

**Pilot Euroregion**

**“Upper Prut”**



**DANUBE-CARPATHIANS  
COUNTER-EMERGENCY  
FACILITIES, ANSWERING  
EUROPEAN GREEN DEAL,  
NEXT GENERATION &  
JUST TRANSITION  
SYNERGIC CHALLENGES**

**EUSDR PA5 SG XIX meeting - online 17/06/2021**

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# The EU will:



Become climate-neutral by 2050



Protect human life, animals and plants, by cutting pollution



Help companies become world leaders in clean products and technologies



Help ensure a just and inclusive transition

*“The European Green Deal is our new growth strategy. It will help us cut emissions while creating jobs.”*

*Ursula von der Leyen, President of the European Commission*





European Commission

  
 SUPPORTING SUSTAINABILITY  
 TRANSITIONS UNDER THE EUROPEAN  
 GREEN DEAL WITH COHESION POLICY  
 Toolkit for national and regional decision-makers



**Title: Demonstration of systemic solutions for the territorial deployment of the circular economy**

**GIS applying with geo-spatial data exchange between distributed DBs**

**TRANSFRONTIER ISSUES OF SUSTAINABLE SOCIO-ECONOMIC AND SPATIAL DEVELOPMENT OF UKRAINIAN MOUNTAIN TERRITORIES WITH GEO-INFORMATION SYSTEMS APPLYING**



**Zinovy BROJDE**

Director of State Centre "EcoResource", Adviser of the Head of Chernivtsi Regional State Administration, Head of the Working Commission of Euroregion "Upper Prut"  
[Zinovy.brojde@gmail.com](mailto:Zinovy.brojde@gmail.com)

According to Association agreement EU-Ukraine (Title V, Chapter 27, Article 442):

"The Parties shall strengthen and encourage development of cross-border and regional elements of, inter alia, transport, energy, communication networks, culture, education, tourism, health and other areas covered by the present agreement which have a bearing on cross-border and regional cooperation"

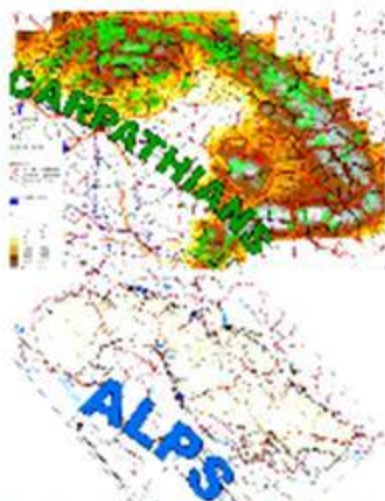
Draft elaboration of State Program for Carpathian Region Development on the beginning of 1990s by the analysis from 4 Ukrainian oblasts've revealed the key role of Carpathian Space building since XVIII cent. till II World War, as of unified territory in the centre of Europe, which today is divided between 2 countries.

Ukraine occupies less than 15% of whole Carpathian territory, which has strategic value.

Around geographic centre of Europe few branches of historic "Silk way" cross and bypass Carpathians, uniting here East and West of the Continent. At the same time, on the both sides of Carpathians these branches are crossed by also historic Baldo-Mediterranean connections "from Varangians to Greeks", which bypass mountains from the East and to be cross them on the West.



The Carpathian Region and its development was utilized for development of Carpathian Water, Transport, Land, Energy systems, Industrial, Construction Forestry-Wood and other complexes, including Self-governance, Social care and Security



For today this geographic peculiarity of this macro-region plays important role for "Inter-rio" collaboration & Carpathian activities. At the same time it's the issue of Euro-integration processes, taking also into consideration nowadays Euro-Atlantic cooperation.

Common attempt to renew joint macro-regional approach for collaboration was made in 1992 through Carpathian Euro-region creation.

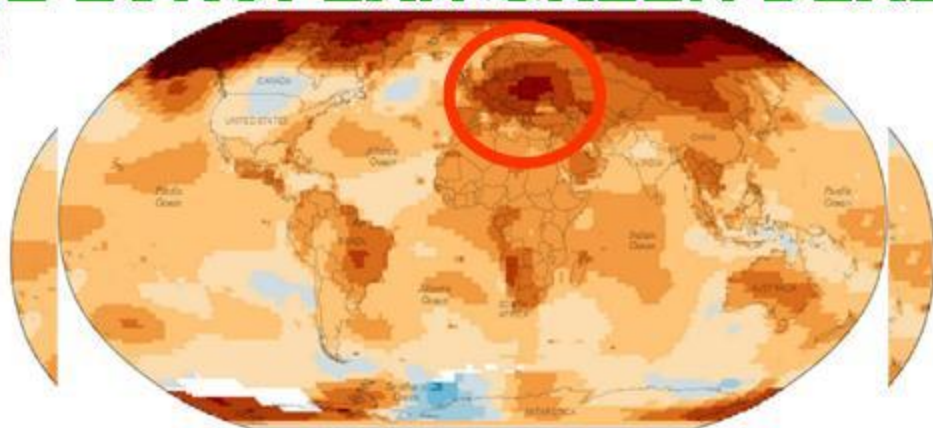


as well as the process direction to sustainable territorial development.



The New York Times | <https://nyti.ms/35P1XFu>  
 2019 Was the Second-Hottest Year Ever, Closing Out the Warmest Decade  
 By Henry Fountain and Nadja Popovich | Jan. 15, 2020

Degrees cooler or warmer in 2019 compared



European Commission | English | Search

From: 3 Policy 3 Areas 3 Proposals

**A European Green Deal** **11.12.2019**  
 Seeking to be the first climate-neutral continent

**Policy areas Nowadays World & European Approach**

Sustainable industry

Ways to ensure more sustainable, more environmentally-respectful production cycles  
**environmental & health impact, resources, waste flows, ozone depletion minimizing**

Biodiversity

Measures to protect our fragile ecosystem  
**sustainability of natural (water, air, soils, flora, fauna) & human life cycles synergy, forestry - water sources & damage better equilibration**

From Farm to Fork

Ways to ensure a more sustainable food systems

**food sources growing, processing, consumption & impact harmonization**

Eliminating pollution

Measures to cut pollution rapidly and efficiently  
**liquid, solid, gaseous, heat, radiation & information wastes minimization through BAT implementation**

FROM : DEPT. OF INTERNATIONAL REL. PHONE NO. : 00000000000000000000

МІНІСТЕРСТВО  
ОХОРОНИ НАВКОЛИШНЬОГО  
ПРИРОДНОГО СЕРЕДОВИЩА  
ТА ЯДЕРНОЇ БЕЗПЕКИ УКРАЇНИ



MINISTRY  
FOR ENVIRONMENTAL PROTECTION AND  
NUCLEAR SAFETY OF UKRAINE

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Хрещатик 6, 252601, Київ-1  
phone: 044-228-06-44; fax: 044-229-83

Ministry of Waters, Forests and  
Environmental Protection of  
ROMANIA

Nr. 18 032 / 111  
Data 01.08.1996

Ministry for Environmental Protection  
and Nuclear Safety of Ukraine

Fax: 044 - 229-83

N 18-352  
31.07.96

Mr. H.E. Aurel Constantin ILIE  
Minister of Waters, Forests and  
Environment Protection of  
Romania

Dear Sir,

Our Department of Environmental Safety in Chernivtsi Region developed project of the Environmental Center for Administration and Technology (ECAT-BUKOVINA) which was supported by the Lands Government of Karnten (Austria) as a potential partner from the EU side.

European Commission 03.07.96 N DG1A/C1-KY/sscdl.doc announced about new TACIS/PHARE "Cross-Border-Cooperation Programme". Projects proposals concerning environmental projects should be submitted before 03.08.96.

In this occasion our Chernivtsi Regional Department handed on 25.07.96 to the Agencies of your Ministry in Suchava and Botoshany our proposal for joint project Environmental Center for Administration and Technology on the base of the Chernivtsi Region of Ukraine and the Suchava and Botoshany districts of Romania (ECAT-BUKOVINA).

We would like you to consider the possibilities for your corresponded structures in Suchava and Botoshany to take a part in this project and then, please, preliminary announce us at your earliest convenience about your vision. Your support will be appreciated. I will be thankful to you if you take into account that deadline for submission of agreed application.

I am looking forward to continuing the dialogue with you in the future.

Sincerely,

Deputy Minister

Ya. Movchan

Dear Sir,

To your letter from 31.07.1996, no.18 352, we transmit you our agreement with this common project (ECAT - Bucovina) concerning the co-operation between the Environmental Center of the Chervtsi Region of Ukraine and Suchava and Botoshani districts of Romania.

For final programme we recommend you to in touch directly with Ministry's Agencies for Environmental Protection (APM) from these districts.

We ask you at the same time to send us other details concerning this programme.

Sincerely Yours,

Secretary of State

D. I. Oprea

# Preliminary pilot developments in



CABINET OF MINISTERS OF UKRAINE

DECREE

of February 14, 2002 Nr. 59-p

Kyiv

Some issues concerning the development of transfrontier co-operation within the frames of the Euroregion "Upper Prut"

1. To support the proposal of the Council of the Euroregion "Upper Prut" concerning the experimental elaboration of transfrontier co-operation mechanisms as the elements of the process of European integration and development of the regional policy within the frames of the above-mentioned Euroregion..

2. Ministry of Foreign Affairs in co-operation with the Ministry of Economics and European Integration to negotiate with the Romanian and the Moldovian Parties the determination of experimental status of the Euroregion "Upper Prut" and experimental elaboration of transfrontier co-operation mechanisms as the elements of the process of European integration and development of the regional policy within the frames of the above-mentioned Euroregion..

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proposals to the  
3. Chernivtsy R  
Economics and  
executive bodie  
Ukraine within t  
program of tran  
"Upper Prut".

8/2000  
REGIUNII  
US »  
re ale activităţii  
nă «Prutul de Sus»

30 noiembrie 2000  
5 și 6 ale Acordului  
utul de Sus»

următoarele domenii  
că și socială reciprocă

de transport și  
oarelor trans-europene

energetice la nivelul  
stat și surselor de

de apă și a sistemelor

dezvoltarea industriei  
are a lemnului, a  
și industriei ușoare;  
infronțier la nivel

DECISION № 8/2000  
OF THE COUNCIL OF EUROREGION  
«UPPER PRUT »

«On the priority spheres for the Social & Economical activities in Euroregion «Upper Prut»

city Edinets November 30, 2000  
Accordingly to the Articles 5 and 6 of the Agreement regarding the setting up of the Euroregion «Upper Prut»

1. Council of the Euroregion adopts the follows list of priority spheres for the linked Economical & Social activities in the Euroregion

- \* development of transport & communications infrastructure on the levels of Trans-European corridors and local traffic;

- \* development of energetic infrastructure on the levels of state systems and local sources;

- \* update of the water supply and canalisation systems;

- \* forestry and development of the timber and wood-working industries, agro-industrial complex and light industry;

- \* development of transfrontier trading on the local

1. Council of the Euroregion adopts the follows list of priority spheres for the linked Economical & Social activities in the Euroregion



істр України

A.Kinah

# UA-RO-MD Euroregion "Upper Prut"

# Main objectives of Euroregion "Upper Prut" (2000) are totally conform to Priority areas of EUSDR and Carpathian Convention (<http://cppk.cv.ua/i/2018723.pdf>)

2. В якості основних механізмів взаємодії у вищезначених сферах діяльності в Єврорегіоні, що мають реалізовуватися через спільні проекти і програми з врахуванням особливостей статусу депресивних регіонів Рада Єврорегіону визначає:

2. Consiliul Euroregiunii stabilește următoarele mecanisme principale de colaborare în aceste domenii de activitate în cadrul Euroregiunii, care urmează să fie realizate prin proiecte și programe comune, avându-se în vedere particularitățile statutului regiunilor defavorizate:

2. As the main mechanisms for interaction in the aforesaid areas of activity in the Euroregion, which should be realised through the common projects & programs, taking into account the particular status of depressive regions, Council of the Euroregion defines:

- providing of the Sustainable Development for the territories – components of the Euroregion and in the transfrontier basins by means of more rational usage of the Resources, implementation of the Technogenic & Environmental Safety modern facility as well as establishment of the Regional Cleaner Production Centre;

зв'язків між впливовими політичними організаціями в Єврорегіоні;

între organizațiile politice influente din cadrul Euroregiunii;

connections between authoritative political organisations in the Euroregion;

налагодження взаємодії між ЗМІ членів Єврорегіону для забезпечення поінформованості населення і широкої підтримки ним діяльності Єврорегіону.

stabilirea unor legături reciproce între mijloacele de informare publică ale membrilor Euroregiunii pentru asigurarea informării populației și

tune of collaboration between mass-media of Euroregion members to provide the interest of population and their broad support for Euroregion activity.

<http://www.oda.cv.ua/UserFiles/File/2012/Decis8.pdf>

# WATER RESOURCE MANAGEMENT

## Басейни головних річок України



## Dnister Hydro-Energy Accumulation Complex – greatest in Europe

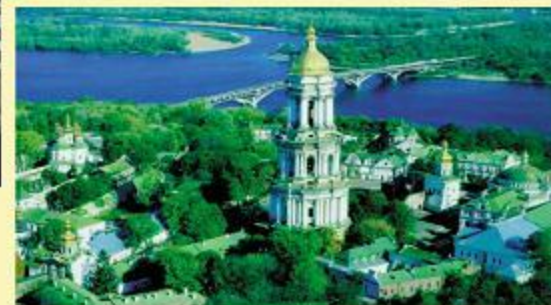


Possible to construct additionally 4 Hydro-generating units, each of 324 MW



## DANUBE POLLUTION REDUCTION PROGRAMME NATIONAL PLANNING WORKSHOP UKRAINE

Black Sea, July 13-19, 1998

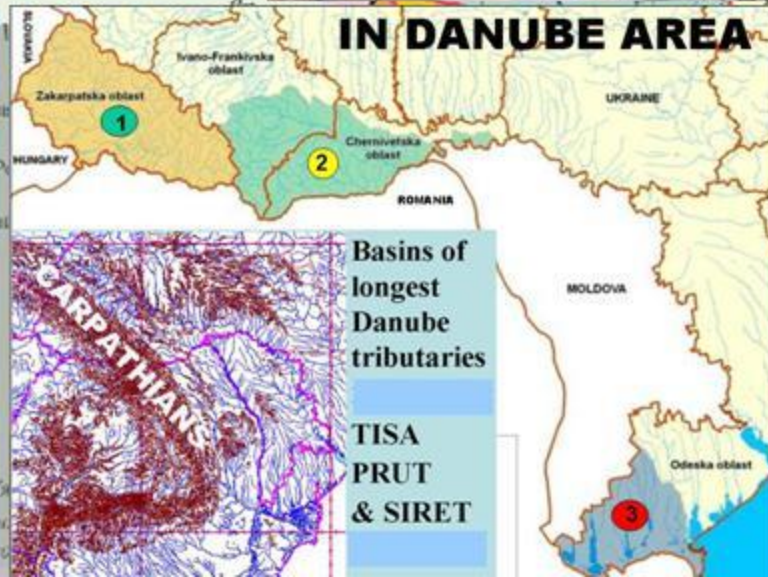


[www.icpdr.org/icpdr-files/8277](http://www.icpdr.org/icpdr-files/8277)

Ministry of Environmental Protection  
and Nuclear Safety  
in cooperation with the  
Programme Coordination Unit  
UNDP/GEF Assistance



## IN DANUBE AREA



Basins of longest Danube tributaries  
TISA  
PRUT  
& SIRET

## IN THE RIVER BASINS OF CARPATHIAN-DANUBE REGION



Concept for the Water Supply in Chernovtsy  
Концепція водоснаблення міста Чернівці



# Common roots (2001) for Carpathian Convention (2003) & the EU Danube Strategy (2010)

Adoptata la Summitul din 30 aprilie 2001

## Declaration on Environment and Sustainable Development in the Carpathian and Danube Region - Bucharest, 30 April 2001 -

We, Heads of State and High Representatives of the States participating in the Summit on Environment and Sustainable Development in the Carpathian and Danube Region\*,

Bearing in mind the Stockholm Declaration of the United Nations Conference on Human Environment of 1972 and the Rio Declaration of the United Nations Conference on Environment and Development of 1992;

Reaffirming the importance of the implementation of the political and legal commitments undertaken by the international community following those and subsequent conferences, especially at the Pan-European level;

Being aware that the 10-year review and evaluation of the Rio Declaration commitments and the implementation of Agenda 21 to be conducted at the World Summit on Sustainable Development in Johannesburg in 2002 will provide a momentous opportunity for further action to strengthen international co-operation towards coping with the challenges of sustainable development in the twenty-first century;

Being convinced that renewed efforts are required toward that goal on the part of all Carpathian and Danubian countries in a spirit of regional solidarity;

Upholding the principle of common, yet differentiated responsibility, to manage the environment and natural resources so as to promote sustainable development to the benefit of present and future generations;

Acknowledging that the Carpathian region is a natural treasure of great beauty and ecological value, a reservoir of biodiversity, the headwaters of major rivers and Europe's largest area of virgin forest;

Acknowledging also the special economic and social importance of the Danube River and its tributaries as a major European river with multiple uses and functions, as well as its ecological significance and its value as a natural habitat for numerous wildlife species;

Recognizing that a world wide scientific assessment of biodiversity by World Wide Fund for Nature identified the Carpathian Mountains and the Danube Delta as two of the world's most important ecoregions with a representative selection of the world's most outstanding and distinctive biological resources;

Being aware of the fact that efforts to protect, maintain, and sustainably manage the natural resources of the Carpathian Mountains and the Danube River Basin cannot be achieved by one country alone and require regional co-operation;

Emphasizing that co-operation on environment and sustainable development will assist the efforts towards stability and peace in the region;

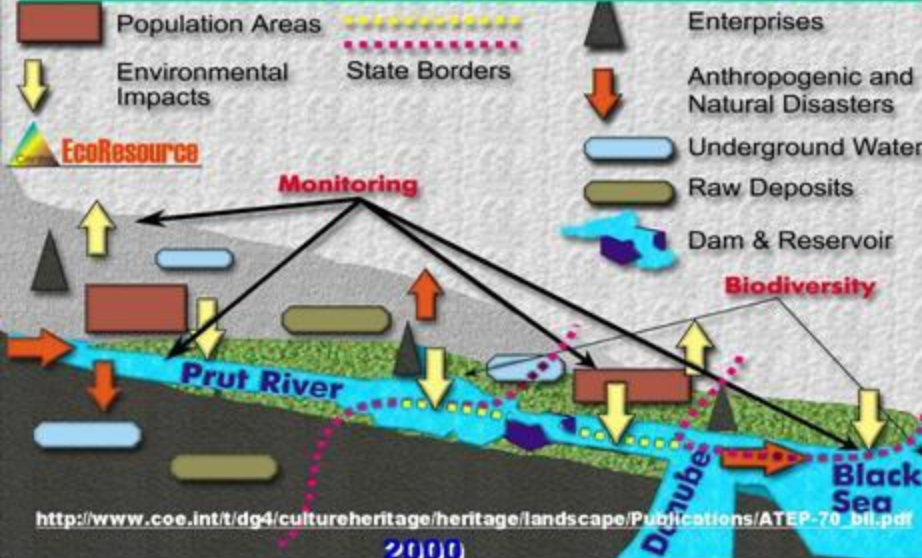
Appreciating the efforts that have been undertaken at international, regional, national and local level to enhance co-operation and support for the maintenance and protection of the natural assets and resources;

<http://www.carpathes.org/sum/Info1.html>



# EcoEuroRegion (Prut basin)

Модель сталого розвитку і техногенно-екологічної безпеки для транскордонних басейнів річок



[http://www.coe.int/t/dg4/cultureheritage/heritage/landscape/Publications/ATEP-70\\_bil.pdf](http://www.coe.int/t/dg4/cultureheritage/heritage/landscape/Publications/ATEP-70_bil.pdf)

Regional Water Resource Treatment and accompanied Disasters Prevention as core elements for Sustainable Spatial Development in the pilot Euroregion "Upper Prut"

Zivoviy S.BROYDE - Centre "EcoResource" (Chernivtsi, UKRAINE, broyde@aonr.net)

Nowadays concept on the Regional Sustainable Spatial Development can be considered as a composition of the Technology Foresight approach [1], modern understanding of the equilibrium between Economical & Environmental aspects of Mankind Activity [2-3] as well as new hierarchical vision of Safety as a multivariate process [4].

Last time these issues became very actual for the surroundings of the widening European Union & NATO under the new ideas of Neighbourhood [5].

Along the new EU & NATO borders Euroregions becomes "points of growth" for new European policy. And through them can be co-ordinated (and concentrated) the efforts of the Local, Regional, National Authorities & International Organisations, aimed to find systems solutions for the above mentioned problems.

Even the enumeration of the Euroregions in these area: "Neman", "Bug", "Danube-Kris-Mures-Tisa", "Neisse", "Elbe/Laba", "Danube-Drava-Sava", "Upper Prut", "Lower Danube" etc. — allows to judge, which role plays today Water Resources and associated Security issues for the further Regional Development.



[http://www.coe.int/t/dg4/cultureheritage/heritage/landscape/Publications/ATEP-70\\_bil.pdf](http://www.coe.int/t/dg4/cultureheritage/heritage/landscape/Publications/ATEP-70_bil.pdf)

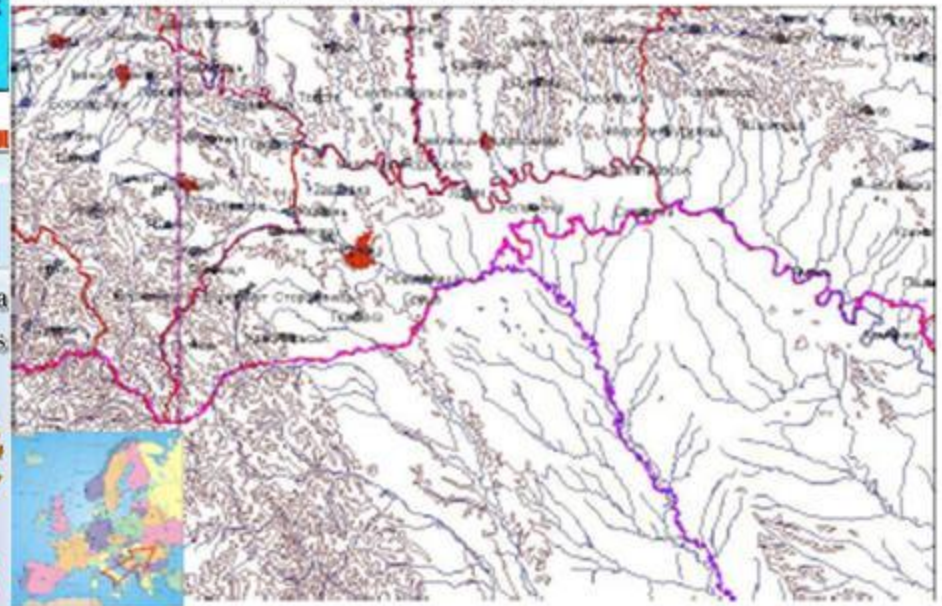


Fig. 1 Rivers system in the Euroregion "Upper Prut"

This effect of floods also can be appeared in two ways (separately or jointly): 1) when the already existent individual factors become "summarised" by the flood and then give the synergistic consequences; 2) when flood provokes previously imperceptible phenomenon, which further starts to develop and/or becomes new factor of danger.

**TRANSREGIONAL ALPINE- CARPATHIAN DIMENSION OF DANUBE STRATEGY**

**Consultation on the EU Strategy for the Danube Region**

Partner States, their regions, geo-landscapes and habitats. This disparity can be perceived in social-economic and spatial conditions, mentalities/traditions, approaches and accessibility to resources, energy, education, mobility, information and other "creature comforts".

Such "patchwise cohort" has, first of all, to find common fields of interests on the way to joint synergic solutions to prevent further face-off barriers for macro-regional Sustainable Development. At the moment Danube Strategy (EUSDR) establishment can be qualified by term "betweenness" as "a place or a time where differences and borders are redefining themselves" (D. Sibony).

This betweenness overcoming opportunity was formulated by EU Commissioner O.Reilly: "Borders are restrictive. Borders limit our minds, chain actions, and reduce our influence. Frontiers are innovative. Frontiers free our minds, stimulate action, and increase our influence. Frontiers are much more substantive and functional – even mental – than geographic". From such point of view successful start up of EUSDR embodiment should conform to the principle proclaimed by the EU in Article 17 of the ENPI: "Community assistance may be used for common benefit of Member States and partner countries and their regions, for the purpose of promoting cross-border and transregional cooperation through different EU Programs and other tools.

Further development of this EU approach was formulated in the ENPI system Regional Program Strategy Paper 2007 – 2013: "seems that the most successful projects have been those which from the outset have benefited from a sustained high level political support provided from a regional institutional framework. By contrast, projects that have been implemented through a bottom-up approach, i.e. as a result of demand from individual partner countries, rather than within a well-defined political multi-lateral framework, have tended to remain isolated, even when successful, and in general have not succeeded in fostering a genuine regional spin-off".

The "natural" challenge of Climate Change in Danube area should receive "anthropogenic" answer through Sustainable Development mechanisms. Using experience of "Industrial Metabolism Refinement" in Rhine basin we can act "implementing our climate and energy package showing how tackling climate change is a dynamic element in a strategy for growth by creating jobs and boosting energy security under the Europe 2020 approach", how it was proposed by President Barroso to EU Heads of State and Government after Copenhagen.

Water is the general common Resource in Danube basin. It's evident that EUSDR will concert those activities, which are realised immediately in the river bed space, e.g. navigation, or hydro-technical processes in the river basin (irrigation, motorisation, bowels exploitation and mining water pumping, river beds regulation, dredging, sand/gravel mining on the river banks etc.).

In parallel should be revised all other anthropogenic activities impacting river basin both on more or less constant value and through emergency risks generation (probable accidents). For instance in the industrial sphere they are: production in mining and ore-dressing, chemical, forestry-wood-cellulose, all kinds of food, construction materials, electronic and machine building sectors etc. And especial attention will be paid to hazardous waste generators, waters polluters and potentially danger manufactures.

But the most general topic of EUSDR concerns Clean Water Sources in Alps and Carpathians. Under Climate Change this trend only problem very soon will become more than obvious.



Taking into account actual Alpine and Carpathian Conventions - their last years collaboration should become a "Common Generator" for further EUSDR project's topics. It means utilisation of common and individual achievements and agreements of these Conventions for Sustainable Development of Transport, Energy, Water, Forests, Agriculture and other sectors. As well as both Conventions also foresee intercultural and interethnic reciprocal actions aimed to augment common heritage.

**Centre for Alpine and Carpathian Forests**

**From Alpen through Carpathian to the European Mountain Convention**



**THE EUROPEAN CLUSTER MEMORANDUM**  
Promoting European Innovation through Clusters

**THE CONCEPT OF CLUSTERS AND THEIR POLICIES AND THEIR CONTRIBUTION TO COMPETITIVENESS AND INNOVATION: STATISTICAL RESULTS AND LESSONS LEARNED**

COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 17/02/2005  
COM(2004)472

MEMORANDUM FROM THE COMMISSION TO THE COUNCIL, THE EUROPEAN PARLIAMENT, THE ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

Towards multi-level clusters in the European Union: Implementing the third Sustainable Development Strategy

Основою Стратегії ЄС для Дунайського регіону є

EU Strategy for Danube Region is based on



трансгранична співпраця в басейнах спільних річок

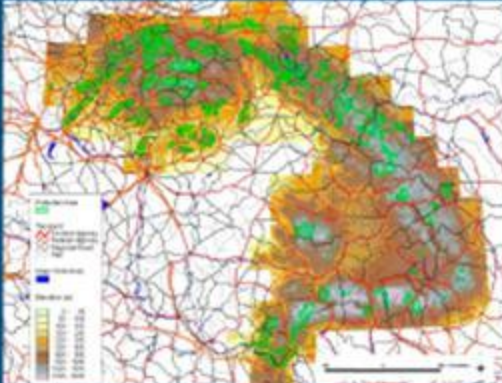
transfrontier cooperation in basins of common rivers

**EcoEuroRegion (Prut basin)**  
 Модель сталого розвитку і техногенно-екологічної безпеки для трансграничних басейнів річок



Великомасштабний проект East Avert втілює модель ЕкоЄвроРегіону на теренах плінтоного Євробасейну «Верхній Прут» і відповідає

Large scale project East Avert embodies EcoEuroRegion model in pilot Euroregion "Upper Prut" and answers



спільним пріоритетам Карпатської конвенції, Стратегії ЄС для Дунайського регіону і Угоди про асоціацію України з ЄС, зокрема щодо прискорення впровадження Водної і Повенної Директив ЄС у басейнах Прута і Сирета

common priorities of Carpathian Convention, EU Strategy for Danube Region and Association Agreement between EU and Ukraine, in particular for acceleration implementation of Water & Flood EU Directives in the basins of Prut and Siret

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 director@trn.fed.gov.ua  
 Державний науково-технічний центр з міжгалузевих регіональних проблем екологічної безпеки та ресурсообороти (ДНТЦ «Екоресурс»)
   
 1988 проект «Водна безпека Європо-Балканського басейну» (Синтеза Інформаційних Систем у Румунії, Україні, Республіці Молдова 2007-2011), фінансована Європейським Союзом за рахунок Європейського інструменту Структурних та Регіональних Ініціативних Інструментів (ERDF) у партнерстві з Україною та Румунією і спільнофінансована українською мовою Міністерством у справах Європи та Регіонів, Республікою Молдова і Україною на підставі актуального плану ЄС. Карпатський Центр є партнером у 28 країн-членів, які інтегрують інформацію з 60 країн-членів, включаючи 19 країн, які не є членами ЄС. Цей проект є результатом співпраці між державами-членами ЄС, які інтегрують інформацію з 60 країн-членів, включаючи 19 країн, які не є членами ЄС. Цей проект є результатом співпраці між державами-членами ЄС, які інтегрують інформацію з 60 країн-членів, включаючи 19 країн, які не є членами ЄС.

Prevenirea și protecția împotriva inundațiilor în bazinele râurilor Siret și Prut – sistem de monitorizare modern cu stații automate

Попередження і захист від повеней у верхніх частинах басейнів Сирету та Прута шляхом впровадження сучасної моніторингової системи з автоматичними станціями



MINISTRY OF ENVIRONMENT, WATERS AND FORESTS

East Avert  
 Basin Administration  
 National Institute of Hydrology and Water Management  
 Basin Director's Office  
 National Prut Basin Administration  
 EcoResource



În conformitate cu prioritățile 4 și 5 (componenta II) ale Strategiei UE pentru Dunăre, proiectul pe scară largă East Avert (POC "RO-UA-MD") va iniția implementarea, de comun acord, în Ucraina și Moldova, a abordărilor managementului apelor, dezvoltării regionale și altor aspecte ale legislației UE în bazinele celor mai importanți transfrontalieri afluenți ai Dunării.

Згідно з пріоритетами 4 і 5 (II платформа) Дунайської стратегії ЄС великомасштабний проєкт East Avert COP "RO-UA-MD" має ініціювати узгоджене опрацювання в Україні (та Молдові) підходів водного управління, регіонального розвитку та інших аспектів законодавства ЄС у базейнів головних трансфрондонних приток Дунаю.

Prevenirea și combaterea inundațiilor și viiturilor în bazinele superioare ale Prutului și Siretului, în baza sistemului automatizat de monitorizare și aplicare a GIS, în scopul gestionării resurselor de apă și a riscurilor.

Захист і прогнidy повеням і "штормовій воді" у верхніх частинах басейнів Прута і Сирета на основі сучасного автоматизованого моніторингу і застосування ГІС для управління водними ресурсами і ризиками.

Pînă studiarea vîrînîi supraîtalîci, autorităîilor și specialiștilor din zonele defavorizate, au fost identificate cele mai adecvate metode de cartografiere a inundațiilor și riscurilor legate de ele și teritoriile bazinelor Prut și Siret, în scopul analizării detaliate, în continuare, a inundațiilor istorice și posibilităților pericole, care stau la baza evaluării riscurilor și planificării acțiunilor în cadrul situațiilor de urgență și verificarea lor cu ajutorul modelării GIS.

Шляхом вивчення та опитувань населення, влад і фахівців у вразливих зонах визначались найбільш адекватні методи картування повеней і пов'язаних з ними ризиків та зони басейнів Прута і Сирета для подальшого детального аналізу історичних повеней і потенційних небезпек, як основні оцінки ризиків і планування дій щодо надзвичайних ситуацій (НС) та їх верифікації через ГІС моделювання.

**REZULTATELE DE BAZĂ ALE PROIECTULUI**

MONITORIZARE	PROGNOZARE
Nivelul și debitul de apă în timp	Prognostice nivelului și debitului
Măsurările la punctele de control	Modelarea
Procesarea și transferul de date	Verificarea datelor și modelului
Maximale niveluri de avertis și inundaje	Calcularea maximeilor (maximalele viiturilor și inundațiilor) între punctele de control
ANALIZĂ STAGIONĂLĂ	Stabilirea obiectivelor următoare
Scenarii de dezvoltare	Algoritmii de monitorizare
Obiectivele structurale locale	Interacțiunile interbasinice
Verificarea acțiunilor	Integrarea amănunțită a datelor
Sustținerea eliminării corecțiilor	Conectarea planurilor de acțiune

**REZULTATELE DE BAZĂ PENTRU GRUPURILE ȚINTĂ ALE PROIECTULUI**

POPULAȚIA	AUTORITĂȚI
Structuri de avertisment	Structuri specializate
Equipe de salvatori	Forțe de reacțiune
Resurse disponibile	Medii de monitorizare
Informații și pregătire	Planuri de acțiune, instruire, cooperare
Avertisarea	Schema de date
Feedback	Acțiunile după scenariu
Îngrijirea generală a schimbării situației	Modificarea scenariului
Acțiuni concrete	Modificarea planurilor de acțiune

**DEFECTIVELE DE BAZĂ ALE GIS ȘI MODELAREA**

BAZĂ ȘI ÎNĂLȚĂ DE CONȘTIȚĂ	TERITORIILE BAZINELOR DE APĂ
Baza topografică digitală (actualizarea geometriei obiectelor, zonelor inundabile și zonelor de risc)	Existența sistemului Devizelor CE INUNDARE
Specificarea zonelor inundabile	Factori tehnologici, care creșteră pericolul de poluare, congestie, modificări ale nivelului și debitului
Profilul	Construcții de inginerie de protecție, consolidare și sisteme
Existența evidențierilor istorice	Zone și obiective cu risc
Trasarea de contur și actualizarea zonelor inundabile	Calcularea debitului înviiturilor, conform scenariilor inundațiilor
Zonarea de risc, congestie și nivel	Modelarea inundațiilor și evaluarea în calitate de factori aditivi
Soluții de nivel în altă perspectivă	Calcularea pentru zone separate
Verificarea și actualizarea inundabile	Integrarea pe scară largă a datelor de acțiune

**DOBŢINE REZULTATILOR PROIECTULUI**

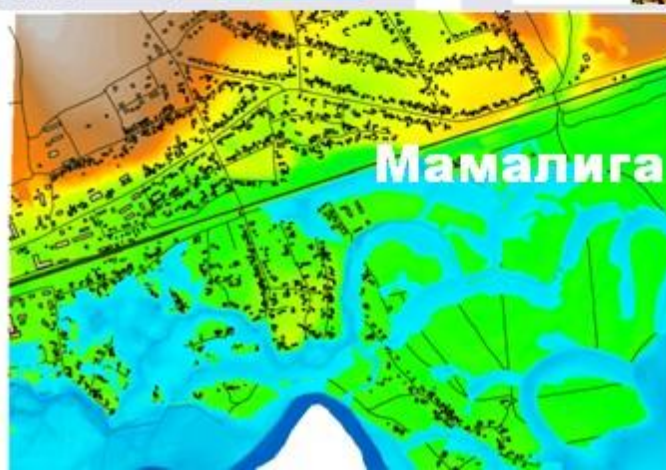
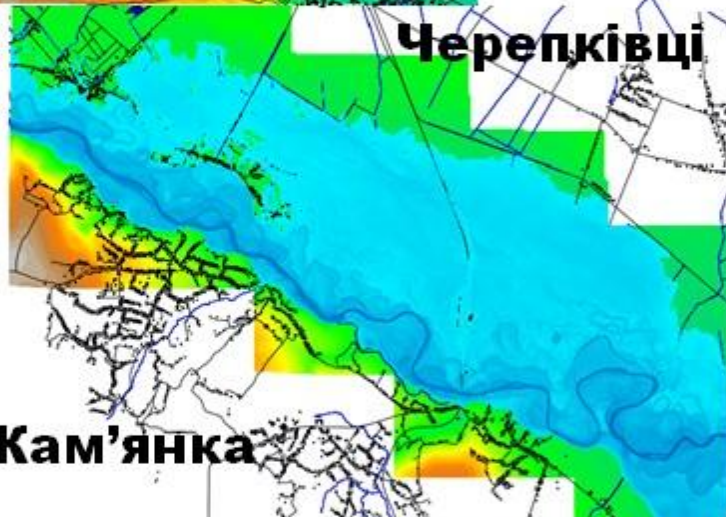
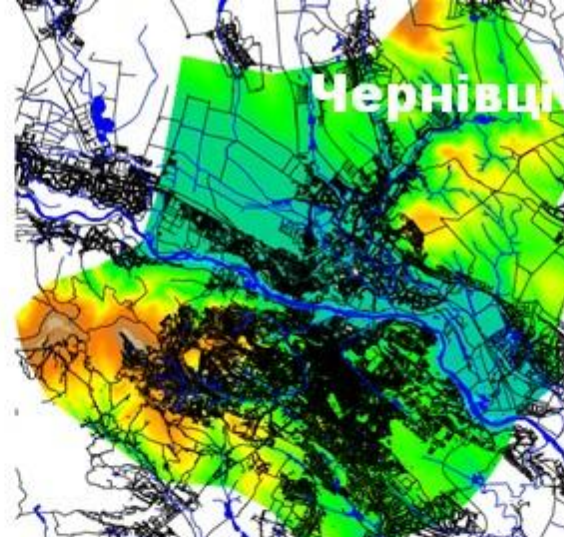
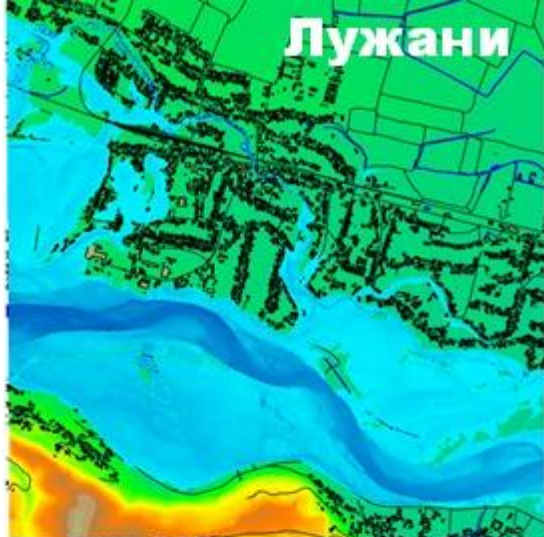
MONITORIZARE	PROGNOZARE
Nivelul și debitul de apă în timp	Monitorizarea în timp real
Măsurările la punctele de control	Modelarea
Obiective și proceduri de date	Verificarea datelor și modelului
Procedurile de nivel în altă perspectivă	Algoritmii de monitorizare (maximalele viiturilor și inundațiilor) între punctele de control
Cartografierea zonelor inundabile	Calcularea maximeilor (maximalele viiturilor și inundațiilor) între punctele de control
Profilul	Stabilirea obiectivelor următoare
Scenarii de dezvoltare	Algoritmii de monitorizare
Obiectivele structurale locale	Interacțiunile interbasinice
Verificarea acțiunilor	Integrarea amănunțită a datelor
Sustținerea eliminării corecțiilor	Conectarea planurilor de acțiune

**OSNOVNI VEȘTEJIMATE DLYA ĆELŢOVIKH GRUP PROIEKTU**

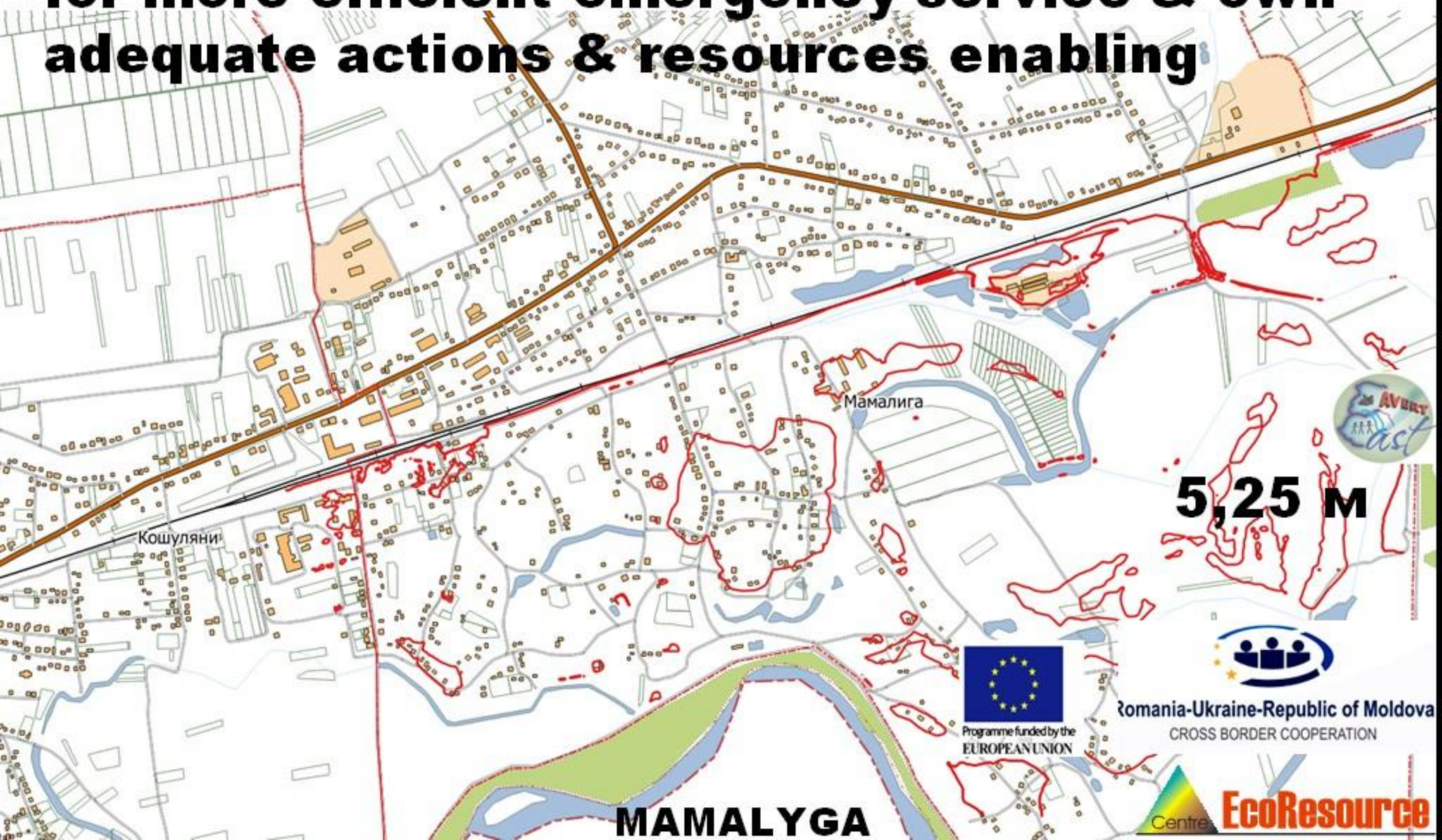
NASILENIE	ORGANI UPRAVLENIE
Structura administrativă	Specializarea și structura
Resurse umane	Scenarii de dezvoltare
Informații și proceduri de date	Monitorizarea în timp real
Obiectivele	Planuri de acțiune, instruire, cooperare
Procedurile de nivel în altă perspectivă	Schema de date
Verificarea și actualizarea inundabile	Acțiunile după scenariu
	Modificarea scenariului
	Modificarea planurilor de acțiune

**OSNOVNI ZAVEDENIE GIS I MODELIRANIE**

ȚINTĂ ȘI GRUPURILE ȚINTĂ	TERITORIILE BAZINELOR
Definiția și actualizarea geometriei obiectelor, zonelor inundabile și zonelor de risc	Existența sistemului Devizelor CE INUNDARE
Specificarea zonelor inundabile	Factori tehnologici, care creșteră pericolul de poluare, congestie, modificări ale nivelului și debitului
Profilul	Construcții de inginerie de protecție, consolidare și sisteme
Existența evidențierilor istorice	Zone și obiective cu risc
Trasarea de contur și actualizarea zonelor inundabile	Calcularea debitului înviiturilor, conform scenariilor inundațiilor
Zonarea de risc, congestie și nivel	Modelarea inundațiilor și evaluarea în calitate de factori aditivi
Soluții de nivel în altă perspectivă	Calcularea pentru zone separate
Verificarea și actualizarea inundabile	Integrarea pe scară largă a datelor de acțiune



**For each settlement/community becomes available to see detailed local inundation danger accordingly to general flood scenario for more efficient emergency service & own adequate actions & resources enabling**



**MAMALYGA**



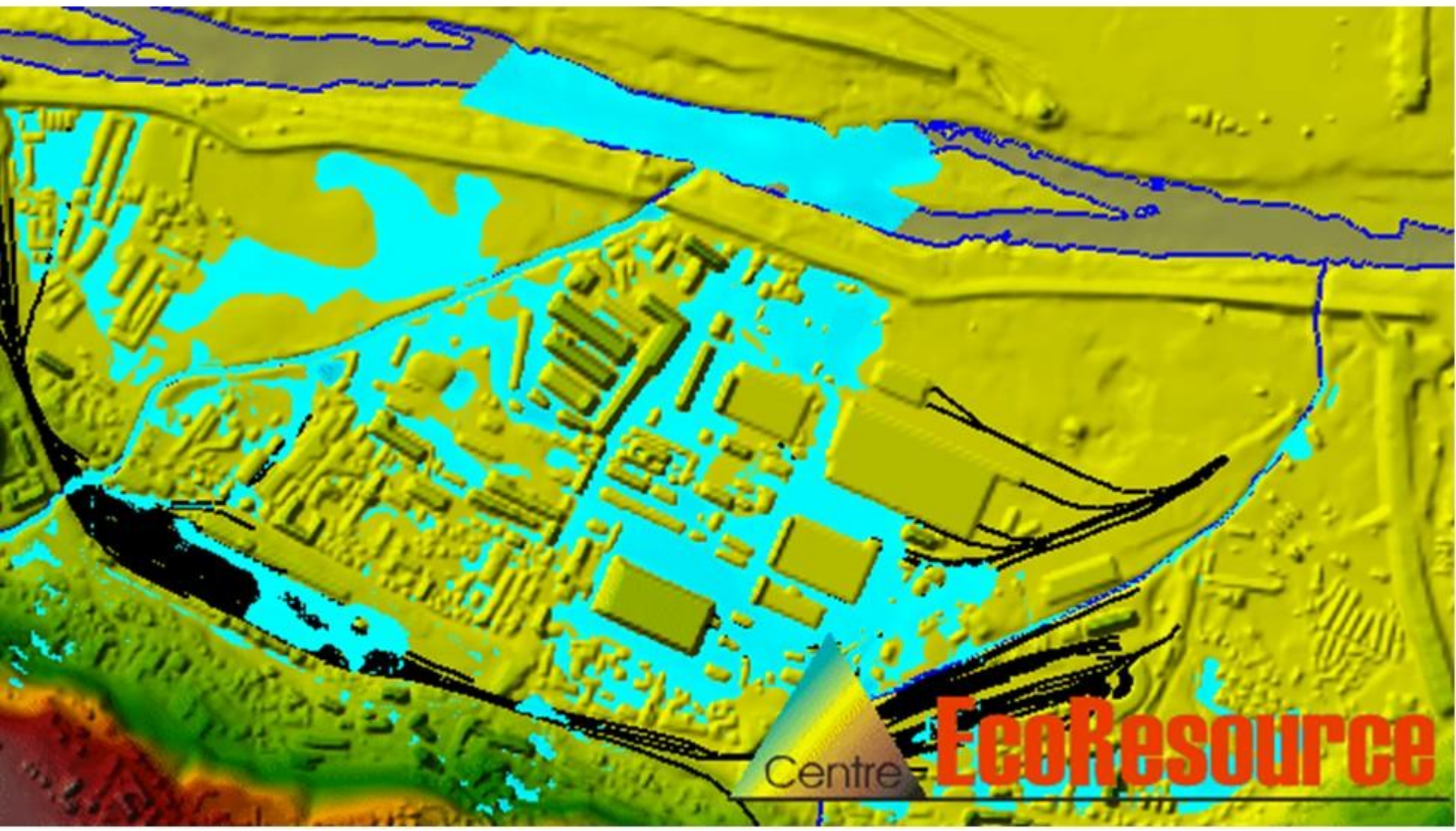
Programme funded by the EUROPEAN UNION

Romania-Ukraine-Republic of Moldova  
CROSS BORDER COOPERATION



**EcoResource**

# URBAN FLASHFLOOD



Centre

**EcoResource**



# & accelerates EU Directives rooting



**Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks**

**WISE in the WISE в более**

*Environmental Reporting / Предст. EIONET*

*Biodiversity and Health / Биолог*

**Air Воздух**

**Soil Почва**

**Water Вода**

**WISE WISE**

Meeting of European R&D Author Sill

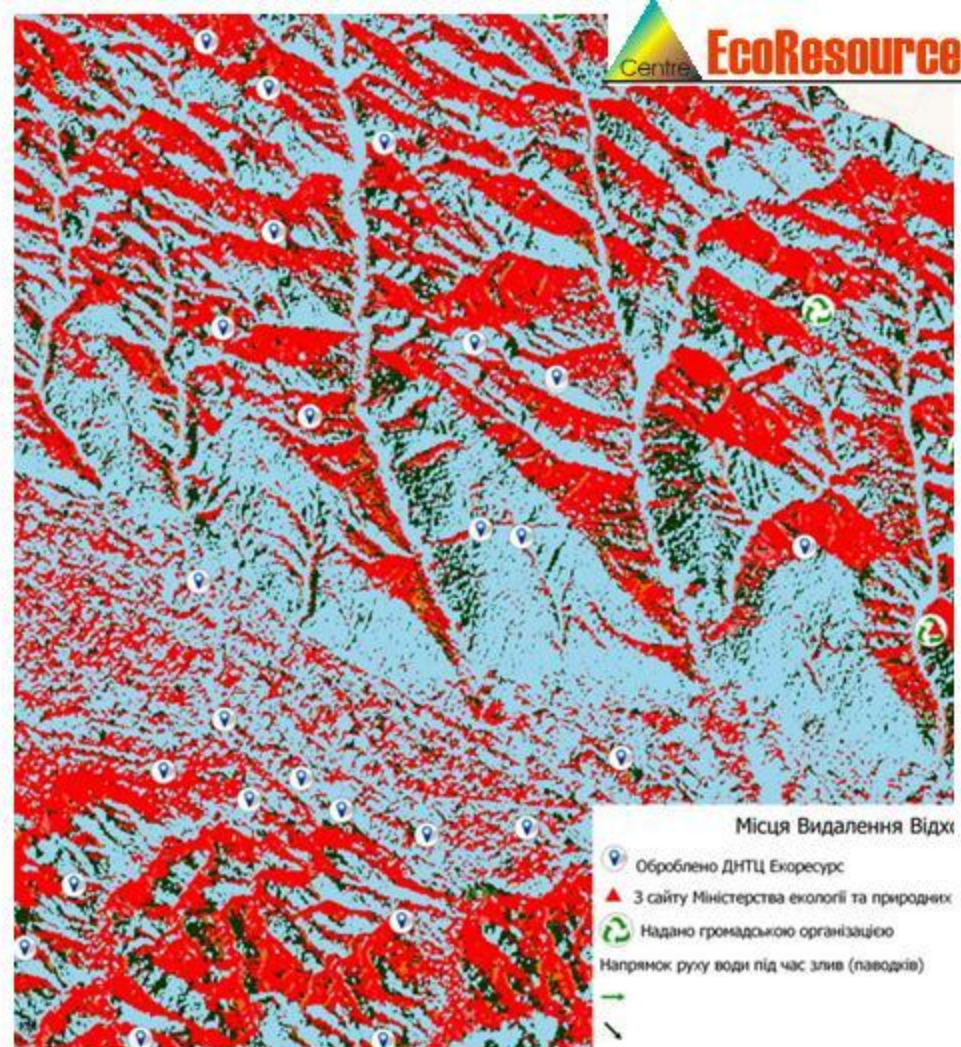
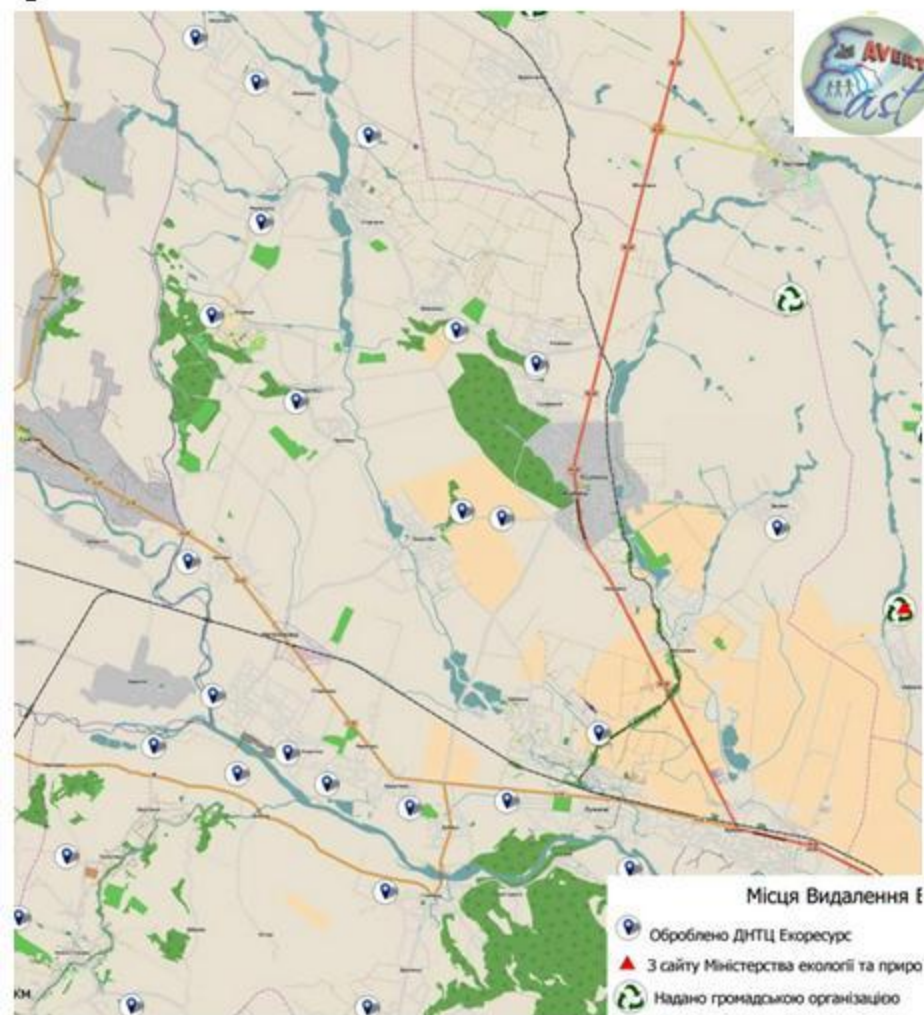
**EU Directives**

- 2010/75/EU on industrial emission (integrated pollution prevention and control)
- Directive 91/271/EEC on urban waste water treatment



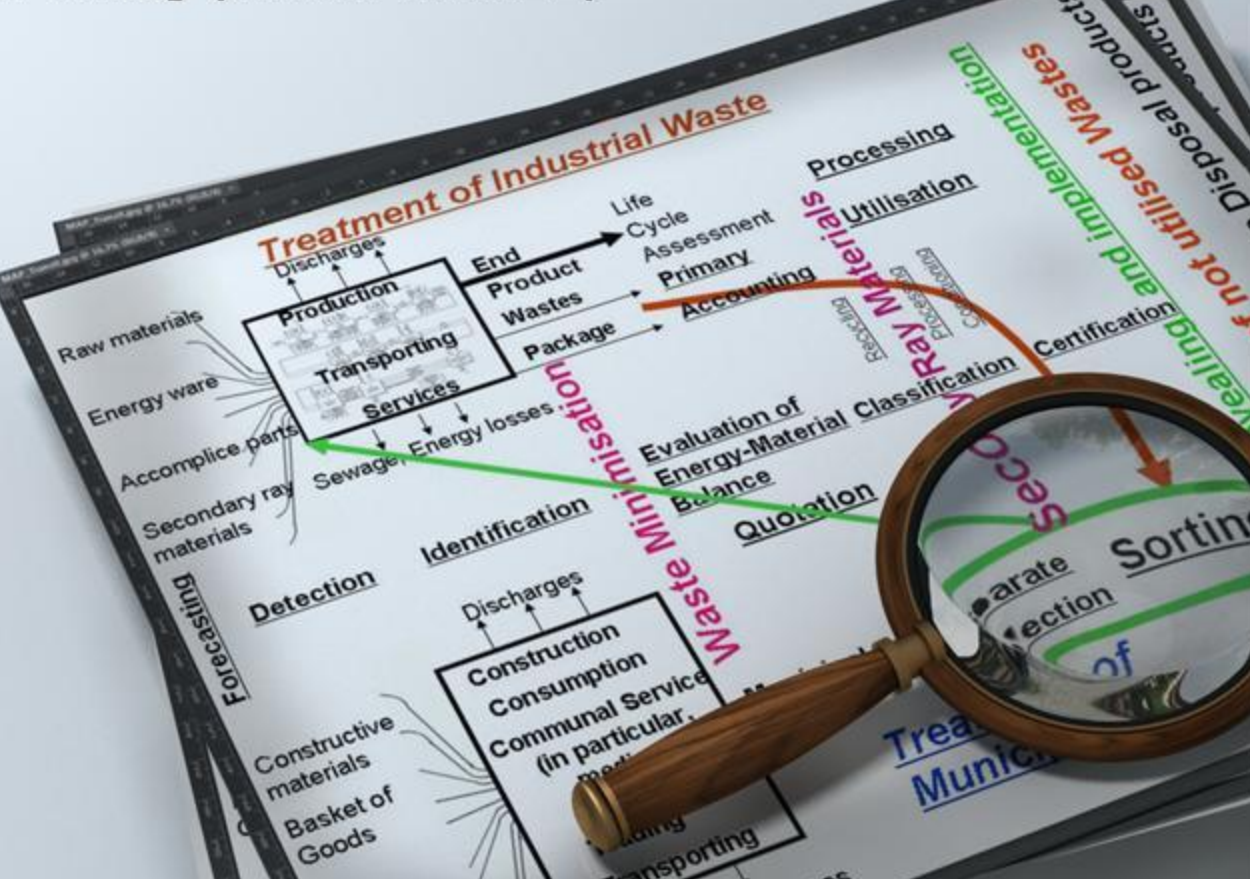


# Decisions making for Waste accumulations (landfills, dumps, burial grounds for animals etc.) placement & risks caused



by actual danger of flash  
floods from slopes (on  
Stormwater nature), which  
are provoked by Climate  
Change

# Transfrontier collaboration for establishment of efficient System for Municipal and Industrial Waste Treatment on the basis of their Sorting (SMIWASTRES)



**DANUBE REGION strategy**  
Biodiversity

LETTER OF RECOMMENDATION

To whom it may concern

The Steering Group of the Priority Area 6 "Preserving biodiversity, landscapes and the quality of air and soils", made up of representatives from the Danube countries (nominated by their governments), has pre-examined the project SMIWASTRES ("Transfrontier collaboration for establishment of efficient System for Municipal and Industrial Waste Treatment on the basis of their Sorting") on the basis of a project description form, in which the project relevance for the EUSDR, the project objectives, activities and expected results and further information are described by the applicant (Department of Housing & Communal Service of Chernivtsi Regional State Administration - Ukraine).

The conclusion is:

The project 'SMIWASTRES' contributes to the actions of the EU Strategy for the Danube Region. Hence, the Steering Group - representing the Danube countries - invites the funding sources to consider providing adequate financial support to the project.

Munich, 01. March 2012

*Ballung*

Dr. Florian Ballung  
Priority Area Coordinator  
Bavarian State Ministry of the Environment and Public Health  
Germany

**through other appropriate EUSDR priority projects,**  
EcoResource

**for EUSDR principal project Cross-border cooperation on establishment of effective system of sorting waste products, farm waste and municipal waste on the base of the best available techniques (BAT)"**

**DIRECTIVE 2000/60/EC OF THE  
EUROPEAN PARLIAMENT AND  
OF THE COUNCIL  
of 23 October 2000  
establishing a framework for  
Community action  
in the field of water policy**

**DIRECTIVE 2007/60/EC OF THE  
EUROPEAN PARLIAMENT AND  
OF THE COUNCIL  
of 23 October 2007  
on the assessment and  
management of flood risks**

(22) This Directive is to contribute to the progressive reduction of emissions of hazardous substances to water.

**Synergy of the EU  
framework Water,  
Flood Risk, Urban  
Waste Water**

**Treatment and  
Integrated Pollution  
Prevention & Control  
(IPPC) Directives**



**EcoResource**



Programme funded by the  
EUROPEAN UNION



România-Ucraina-Republica Moldova  
PROGRAM DE COOPERARE TRANSFRONTALIERĂ

Article 1 The purpose of this Directive is to establish a framework for the assessment and management of flood risks, aiming at the reduction of the adverse consequences for human health, the environment, cultural heritage and economic activity associated with floods



International Network of Basin Organizations

流域组织国际网

Международная сеть водохозяйственных организаций

الشبكة الدولية لهيئات الأحواض

Uluslararası Havza Organizasyonu Ađy

**www.inbo-news.org**

*"The Website on Basin Management in the World"*

Français - Español - русский

**"Europe-INBO 2014"**

12-15, November 2014, Bucharest (Romania)



Information and news

General Assemblies

Liaison Bureau meetings

Communications / Comunicaciones

**WORKSHOP on the Europe Region Process of the 7th World Water Forum**

12 novembre 2014

› East Avert : From agreed Water Management through green Infrastructure to Sustainable Regional Development in Transfrontier River Basins

Zinoviy S.BROYDE

- WORKSHOP on the Europe Region Process of the 7th World Water Forum
- WORKSHOP : River Restoration and Natural Water Retention Measures
- ROUNDTABLE 1 : Preparation of the WFD 2nd Management plans (2016- 2021) : Integration of water quantity issues ; adaptation to climate change ; better interarration

The information and the news of the Regional Networks



Programme funded by the



**EAST AVERT PROJECT MIS ETC 966**

[www.ro-ua-md.net](http://www.ro-ua-md.net)



**Romania-Ukraine-Republic of Moldova**

CROSS BORDER COOPERATION



**28.04.2015**

FILES

<http://www.danubeenvironmentalrisks.eu/files/directory/84>

Root > 9th SG Meeting

### Technogenic-Environmental Safety issues in Ukrainian part of EUSDR area

Ukrainian part of EUSDR area is unique in comparison with other 13 countries of the Danube region, whereas it's the single State, which unites [http://ec.europa.eu/regional\\_policy/archive/consultation/danube/doc/contrib/ua\\_ecoResource.pdf](http://ec.europa.eu/regional_policy/archive/consultation/danube/doc/contrib/ua_ecoResource.pdf) - important part of the Danube delta in Odessa Oblast (Sulina) together with

- general Lower Danube water (and danger) sources – basins of its main tributaries: Tisa, Prut and Siret in Ukrainian Carpathians, which occupy 80% of Ukrainian area in the Danube basin.

Ukrainian & Moldavian participation in EUSDR also covers in fact practically all the right bank and the whole delta of the neighbour Dnister/Nistru river.

Therefore in parallel to EUSDR establishment, it was developed and approved Large Scale project East Avert. which should cover the last “gap” in the Danube Risks Prevention and Mitigation “umbrella” following developments of the Danube Flood Risk project.

Implementation of East Avert foresees 2 general objectives for the Carpathian-Danube area:

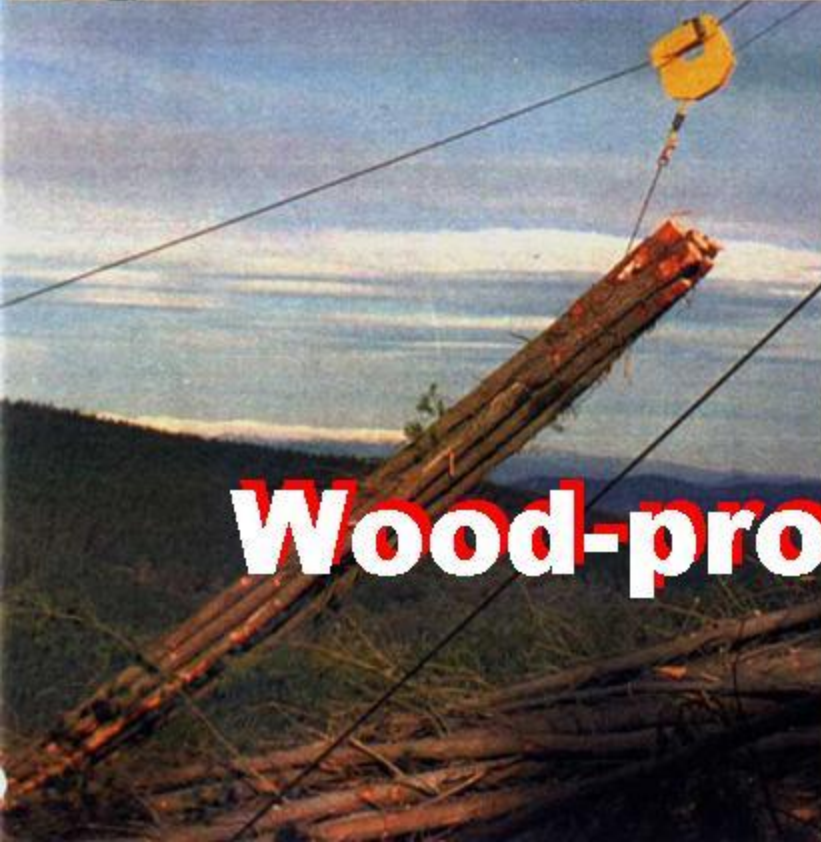
- core technical – common System of Automatic Stations establishment & putting into operation through trilateral dispatching structure;
- and more prospective - development of GIS basis and distributed data bases for digital mapping of flood hazards and flood risk, showing the potential adverse consequences associated with different flood scenarios, including information on potential sources of environmental pollution, and modeling, planning, as well as interaction in the ordinary, emergency, disaster regimes and for consequence of floods elimination, as an essential element for territorial Spatial Planning and Sustainable Socio-Economic Development.

**Alpine & Carpathian Forests aren't only "Lungs" of Europe – but also choiceless source of Danube waters under Global Climate Change with snow & glaciers accumulations exhaustion**





# Change of whole Forestry-



# Wood-processing Cycle



# TO HARMONIZATION OF TERRITORIAL NATURAL & ANTHROPOGENIC COMPONENTS



**EUROPEAN COMMISSION**  
 DIRECTORATE-GENERAL  
 REGIONAL AND URBAN POLICY  
 European Territorial Cooperation, Macro-regions, Interreg and Programme Implementation I  
 Macro-regions, Transnational/ Interregional/ External Cooperation, Enlargement

Brussels,  
 CH -regio.ddg.d.1(2020)5433012

**Subject: Your letter to Commissioner Ferreira concerning European Green Deal and EU Next Generation and Just Transition Platforms (Commission reference: Ares (2020)4283175 – 17/08/2020)**

Dear Dr. Broyde,

On behalf of Commissioner Elisa Ferreira, I would like to thank you for your letter in the subject and your continuous support to the EU project, in particular regarding boosting cooperation and aiming to bring the European Green Deal to the local level.

Please be reassured that both the elaboration of regional development strategies in Ukraine as well as the cross border cooperation programmes with Ukrainian participation will be further encouraged in the new, 2021-2027 financial period. Including the experience and developments coming from previous cooperation actions and joint work into the regional strategies and cooperation programmes is the best way to put them into operation.

As you have mentioned in your letter, coordination is key. Now, when the programming of the 2021-2027 cross border programmes is taking place, it is of utmost importance to take into account the policy results already developed in the programming of these programmes. I would like to encourage you, as a stakeholder, to have your say during the preparation of these programmes, so that you will be able to take part in the implementation of them in a more efficient way. Taking part in shaping the Ukrainian regional development strategies can also be an efficient tool to feed in the results achieved, as these strategies will be implemented through the regional and cooperation programmes as well.

In addition, I am very happy to hear from you how Ukraine has actively contributed to the revision of the Action Plan of the EU Strategy for the Danube Region (EUSDR). Indeed, being part of the macro regional strategy means that projects implemented in Ukraine contribute positively to a wider territorial strategy and goals.

The participation in the development of regional, national and macro regional strategies, as well as in cooperation and regional programmes is the most efficient way for Ukrainian stakeholders to bring the policy developments into operation.

Sincerely yours,

Jean-Pierre Halkin  
 Head of Unit



Head of Division  
 Eastern Partnership – Bilateral Relations

DIRECTORATE Russia, Eastern Partnership, Central Asia  
 Regional Cooperation & OSCE

Brussels, 7 May 2021  
 EURCA.EAST.2 (2021) RT/ 2289904-3432750

Mr. Zinoviy S.BROYDE  
 Director of Centre "EcoResource"  
 2, Kobyljanska str.  
 Chernivtsi 58002 UKRAINE  
[broyde@sacura.net](mailto:broyde@sacura.net) [zinoviy.broyde@gmail.com](mailto:zinoviy.broyde@gmail.com)

Dear Mr Broyde,

Thank you for your letter, dated 24 March, to Josep Borrell, High Representative/Vice-President. The EU welcomes regional integration, improved joint-up infrastructure and projects of common interest.

You refer to the collaboration of the eight Carpathian countries (Austria, Czechia, Hungary, Poland, Romania, Serbia, Slovakia and Ukraine) in the heart of the European continent, which have common historic roots in infrastructural, socio-economic, environmental and other key aspects and should push cooperation forward.

I subscribe to your view that the upcoming Ukrainian Presidency in the EU Strategy for the Danube Region (EUSDR) provides an opportunity to enhance current and prospective EU approaches and look for more synergies between the projects.

The European Union is supportive of projects furthering regional integration that foster joint solutions towards climate change and economic development.

Yours sincerely,

[e-signed]  
 Richard Tibbels

**SUPPORT FROM EXTERNAL & REGIONAL POLICY OF EU COMMISSION**

СПІЛЬНИМИ ЗУСИЛЛЯМИ !



VIRIBUS UNITIS !

10.10.2012



Офіційний веб-портал

[zinoviy.broyde@gmail.com](mailto:zinoviy.broyde@gmail.com)

**Thanks for your attention!**

[zinoviy.broyde@gmail.com](mailto:zinoviy.broyde@gmail.com)

