CAMARO-D

"Cooperating towards Advanced Management Routines for land use impacts on the water regime in the Danube river basin"

Marius Dănilă, Balazsi Beata
Environment Protection Agency Covasna
danila.marius@apmcv.anpm.ro
balazsi.betty@apmcv.anpm.ro

Project co-funded by the European Union

EPAC – PP08

Environment Protection Agency of Covasna County

Public authority that meets at the county level the tasks of the National Agency for Environmental Protection

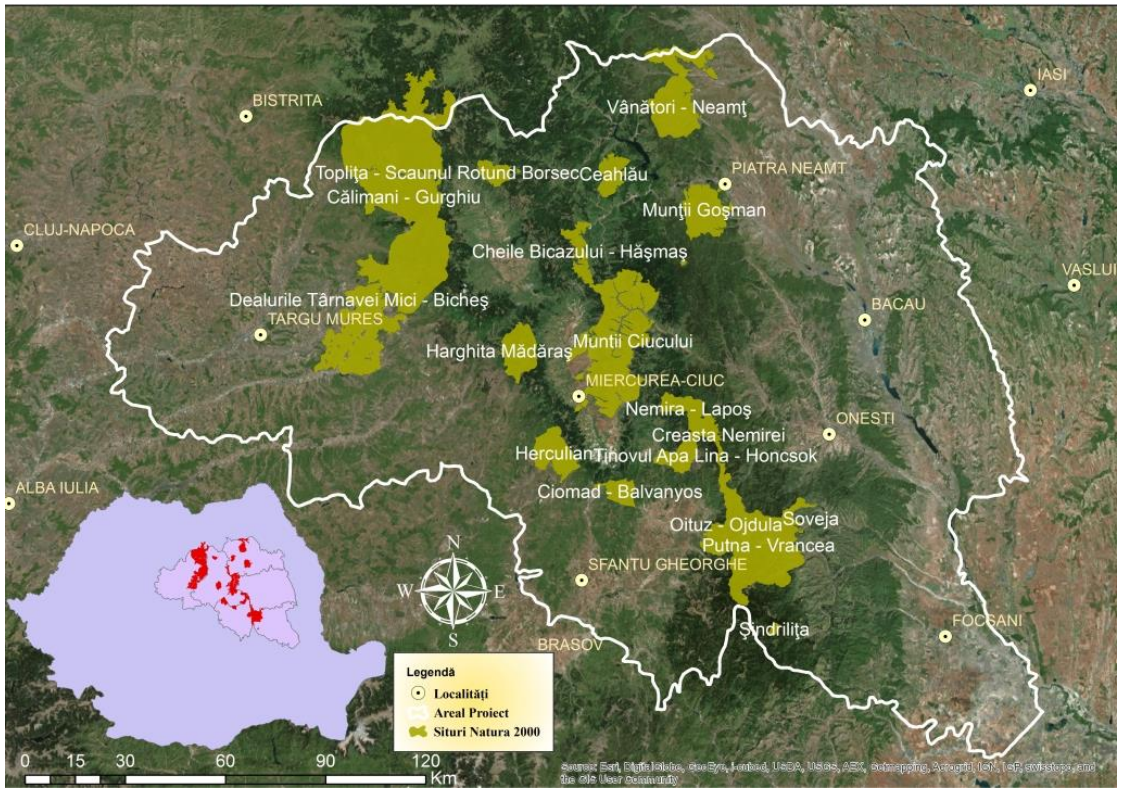
Main activities:

- implementation of policies, strategies and legislation regarding environmental protection;
- environmental licensing for the activities with possible impact on environment, Strategical Environmental Process for land use planning, Environmental Impact Assessment for projects;
- enforcement of environmental laws regarding waste, nature protection, biodiversity, chemicals;
- monitoring the quality of the environment, analyzing and reporting on the environment, and activities related to databases management;
- raising public awareness regarding environment protection;

Project co-funded by the European Union

Environment Protection Agency of Covasna County

Implemented Projects



The aim of the project **WOLFLIFE** was to implement the best conservation practices for the conservation of wolf *(Canis lupus)* in the wild and to maintain a viable population of wolves in the Carpathian Mountains by strengthening the management and promoting the human – wolf coexistence.

https://www.wolflife.eu/

Project co-funded by the European Union

Interreg
Danube Transnational Programme
CAMARO-D

EPAC – PP08

Environment Protection Agency of Covasna County

Implemented Projects

WaterCoRe - Water scarcity and droughts; coordinated actions in European regions

The objective of the WATER CoRe project is to create a collection of regional best practices to help the regions and local institutions from all over Europe, improving their prevention strategies for environmental problems. The aim of our project is to strengthen the interregional cooperation between politicians, policy-makers and technical experts, providing a permanent and accessible platform to identify common strategies to cope with water scarcity, drought and climate change which will affect the European Union on ecological, on economic as well as a on social issues.

https://www.keep.eu/project/542/water-scarcity-and-droughts-coordinated-actions-in-european-regions

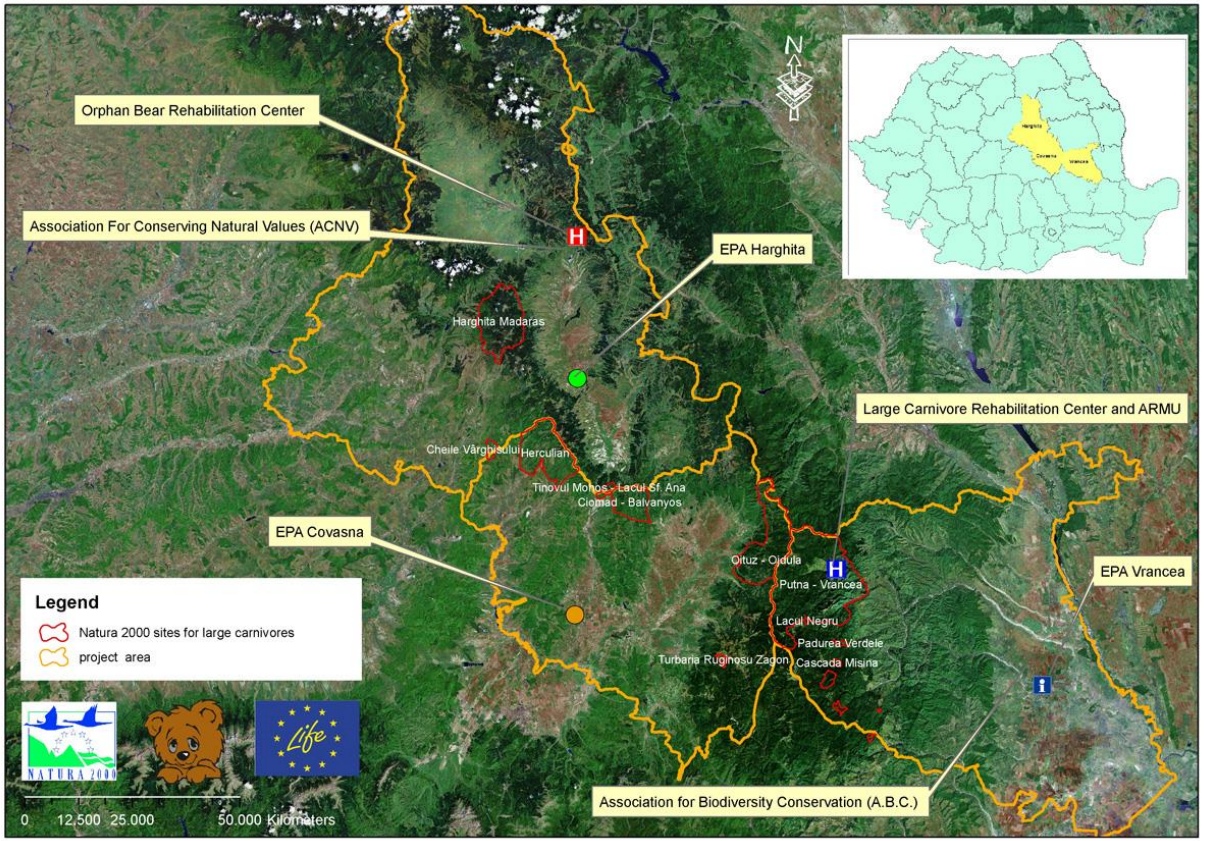
EPAC – PP08

Environment Protection Agency of Covasna County

Implemented Projects

LIFE URSUS – The goal of the project is: Conservation of the most representative sample of the brown bear population in Romania, by implementing the best practices and demonstrative actions in the Central-Eastern area of the Carpathians.

http://lifeursus.carnivoremari.ro/



Project co-funded by the European Union

Environment Protection Agency of Covasna County

Implemented Projects

ORIENTGATE - A network for the integration of climate knowledge into policy and planning

The OrientGate project aims to implement concerted and coordinated climate adaptation actions across South Eastern Europe (SEE). The partnership comprises 19 financing partners, 11 associates and three observers, covering 13 countries, that together will explore climate risks faced by coastal, rural and urban communities, contributing to a better understanding of the impacts of climate variability and climate change on water regimes, forests and agroecosystems.

The main objective of the project is to communicate up-to-date climate knowledge for the benefit of policy makers, including urban planners, nature protection authorities, regional and local development agencies, and territorial and public works authorities.

http://www.orientgateproject.org/

ACTIVITĂȚI ÎN CADRUL WP 3
INVESTIGAREA DUNĂRII

PROBLEM - certain land management practices affecting the quality and quantity of water

TARGET - protecting water resources and preventing flood risks

ACTIONS - investigating status-quo in the project implementation area (AT, SI, HU, RO, BG, HR, SRB, CZE, DE)

RESULTS – 3 REPORTS

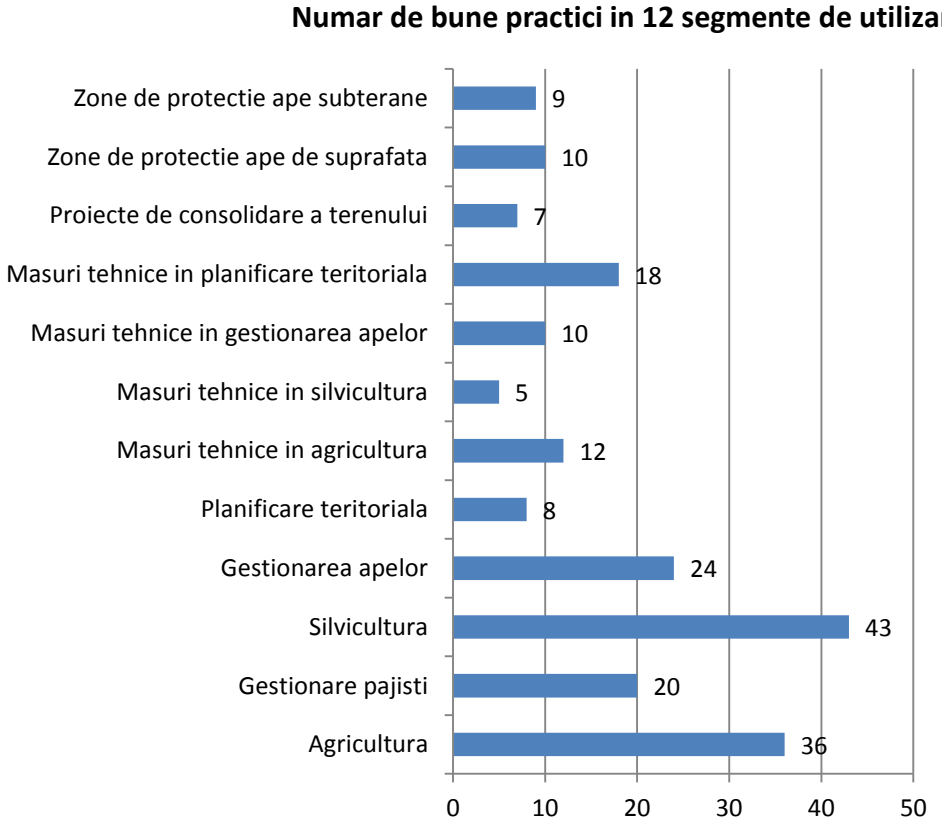
1. Analysis of Land Use Practices in the 9 Countries of the Danube Region and their Impact on Water Conservation, Flood Prevention and Land Functions

Transnational synthesis status quo report on Danube basin level – DT.1.1.4

Project co-funded by the European Union

WP 3 INVESTIGAREA DUNĂRII - REZULTATE

2. **Analysis of Best Land Management Practices** in the 9 Danube Countries - **202 Good Practices Identified**



Catalogue GAP - DT.1.1.2 (non - recommended practices In agriculture, forestry, water management, territorial planning, etc.)

Transnational review report of existing BMP - DT.1.2.2

In Romania, 44% of them are occasionally used under appropriate conditions and just 22% of them are used frequently. Larger frequencies are used in forestry as well as the technical measures for surface water protection areas. Less often they are used in water management, land consolidation and agriculture.

WP 3 INVESTIGAREA DUNĂRII - REZULTATE

3. **Analysis of existing policy tools / strategies** and national / regional cross-compliance synergies and how to put them into practice

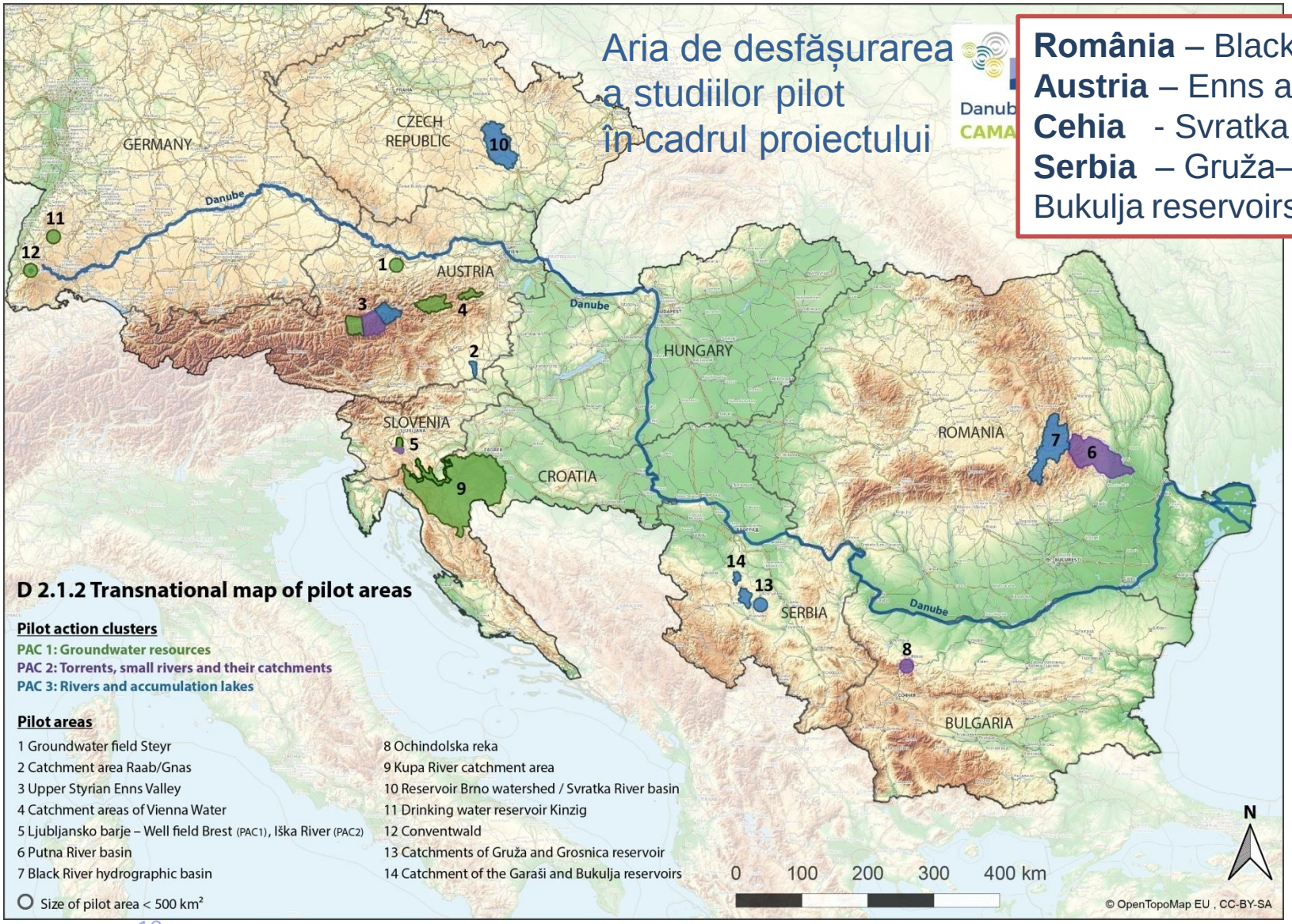
Evaluation and transnational conclusions
SWOT – DT.1

Knowledge base
Output O.T1.2

Project co-funded by the European Union

ACTIVITIES WITHIN WP 4 / Cluster 3
EXPLORING DANUBE

Interreg
Danube Transnational Programme
CAMARO-D



România – Black river watershed
Austria – Enns and Raab rivers watersheds
Cehia - Svratka river watershed
Serbia – Gruža–Grosnica and Garaši-Bukulja reservoirs

CLUSTER 3

Use of land / cover with vegetation along the rivers - erosion, floods, soil compaction, surface leakage, invasive plant species and water pollution

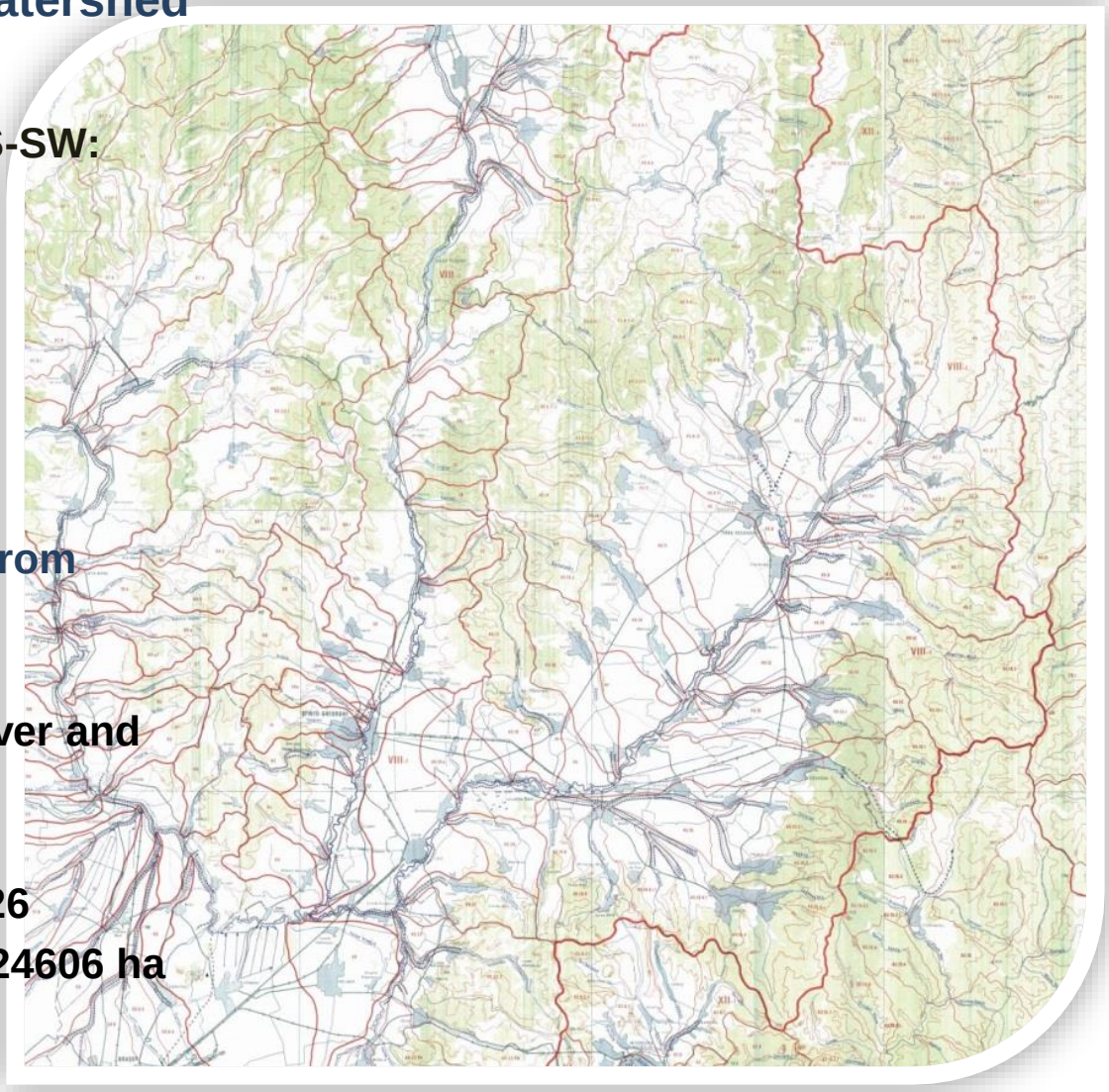
Project co-funded by the European Union

Interreg
Danube Transnational Programme
CAMARO-D

ACTIVITIES WITHIN WP4/Cluster 3
PILOT STUDY – BLACK RIVER WATERSHED

Pilot area characteristics – Black River Watershed

- left tributary of the Olt River
- N: Nemira Mountains, W: Bodoc Mountains, S-SW: Brașov Depression, E: Vrancea Mountains
- hydrographic area = 2,349 km2
- average altitude = 771 m
- total length = 88 km
- 22 cadastral tributaries

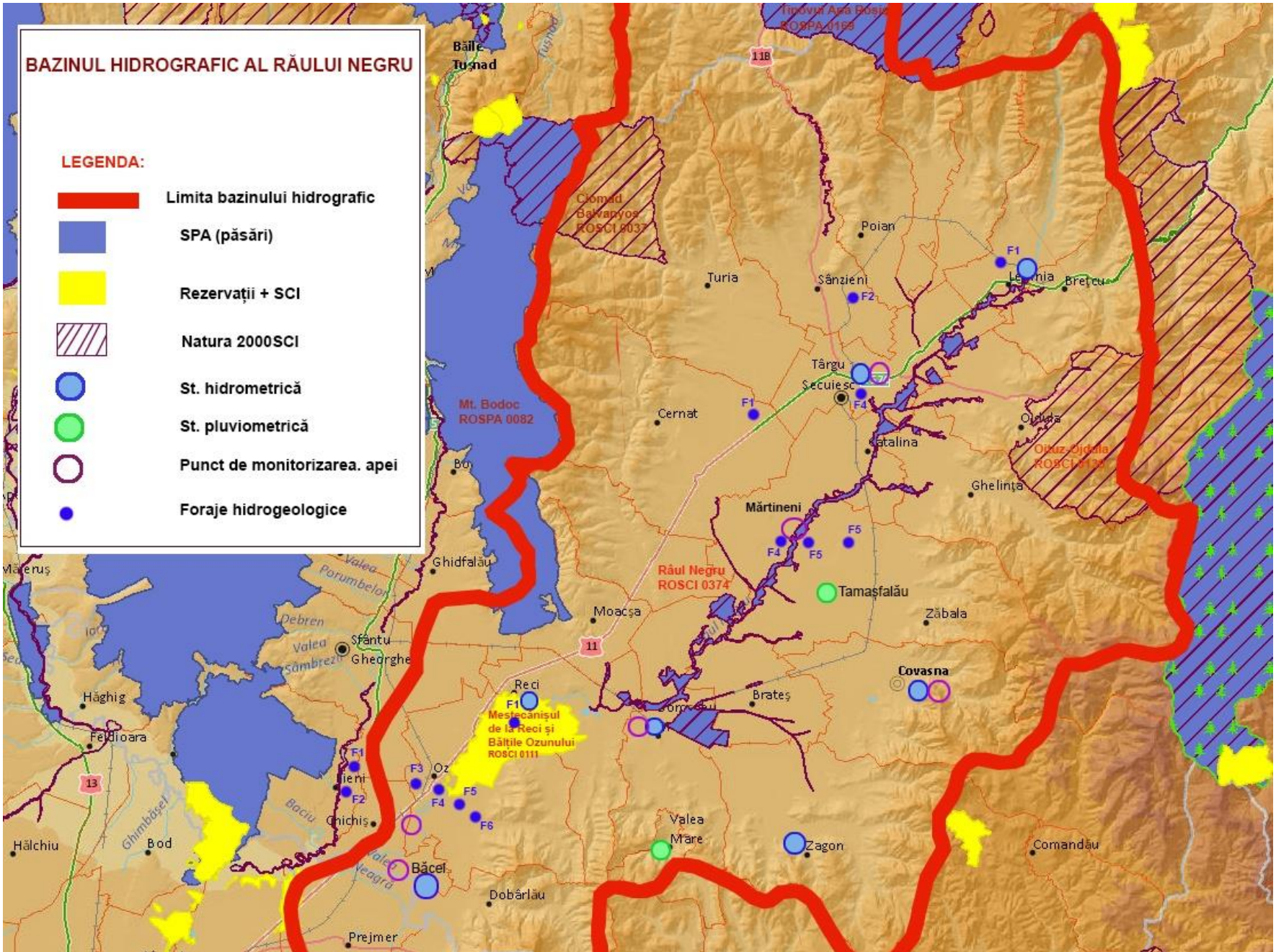


Responsabilities of Water Management District from Covasna County

(ASP 06 - associated strategic partner)

- Total length of defense dikes for the Black River and tributaries = 161,844 km
- Fully defended sites = 42
- Localities defended at administrative level = 26
- Lands defended at the administrative level = 24606 ha

ACTIVITIES WITHIN WP4/Cluster 3
PILOT STUDY – BLACK RIVER WATERSHED

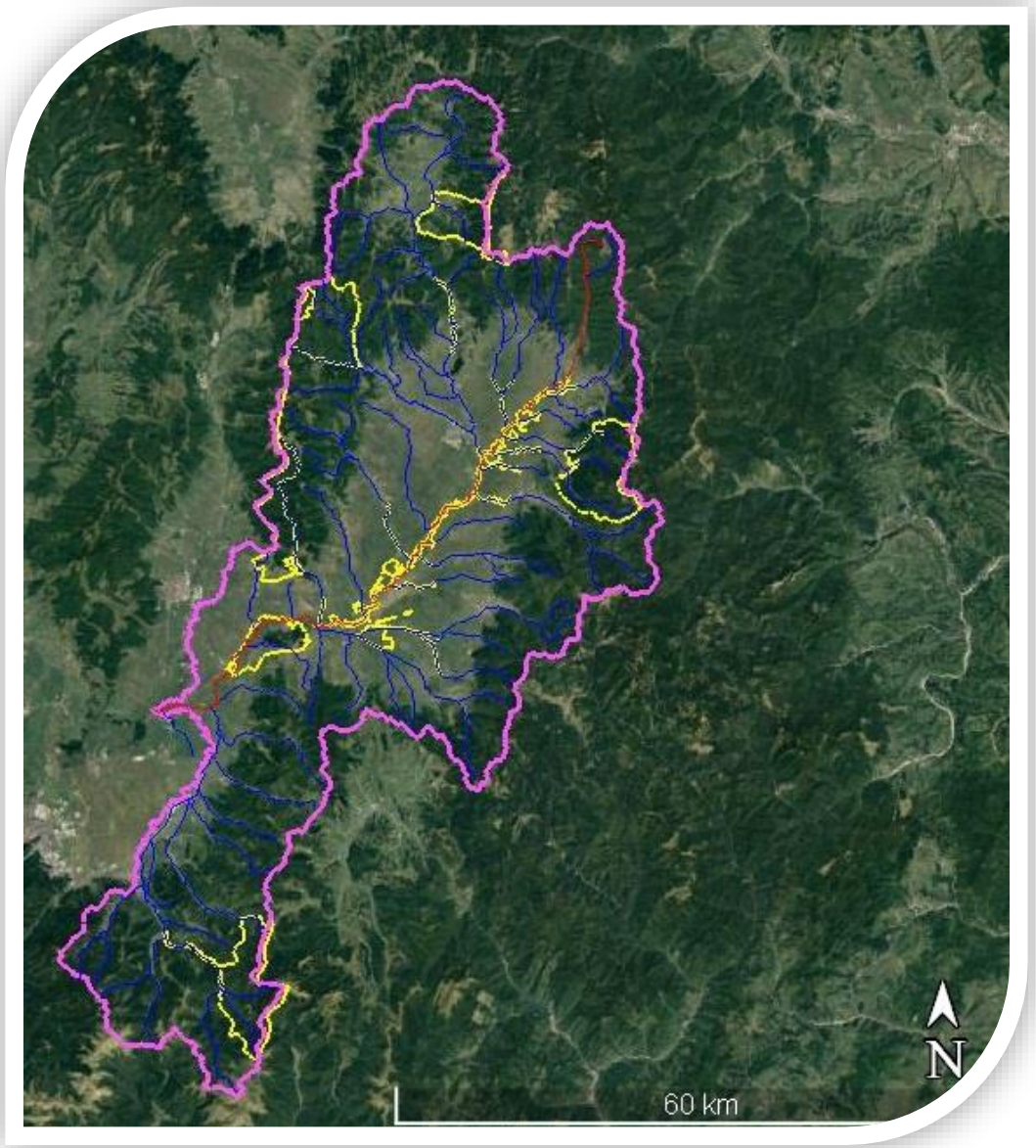


Interreg
Danube Transnational Programme
CAMARO-D

ACTIVITIES WITHIN WP4/Cluster 3
PILOT STUDY – BLACK RIVER WATERSHED

PROTECTED AREAS IN THE PILOT AREA

- Râul Negru **ROSCI0374 / ROSPA0147**
- Piatra Mare **ROSCI0195**
- Ciucaş ROSCI0038
- Aninișurile de pe Tărlung **ROSCI0001**
- Ciomad – Balvanyos **ROSCI0037**
- Mestecănișul de la Reci **ROSCI0111**
- Apa Lină – Honcsok **ROSCI0241 / ROSPA0169**
- Munții Bodoc – Baraolt **ROSPA0082**



Interreg
Danube Transnational Programme
CAMARO-D

ACTIVITIES WITHIN WP4/Cluster 3
PILOT STUDY – BLACK RIVER WATERSHED

EPA Covasna conducted a Scientific Study in the pilot area - the watershed of the Black River (in collaboration with experts from **MULTIDIMENSION S.R.L.** company):

"Interdependencies between land use (covering with vegetation) and negative effects such as erosion, floods, soil compaction, surface leakage, occurrence of invasive plant species and water pollution in the river basin of the Black River in the context of climate change"

Activities:

-the quantification of the characteristics of the river basin of the Black River

- assessment of the current state of the river, in collaboration with the associated strategic partner - Covasna Water Management District

- land use mapping and proposals of scenarios for their use, in collaboration with the ***Herman Otto Institute,*** from Hungary

- water balance in the Black River Basin, including assessment of habitat characteristics specific to biodiversity components

- ecological and hydrological modeling

- the application of climate scenarios by the ***National Meteorological Administration***

- analyzing the combined impacts of climate change and land use on the quantity and quality of water to select appropriate climate change adaptation measures

GOAL: identifying the best solutions leading to the necessary adaptations of land use management concepts to ensure sustainable water resource protection.

Interreg
Danube Transnational Programme
CAMARO-D

ACTIVITIES WITHIN WP4/Cluster 3
PILOT STUDY – BLACK RIVER WATERSHED

Activities of ***EPA Covasna*** carried out in the framework of the scientific study conducted in cooperation with specialists from ***WMD COVASNA*** and experts from ***MULTIDIMENSION S.R.L.***):

Establishment/deciding about monitoring areas in the Black River watershed, the inventory of the existing situation from the point of view of the hydrological situation, land use and soil erosion

Interreg
Danube Transnational Programme
CAMARO-D

WP4/Cluster 3 – Studiu pilot - Bazinul hidrografic al râului Negru

Activities of ***EPA Covasna*** carried out in the framework of the scientific study conducted in cooperation with specialists from ***WMD COVASNA*** and experts from ***MULTIDIMENSION S.R.L.***):

Two points for water quality monitoring
- upstream, before a town (Ojdula tributary)
- after localities and agricultural land
(together with specialists from SGA Covasna)

ACTIVITIES WITHIN WP 5 VISIONARY DANUBE

WP5 – VISIONARY DANUBE

- Drawing up a ***Guide for the Danube Region for Sustainable Land Use Planning*** (GUIDR)

- ***Identification of good management practices*** in the project area and prepare implementation in the pilot area

- ***Initiate the implementation*** of some of the best practices within the pilot areas.

Project co-funded by the European Unio

Interreg
Danube Transnational Programme
CAMARO-D

ACTIVITIES WITHIN WP 5 VISIONARY DANUBE

Within the project, in the Visionary Danube WP (WP5 - Visionary Danube) it is foreseen to identify a good practice for which the implementation is to be started in the pilot study area. In the Black River watershed, where the pilot study is conducted, an important problem has been identified in the beaver population, which, through their activities, cause damage to the population's flood defense infrastructure.

Interreg
Danube Transnational Programme
CAMARO-D

ACTIVITIES WITHIN WP 5 VISIONARY DANUBE

APM Covasna contracted ***ICAS Braşov*** to conduct a scientific study for the identification of a good practice for the management of human-beaver interaction, to be implemented in the pilot area:

"Identifying optimal management solutions for human-beaver conflict situations (Castor fiber species) and their implementation in a pilot area of the Black River watershed, in connection with the maintenance works of defense infrastructure of the population against floods"

Activities:

- a description of the beaver ecological requirements;

- best solutions to avoid conflicting situations, used internationally;

- SWOT analysis for choosing the optimal functional and financial solution to avoid conflicting situations, by protecting the population's flood defense infrastructure;

- identifying at least three pilot areas where measures can be implemented,

- specialized assistance in implementing measures on the ground;

- conclusions and recommendations.

Interreg
Danube Transnational Programme
CAMARO-D

ACTIVITIES WITHIN WP 5
VISIONARY DANUBE

EPA Covasna has monitorized the effects of the construction that the beavers made on, along the tributaries of the Black River, where they were identified predominantly.
In the Black River watershed, significant damage is caused by the activities of beavers in the infrastructure of defending the population against floods.

Destruction of buildings near watercourses

Interreg
Danube Transnational Programme
CAMARO-D

ACTIVITIES WITHIN WP 5
VISIONARY DANUBE

EPA Covasna has monitorized the effects of the construction that the beavers made on, along the tributaries of the Black River, where they were identified predominantly.
In the Black River watershed, significant damage is caused by the activities of beavers in the infrastructure of defending the population against floods.

Land flooding in the beaver dams area

Interreg
Danube Transnational Programme
CAMARO-D

ACTIVITIES WITHIN WP 5
VISIONARY DANUBE

EPA Covasna has monitorized the effects of the construction that the beavers made on, along the tributaries of the Black River, where they were identified predominantly.
In the Black River watershed, significant damage is caused by the activities of beavers in the infrastructure of defending the population against floods.

Cancer Creek (CV)

Due to the flooding of the area through the occlusion of the watercourse, occure the problem of moaning the dam over long periods and the weakening of its resistance

Interreg
Danube Transnational Programme
CAMARO-D

ACTIVITIES WITHIN WP 5
VISIONARY DANUBE

APM Covasna a efectuat monitorizarea efectelor construcțiilor pe care castorii lea-u efectuat de-a lungul afluenților Râului Negru, acolo unde aceștia au fost identificați cu preponderență.
În bazinul hidrografic al Râului Negru, prin activitățile castorilor se produc pagube importante în infrastructura de apărare a populației împotriva inundațiilor.

Brețcu Creek (CV)

The destruction of the dams through the galleries they build in the dyke body, especially in areas where the dilapidated distance is less than 10 m

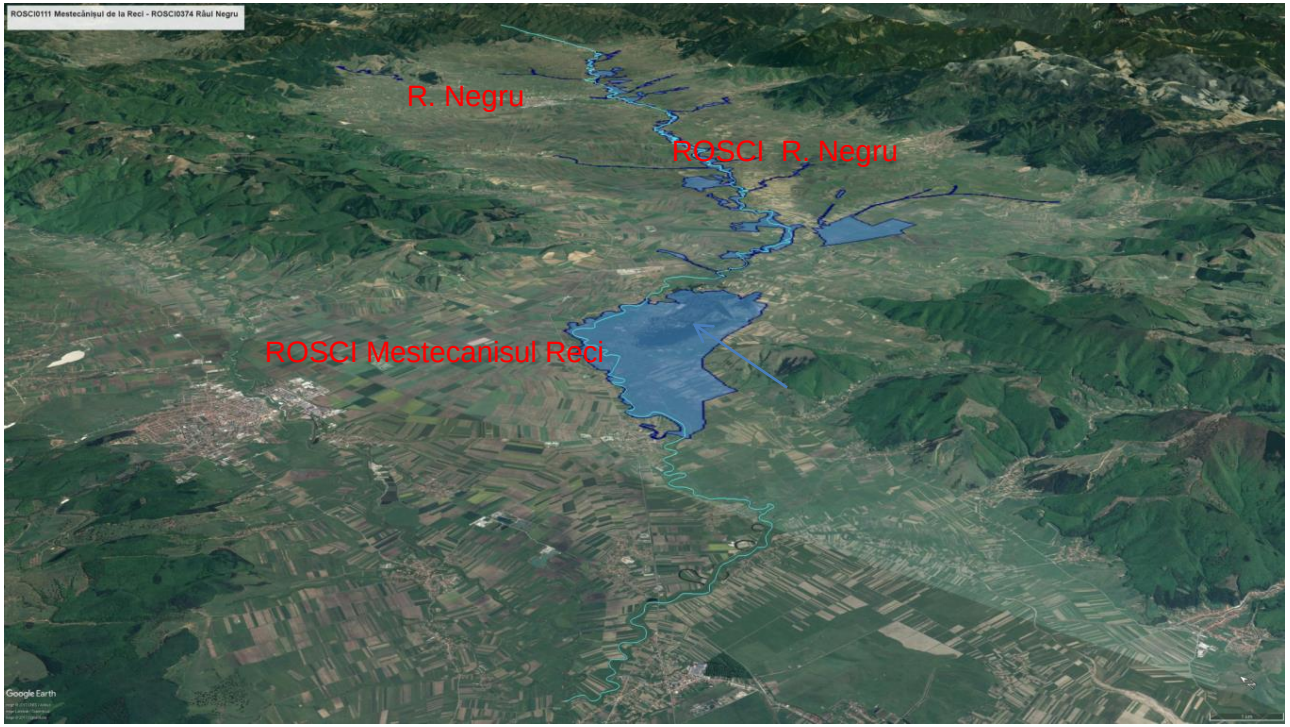
Interreg
Danube Transnational Programme
CAMARO-D

ACTIVITĂȚI ÎN CADRUL WP 5 DUNĂREA VIZIONARĂ

Destruction of banks of watercourses following the collapse of galleries. In these areas there are erosions of shore that can endanger the dikes. Exhausted galleries lead to difficulties in performing maintenance work (mechanized mowing).

Dialogs with the stakeholders

Identifying good management practices in the project area and implementing a pilot area practice



Beaver Management Plan to ensure species conservation and, at the same time, reduce damage and conflict.

Examples of good practice in Germany, Austria and the Czech Republic for conflict mitigation

Beavers offer ***ecological benefits***: they create a precious wetland habitat and improve the quality of water and biodiversity that people benefit.

Castors cause ***damages***: floods, damage to vegetation

Project co-funded by the European Union

Interreg
Danube Transnational Programme
CAMARO-D

ACTIVITIES WITHIN WP 5
VISIONARY DANUBE

Activities carried out by EPA Covasna in the Human-Beaver Interaction Study:

-monitoring the activities of the beaver families throughout the year, along the streams of Lemnia, Ojdula, Păpăuţi

ACTIVITĂȚI ÎN CADRUL WP 5 DUNĂREA VIZIONARĂ

Activities carried out by EPA Covasna:

The implementation of a good practice of management of human-beaver interaction, identified following the scientific study:

-applying a method of protection of an area of the defensive dam on Căpâlna (Ojdula)

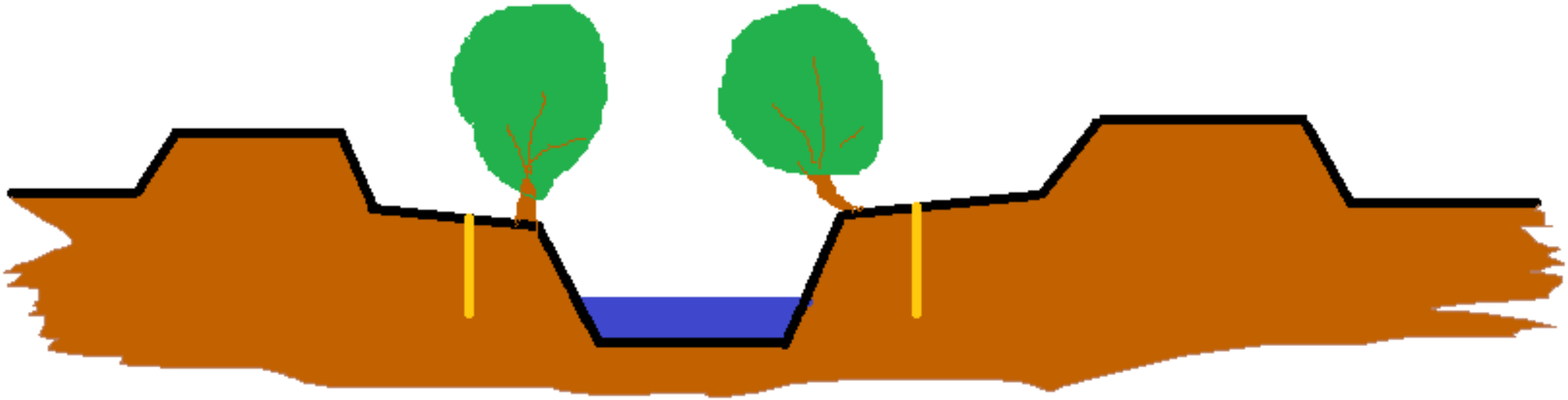


Diagrama de aplicare a soluției tehnice identificate

Interreg
Danube Transnational Programme
CAMARO-D

ACTIVITĂȚI ÎN CADRUL WP 5 DUNĂREA VIZIONARĂ

-applying a method of protection of an area of the defensive dam on Căpâlna (Ojdula)

Interreg
Danube Transnational Programme
CAMARO-D

ACTIVITĂȚI ÎN CADRUL WP 5 DUNĂREA VIZIONARĂ

-applying a method of protection of an area of the defensive dam on Căpâlna (Ojdula)

Interreg
Danube Transnational Programme
CAMARO-D

ACTIVITĂȚI ÎN CADRUL WP 5 DUNĂREA VIZIONARĂ

- applying a method of protection of an area of the defensive dam on Căpâlna (Ojdula) (monitorizing after about 4 months – March 2019)

Interreg
Danube Transnational Programme
CAMARO-D

ACTIVITĂȚI ÎN CADRUL WP 5 DUNĂREA VIZIONARĂ

- applying a method of protection of an area of the defensive dam on Căpâlna (Ojdula) (monitorizing after about 4 months – March 2019)

Interreg
Danube Transnational Programme
CAMARO-D

ACTIVITĂȚI ÎN CADRUL WP 5 DUNĂREA VIZIONARĂ

Cluster and pilot specific training-session for stakeholders – Covasna, November 7-8th 2018

ACTIVITĂȚI ÎN CADRUL WP 5 DUNĂREA VIZIONARĂ

Interreg
Danube Transnational Programme
CAMARO-D

Cluster and pilot specific training-session for stakeholders – Covasna, November 7-8th 2018

Field visit:

-**Capolna Creek** – implemented BMP Measures – humane-beaver conflict

-**SOL-FARM SRL** – visit to practicioners

Interreg
Danube Transnational Programme
CAMARO-D

ACTIVITĂȚI ÎN CADRUL WP 5 DUNĂREA VIZIONARĂ

The Second National Workshop with the Sakeholders – Bucharest, March 19th, 2019

Interreg
Danube Transnational Programme
CAMARO-D

ACTIVITĂȚI ÎN CADRUL WP 5 DUNĂREA VIZIONARĂ

Regional public event for informing the stakeholders – Tg.Secuiesc, March 26-27, 2019

NEXT – ACTIVITIES WITHIN WP 6 PROGRESSIVE DANUBE

Elaboration of the **"Danube Basin Land Use Development Plan" (LUDP)**, based on:

- assessing land use best practices for water protection and mitigating flood risk
- the synthesis of the results of the studies performed by the 3 clusters
- lessons learned and experience gained in pilot action groups
- existing regulations / legal context

Project co-funded by the European Union

Acțiunile necesare pentru a preveni/diminua pierderile, pentru a rezolva conflictele ...

Awareness / information / training activities with stakeholders in the pilot area

Project co-funded by the European Union

Interreg
Danube Transnational Programme
CAMARO-D

Website proiect CAMARO-D

http://www.interreg-danube.eu/approved-projects/camaro-d

Home

CAMARO-D - COOPERATING TOWARDS ADVANCED MANAGEMENT ROUTINES FOR LAND USE IMPACTS ON THE WATER REGIME IN THE DANUBE RIVER BASIN

- Home
- Partners
- Library
- News and events
- Gallery
- Newsletters
- Lead Partner
- About the project
- Links - EU documents / EU strategies

CAMARO-D (**C**ooperating towards **A**dvanced **MA**nagement **Ro**utines for land use impacts on the water regime in the **D**anube river basin) aims at developing comprehensive recommendations towards a strategic policy for the implementation of an innovative transnational catchment-based "Land Use Development Plan" for the Danube River Basin. It will also provide important inputs for the further development of EUSDR and other relevant EU-policies. Its main goals are:

- **Setting the frame** for a harmonized transnational land use management system, taking into account the demands of water resources protection and flood prevention.
- **Harmonizing and improving** the protection of water resources against negative impacts of land use and climate change as well as

Interreg
Danube Transnational Programme
CAMARO-D

Start date
01-01-2017

End date
30-06-2019

Budget in Euro

Project co-funded by the European Union

Interreg
Danube Transnational Programme
CAMARO-D

THANK YOU !!!