field trips, trainings etc.)
- 13<sup>30</sup> – 14<sup>30</sup> Lunch
- 14<sup>30</sup> Excursion to Iška river
- 16<sup>30</sup> Bus to Ljubljana
- 17<sup>00</sup> Arrival at central bus/train station in Ljubljana (<https://goo.gl/4wzfuE>) ([www.goopti.com/en/](http://www.goopti.com/en/) shuttle service)

## ORGANISATIONAL ISSUES

To register for the workshop, please send an email to [CAMARO-D@fgg.uni-lj.si](mailto:CAMARO-D@fgg.uni-lj.si) until October 10<sup>th</sup> 2018.

## LOCATIONS

1. City Hotel Ljubljana: Dalmatinova 15, 1000 Ljubljana
2. Workshop location: Banija 4, 1292 Ig
3. Train and Bus Station: Trg Osvobodilne fronte, 1000 Ljubljana

For those coming to Ljubljana in the evening of October 14<sup>th</sup> there will be rooms available at City Hotel Ljubljana. For travel to Zagreb we suggest you book a shuttle service (e.g. [GoOpti](#)) or alternatively one way bus/train ticket at central station in Ljubljana where you will be dropped off. If you will be by car, Ljubljana-Zagreb is a 1-hour drive.



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EUROPEAN UNION

## Danube Transnational Programme

### **CAMARO-D**

**Cluster & pilot specific  
training-session**

**Cluster 2 - Minutes**

**Output O.T2.3**

Version 01 – February 2019



## 1. Summary

Second training session workshop for CAMARO-D project was organized by the Slovenian national project team consisting of two project partners: PP3 – University of Ljubljana and PP4 – Public Water Supply. The workshops were also attended by the representatives of the project partners from Austria (Agricultural Research and Education Center Raumberg-Gumpenstein, Research Centre for Forests and Federal Ministry for Sustainability and Tourism), Bulgaria (Executive Forests Agency), Romania (Romsilva) and Slovenia (Municipality of Ig).

The main topics presented and discussed, were:

- Hydrotechnical measures mitigating flood risks and establishing of flood forecasting maps in torrential watersheds
- Best Practice for Water- and Nature Protection Management
- Spatial Planning in torrential watersheds
- Tailored forest management in torrential watersheds
- Awareness raising manual

At the end of each presentation, the discussion time followed. The purpose was to exchange knowledge, to identify current problems and possible solutions and to address issues.

### 1.1. Hydrotechnical measures mitigating flood risks and establishing of flood forecasting maps in torrential watersheds

Gašper Rak from the Faculty of Civil and Geodetic Engineering, University of Ljubljana presented the topic of Hydrotechnical measures mitigating flood risks and establishing of flood forecasting maps in torrential watersheds. The pilot area and the main problems encountered were presented. Flood risk can be identified through flood hazard maps in combination with vulnerability. The emphasis at the presentation was on the identification of flood hazard or flood maps. The latter are the result of hydrologic and hydraulic modelling of high waters with a certain return period. The impact of different land use on flood events was also presented.

The discussion focused on the use of soil and its impact on the distribution of floods. Possible measures of different land use have been addressed in order to reduce the negative impact of floods. The measures concerned agriculture, the economy, water management, etc. There were also issues regarding the choice between:

- the possibility of reducing the flood hazard through various flood protection measures or
- the possibility of reducing vulnerability through more flood-regulated spatial planning and planned land use in a way that would reduce vulnerable entities in flood areas.

It was also highlighted how a major change in land use affects the surface drainage conditions and how this influences the hydrology, dynamics and scale of flooding within the river basin.

## **1.2. Best Practice for Water- and Nature Protection Management**

Renate Mayer from the Agricultural Research and Education Center Raumberg-Gumpenstein presented the topic of Best Practice for Water and Nature Protection Management. Wetland management covers the comprehensive treatment of all lots: Blue Infrastructure (as flood retention areas management), land use (represents Spatial Planning Instruments, Flood Hazard zone mapping, Water protection, Invasive plant species monitoring and Beaver management and monitoring), Green infrastructure (deals Biodiversity and habitats) and Funds/Subsidies (such as Requirements, LE Programme, etc.). Wetland areas have a high diversity of plants, animals and habitats and need a special management for preservation especially because the areas are mostly designated as protected (e.g. Natura 2000). Currently, management either is intensified or are growing too large due to management tasks.

Exposed hot spots were: Spreading of invasive plant species by floods and sediment loads. Dissemination of invasive plant species through the rehabilitation of flood protection dams. Contaminated bed load material is deposited on neighbour areas and neophytes (especially seeds or rhizomes) are spread. Dissemination of Invasive Plant Species through renaturation measures.

In the discussion, the emphasis was mainly on the relation of flood events and the spread of invasive plant species. The goal was to determine how to place the blue infrastructure in space, why a particular location is (in)appropriate, etc. It addressed the issue was also how often it is necessary to refresh the management plan especially when it comes to Natura 2000 sites. The speed of the spreading of invasive plant species was also prevalent in the period before, during and after the flood event.

## **1.3. Spatial Planning in torrential watersheds**

Elisabeth Gerhardt from Federal Research and Training Centre for Forests, Natural Hazards and Landscape presented the topic about Spatial Planning in torrential watersheds. River basins do not correspond with administrative borders on national, regional and local level. Increased surface water run-off in the upper part of river catchments may effect downstream causing flood damages within settlements. The downstream area is dependent of adequate land use and water management measures in the upstream-area. Cooperation within the catchment area is therefore necessary. Downstream community receives beneficiaries of watershed services for what they should balance upstream and downstream interests through incentives e.g. cash, assistance, materials in exchange for e.g. water purification, flood risk mitigation, aquifer recharge, erosion minimization and other watershed services provided from upstream community.

The aim is to Display of flood hazards in spatial planning instruments and reducing vulnerability by minimising hazard exposure by Distribution of land uses and demands for future land uses



according to the suitability of locations. Spatial planning measures for flood risk prevention are often at local planning level instead of catchment-oriented level. The following cooperation possibilities were proposed: regional planning (spatial and water related planning at regional level) and voluntary cooperation (governance approaches at the level of catchments with weak institutionalisation).

An important task in planning appropriate land use in the upstream part is to provide land for protection measures where two options were proposed: transferring land ownership to the cooperative (by purchase of land) or granting easements in favour of the cooperative. Identified disadvantages could be high organisational and economic effort in the foundation phase, lengthy procedure and difficult persuasion of regions, which are not familiar with this model. On the other hand, the benefits would be the following members and affected persons are closer connected to the flood protection scheme through financial contributions, acceptance and personal responsibility concerning maintenance and discharge of public budget.

Sound flood hazard and flood risk information is the indispensable prerequisite for planning in catchments and river stretches. Respective information should be available for spatial planning stakeholders at a regional scale (catchments, river basins, river stretches) to enforce spatial planning in catchments and river stretches by including the approaches presented in manual into flood risk management plans. National and provincial authorities – in both spatial planning and water management – should strive for providing incentives for voluntary cooperation in catchments and river stretches. Close interaction of water administration with voluntary cooperation bodies is important.

In the discussion that followed, it was discussed how to encourage the presented idea both the financing from downstream areas and the taking action in upstream areas. Addressed was the question of the existence of possible scheme that would show what funds for such measures are available. The discussion was also about water funds and their institutionalization.

#### **1.4. Tailored forest management in torrential watersheds**

Albena Bobeva from Executive Forest Agency presented the topic about Tailored forest management in torrential watersheds. Main aim was to provide a wide scope of learning possibilities in the field of forestry for water protection and flood prevention and according to the main problems and risks identified in the catchments on transnational level to transfer state of the art know-how to the relevant stakeholders. Problems and vulnerability identified on transnational level were: loss of biodiversity, loss of forest system stability, erosion processes, surface runoff, unstable forests, bark beetle infestations, forest stands prone to wind throw, snow pressure, soil degradation, using of asphalt gravel at forest roads, forest fire and sleet. As a result of pilot actions the following forest management practices in torrential watersheds were identified as most relevant and applicable on transnational level: reforestation and forest regeneration, erosion control, forest fire management and combating bark beetle infestations.

To reduce erosion, accelerate reforestation, prevent fires and spread of bark beetles, the following measures were exposed: the encouragement of natural regeneration of the native species in their natural areal, enforcement silvicultural regeneration techniques on small-scale

areas, the adequate techniques such as group selection cuts, single tree cuts or small-scale gap cuts, vegetal reinforcement for the consolidation of the steep slopes, consolidation/stabilization with local materials (soil or rock) and vegetative raider, reducing surface-fuel, thinning and elimination of scale-fuel, combined low and crown thinning and installation of special automatic systems for observation and alerting of forest fires, use of trap trees and pheromone traps to monitor the bark beetle development and to fight with bark beetle, implement forest thinning and sanitary cuttings, avoidance of mechanical damages on standing trees, cleaning the clearance and maintenance of the stands after cuttings.

The questions addressed to the topic discussed were the measures to protect the forest from the bark beetle and on the basis of experience what is being done and is the most effective. The discussion also took place in the direction of capturing data on perception of overgrowth, damage of forests due to fires, perception of vegetation processes, etc. on the basis of satellite recording and use of satellite imagery of Sentinel 2.

## 1.5. Awareness raising manual

Elena Rafailova from Executive Forest Agency presented the topic about Awareness raising manual. Main aim of the awareness raising manual is to raise awareness of the problems on watershed level, provide stakeholders with relevant knowledge and skills, outlining the methods and approaches used within the Clusters for communication and stakeholders' involvement, provide stakeholders with the tools to control and management of the risks, promote and implement measures and to distribute -lessons learnt- among public. Activities carried out in Bulgaria for the purpose of creating this manual are as follows:

- knowledge transfers on national, regional and local level where obtained results are useful for the future development on the pilot area,
- stakeholders' workshops,
- field trips with stakeholders from different institutions and local citizens for purpose to recognize their important role in decision making process,
- trainings with stakeholders for their direct practical knowledge transfer and effect and their direct participation in all activities on the spot,
- online consultations through radio, specialised TV shows, specialized newspapers, internet,
- mobile expert groups on the spot to advise and resolve concrete problems together with stakeholders.

In the discussion that followed, the results of the workshops and general cooperation with stakeholders, the possibilities for improvement, possible weaknesses and difficulties, and other recommendations that could be considered was discussed.

## 2. Photos

### 2.1. Presentations and workshop:



*Figure 1: Daniel Kozelj (University of Ljubljana)*



*Figure 2: Gašper Rak (University of Ljubljana)*



*Figure 3: Elisabeth Gerhardt (BFW)*



*Figure 4: Albena Bobeva (Executive Forests Agency)*





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### CAMARO-D - Pilot Action Cluster 2 training session

19 | October 15<sup>th</sup> 2018



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IN EVROPSKO KOHEZIJSKO POLITIKO







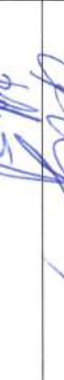





University of Ljubljana

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