

Interreg - IPA CBC Romania - Serbia



ACADEMIC ENVIRONMENTAL PROTECTION STUDIES
ON SURFACE WATER QUALITY IN SIGNIFICANT
CROSS-BORDER NATURE RESERVATIONS
DJERDAP / IRON GATE NATIONAL PARK AND
CARSKA BARA SPECIAL NATURE RESERVE,
WITH POPULATION AWARENESS RAISING WORKSHOPS

EMS: RORS-462

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Lead partner

University Politehnica Timisoara

Experiences

The University (www.upt.ro) has following faculties: Computer Sciences, Electronics and Automatization, Energetics, Mechanical Engineering, Chemical Engineering, Civil Engineering, Architecture, Hydrotechnics, Management in Production. Each of them has its teaching autonomy and disposes of modern laboratories on specific training & research fields. Environmental protection is representing a new tendency in development of young specialist generation, thus one offers courses and practical training concerning prevention of environmental pollution, cleaning technologies and measuring, both on air, water and soil component. The Department for Mechanical Engineering, Equipment's and Transportation (www.mec.upt.ro/~dep4) is deeply involved on special aspects such as air quality monitoring, dispersion modeling of pollutants, emission control of combustion facilities, environmental protection legislation (EC, Romania), waste management, renewable energy resources, special clean technologies, alternative fuels, a.o. University Politehnica Timisoara is one of the leading technical universities in Romania and by far regional leader in providing technical education in all relevant field and also research capabilities thru its research centers.

Benefit

The mission of the Politehnica University of Timisoara is to offer nationally competitive and internationally recognized opportunities for Learning, Research, and Innovation at the highest levels of excellence. As a knowledge resource to the public, the university builds partnerships with other educational institutions, community organizations, government agencies, and the private sector to fulfill the requirements for competences of the societal environment through superior professional training for students and graduates. The innovative capacity of the University Politehnica Timisoara is supported by teachers and scientific researchers through patents invented and involvement in society's need for development. Strengthening the cross border cooperation in our region, regional environmental protection and contribution to the development and increase visibility of regional scientific research in the area is a mission and opportunity for University Politehnica Timisoara. Thru the project outputs the University will develop its research laboratories with state-of-art new analytical equipment's and will develop its regional cooperation network of research centers.



Lead partner

University Politehnica Timisoara

Other International Projects

The University Politehnica Timisoara is by far the most relevant research institution from Banat area and one of the most important in Romania. The university academic staff and researchers developed and implemented thousands (in more than 80 years of existence) research project funded thru various research and development programmes, such as:

EU-IPA, FP5 – 7, HORIZON 2020, CEEX, PNCD, NASA, UEFISCDI, a.o. • RORS (INTERREG IPA I), MIS-ETC 1425, Acronym ENVIROBANAT, a cooperation project with partners from Serbia with impact on developing tools for measurement of water pollution in the Banat Region • Horizon 2020, RFCS-2015/RFCS-2015, Valorisation of Knowledge for Sustainable Steel-Composite Bridges in Built Environment – SBRIplus • EUROPEAN SPACE AGENCY, AO8538 / 2016, Study for a monitoring station for EGNOS to support services in Eastern Europe – EGNOS • INTERREG DANUBE, DTP1-1-454-3.1-eGUTS, 2017 – 2019, Electric, Electronic and Green Urban Transport Systems – eGUTS • RORS (INTERREG IPA I), MIS-ETC 1379, Cross-border access infrastructure to high-level education through web-cast – EduWebCast • HURO (INTERREG IV-A), HURO/1001/139/1.3.4, Contribution to sustainable development by assessing the transboundary air pollution upon the cultural & turistical heritage in HU - RO border – TRANSAIRCULTUR • FP7-PEOPLE-2013-IRSES, Micro and Nanoscale Design of Thermally Actuating Systems • 2009-2012, Research Institute for Renewable Energies (ICER-TM), a project with the main purpose of creating a research platform in order to better use different equipment related with renewable energies.





Project partner

University of Belgrade / Technical Faculty in Bor

Experiences

The Technical Faculty in Bor was founded in 1961, as a part of the University of Belgrade and high education scientific organization for education students in the fields of mining and metallurgy. During its existence, the Faculty had Departments: for inorganic chemistry, Engineering in Mining and Metallurgy, Department for Higher Education of Workers, Industrial Management, Department of Industrial Informatics and Electro-Mechanical Engineering. In 2007 the Technical Faculty got accredited as a scientific and research institution in the field of technical and technological studies - metallurgy, mining, technology and management. Since the establishment of the Faculty, 2850 students have been awarded their Undergraduate Diploma, Master Academic Studies Diploma has been awarded to 180 students, Specialist Studies Diploma for the relevant field has been awarded to 20 students and 160 MSc and 119 PhD theses have been defended. Faculty in the previous period realized several international projects and projects of cross-border cooperation in which the main objective was the transfer of knowledge and education of students, young researchers and teachers, as the main objective and this project. Faculty also has bilateral cooperation with 30 faculties and scientific institutions worldwide.

Benefit

The main benefit of project realization is shown in the transfer of knowledge between institutions in the cross-border area, the advancement of knowledge of students, young researchers and professors in the field of surface water quality monitoring, and environmental protection. By organizing workshops with acknowledged experts from these fields, citizens will attend and will be media covered, this knowledge will spread on wider population in the region. By project realization the cooperation between institutions and team members will be enhanced and new possibilities and forms of cooperation in field of scientific - research work will emerge. By establishing a center and by procurement of equipment for used for the field and laboratory research bring the good opportunities for the promotion of surface water quality data and possibilities for its improvement, in broader region will be created. The design of procured equipment will be adequate not only for needs of promotion but for research in aim of improvement of system functionality and efficiency. Therefore, the research work on faculty will be upgraded involving students and professors and opening new possibilities for work on international research projects.





Project partner

University of Belgrade / Technical Faculty in Bor

Other International Projects

The Technical Faculty in Bor is intensively involved in the international cooperation with many universities and institutions around the world, EU and non EU countries. Some of our most important projects are:

- JST SATREPS „Research on the Integration System of Spatial Environment Analyses and Advanced Metal Recovery to Ensure Sustainable Resource Development”, Research Institutions in Japan: Akita University / Japan Space Systems / Mitsui Mineral Development Engineering Co., Ltd., Research Institutions in Serbia: Mining and Metallurgy Institute Bor/Technical Faculty-Bor, University of Belgrade
- Erasmus + KA1 between Technical faculty in Bor, University of Belgrade and Faculty of Metallurgy Sisak, University of Zagreb (Croatia)
- Erasmus Mundus External Cooperation Window Project - BASILEUs (Balkans Academic Scheme for the Internationalisation of Learning together with EU Universities)
- TEMPUS-1-2010-1 - Development of Environment and Resources Engineering Learning - DEREL, coordinator: Prof. Stefano Manetti, Università degli Studi di Firenze – Facoltà di Ingegneria, UNIFI (Italy), Other partners: JPCR AL(4), MK (5), RS (5) AT, DE, GR, IT
- TEMPUS – MCHM „Modernization of Post-Graduate Studies in Chemistry and Chemistry Related Programmes”, University of Greenwich, School of Science (UK). Other partners: University of Niš / University of Novi Sad / University of Kragujevac / RWTH Aachen University (Germany) / University of Technology (Brno - Czech Republic) / University of Nova Gorica (Slovenia) / University Lower Danube in Galati (Romania) / Technical Faculty in Bor, University of Belgrade



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Project partner

Pro-Mehedinti Association

Experiences

The project team is well experienced in implementing EU funded projects for the development of the tourism sector, environment and the labor market. Its members have excellent project management skills, media and procurement training and expertise. The experience gained as a result of successfully implementing projects in tourism development and their success and growth-generating results entitles us to develop a complementary project and extend the area of intervention, broaden the target groups and further develop the area of effective activities. Pro-Mehedinti Association has foreseen in its statute objectives and types of activities aiming at involving citizens in social and administrative life, informing and conciliating the population from the rural and urban area, developing trainings programs in urban and rural area, offering services of work mediation, promoting equal opportunities and non-discrimination behavior in the society, informing and awareness upon this region natural and historical values, preserving and maintaining a clean environment. Also, the association has obtained until present moment accreditations and provides services of information and professional conciliating, work mediation, and programs of professional training on themes like informatics competences and entrepreneurial competences.

Benefit

We are fully prepared for new challenges and partnerships that could lead to the accomplishment of our Statutory goals and objectives, increasing in the same time our capacity in implementing projects financed by public funds

Other International Projects

Pro-Mehedinti Association has almost 10 years of uninterrupted experience and more than 2,500,000.00 Eur from European Union funds successfully managed, as follows: „Cross-border Danube Itineraries“- Lead partner, financed by the European Union by the Neighbourhood Programme Romania-Serbia 2005; „Danube with no frontiers“ - Lead partner, financed by the European Union by the Neighbourhood Programme Romania-Serbia; „Protected Natural Area Gruia – Garla Mare: The biodiversity conservation in the sustainable development perspective“ - Lead partner, co-financed by European Regional Development Fund, financed by Ministry of Environment and Forests through Sectorial Operational Programme “Environment, SMIS-CSNR 10883; Made in the Iron Gates” MIS - ETC 1235 - Lead partner, financed under Romania – Republic of Serbia IPA Cross-border Cooperation Programme, a program financed by the European Union through the Instrument for Pre-Accession Assistance (IPA) and co-financed by the partner states in the program “Plums For Junk”, INTERREG V-A Romania-Bulgaria Programme, implementation



Project partner

Citizen Association "Village" -
Movement for Rural Development Zlot

Experiences

NGO "Village" has been founded on November 10th, 2007. In order to realize our goals, we are actively engaged in preserving diversities and cultural heritage of Eastern Serbia, promotion of multiculturalism, as one of the most significant value of this area, by organizing, on our own or in cooperation with number of organizations, public forums, seminars, presentations, trainings, public gatherings, publishing printed and multimedia publications and developing, realizing or coordinating wide specter of projects. Our main goals are development and promotion of civil society and as well as improving awareness and managerial skills with the young population as a main condition for survival of our communities. Most of our activities are targeting young population and are directed toward preserving nature, environment, cultural heritage and promoting touristic attractiveness of the area. Members of our organization are of different social, educational, religious and national profiles, fully representing complexity of Eastern Serbia. We are especially proud on the fact that among us are the members of 9 different minority groups living in the area. Of course, we are non-profit organization with the budget coming from project financing, private persons and members' donations. Two of our own brands are fully representing our dedication in preserving cultural heritage and international cooperation: Traditional International Ethno Song Festival "EastVille - Differences are connecting us" with participant from no less then 6 countries and Traditional International Ethno Folk Festival "Malinik" (lasting 4 days, 250+performers, folk ensembles from seven countries). We are also proud on the fact that our dedication is recognized by OSCE HCNM's office who is, in last two years, sending their representatives to moderate round tables on minority issues organized as a part of our manifestations.

Benefit

One of the main objectives our organization is founded for is improving living conditions of local population by promoting natural and cultural heritage. So, the Programme objectives fully correspond to our organization's objective. This project is challenge and opportunity for our members to, together with our partner, work on project which will have positive impact on the whole cross border area.

Other International Projects

NGO Village was managing projects funded by following international organizations: UNDP- project of Eco Ethno Camp IBRD -public works in field of environment protection OSCE HCNM- round tables on minority issues More details on our previous project can be found at our web site: www.village.org.rs

Academic environmental protection studies on surface water quality in significant cross-border nature reservations Djerdap / Iron Gate national park and Carska Bara special nature reserve, with population awareness raising workshops

Project main overall objective

Raise the awareness of society on the need of natural heritage protection and conservation and to promote scientific state-of-art tools for surface water quality monitoring in cross-border area thru case studies and onsite measurements



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Project main result

1. Scientific study on surface water quality in Djerdap/Iron gate protected area.
2. Study on evaluation of surface water quality in two regional significant and unique sites, Carska-Bara special nature reserve and Delta (Balta) Nera nature reservation, the newest delta in Europe.
3. Extensive Study on the influence of the copper mining activities in Majdanpek on Danube river.
4. Awareness raising campaigns - conferences, events and trainings, the Project team intend to educate scientists, experts, students and children in on the importance of environmental protection, especially on the protection of our rich natural heritage, natural protect areas and Natura 2000 sites in conjunction with sustainable economic development.
5. Greening activities The project results and expected outputs contribute directly to programme result indicators: PA2.OI1, PA2.OI2 and PA2OI3.

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Project context

The project contributes to a number of local and regional policies: the Romanian national strategy for sustainable development 2013-2020, HORIZON 2020 policy according to which Romania must complete its obligations in accordance with the EU legislative package on environmental protection and climate change, EU strategy for the Danube region in terms of mobility, environment and socio-economic development or safety.

The project outputs will contribute significantly to two programme strategic focuses: Tackling the lack of competitiveness in cross-border area, where the project will contribute thru the development of two major research laboratories (at University Politehnica Timisoara and Technical Faculty in Bor), strengthening the regional research potential and assuring the necessary expertise and scientific research equipment's – allowing us to promote our participation in large research project at EU level.

Dealing with the significant common challenges in the environment, where the project has its main contribution, thru its surface water quality measuring campaigns, environmental study, and extensive awareness raising campaigns on need of protecting our natural heritage and environmental diversity.

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Specific objective

1. Increase the awareness of region society on the need of natural heritage protection.

Awareness activity will consists in conferences, events, school seminars and training sessions the Project team intend to educate scientists, experts, students and children in on the importance of environmental protection, especially on the protection Romanian Serbian border with specific unique natural heritage, natural protect areas and Natura 2000 sites.

Through this activity we aim to develop the civic spirit empowerment, for the transmission to future generations of a clean and healthy environment respecting the three dimensions of sustainable development - economic, ecological and social.

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Specific objective

2. Strengthening the cooperation between region two most important education and research institutions, University Politehnica Timisoara and Technical Faculty in Bor

Strengthening two major universities, University Politehnica Timisoara and Technical Faculty in Bor, capacity to provide high quality in technical education for students and significant improvement on their research capabilities thru equipment acquisition.



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Specific objective

3. Evaluation of surface waters quality in area with emphasis on Danube and its tributaries and Carska Bara special nature reserve.

Studies on surface water quality in cross-border area:

- Scientific study on surface water quality in Djerdap/Iron gate protected area;

- Scientific study on surface water quality in two regional significant and unique sites, Carska-Bara special nature reserve and Delta (Balta) Nera nature reservation, the newest delta in Europe

- Study on the influence of the copper mining activities in Majdanpek on Danube river;

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Durability of project outputs and results

Changes related to regional transboundary surface water pollution are continuously developing and efforts related to reduce it should be constant. Our effort is to find scientific methods for faster and more complete monitoring of surface water quality, not only to solve current issues but to provide better tools for future generation in their effort to protect our environment. Collaborative efforts to increase the knowledge in environmental protection and to raise awareness of region inhabitants on the necessity to protect our environment, for a better quality of life, are and should be constant and continuous. The project studies on surface water quality on border area are of immediate and mid-term effect, however, the knowledge gathered thru project implementation will be used by our university professors (both on University Politehnica Timisoara and Technical Faculty in Bor) to improve their curricula and improve the quality of educational tools used to interact with students in the future. Also, the state-of-art high end analytical equipment's that will be purchased by both universities will contribute to sustainable development of our research centers and provide a startup point for future cooperation's and projects development.

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Transferability of project outputs and results

The project outputs are all public licensed. As long as our work and results are correctly cited in the works of third parties there are no restrictions in the use of project publically available results, regardless that are measurements data or published studies.

We strongly believe that knowledge has no borders and should not have owners, so that the project scientific outcomes are published entirely on the project webpage and available for download free of any charge. We hope and believe that NGO's and regional public environmental institutions and agencies will use the database that we will develop, the information's that we will present in project conferences and studies information's in their own studies and environmental protection activities. Indirectly, the project findings and outputs are anyway transferred to other organizations, as they are used in our universities educational process to form future environmental protection engineers.



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Project activities

The project management activity will define:

- Communication/Dissemination strategy
- Planning of the task implementation timeframe
- Planning the surface water quality monitoring campaigns
- Organize the Conferences, Workshops and Seminars
- Assure the joint implementation and correct planning of joint expert team tasks
- Prepare the deliverable for Funding Agency branches.



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Target groups

1. Local public authority

- Municipalities from all awareness campaigns will be announced on the campaign and invited to participate. Awareness material will be distributed to municipalities, and municipalities representatives will be invited to public conferences organized by project partners



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Target groups

2. Regional public authority

- Regional government from county's where surface waters quality monitoring will be performed will be invited to our conferences and result studies and awareness materials will be distributed to them. As they are decision makers in environmental aspects of life we hope to make them understand and become aware that a better economic situation is insufficient if not completed with a better environment in order to have a better life.

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Target groups

3. National public authority

- All data and all project outputs are directly available to national financing agencies.



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Target groups

4. Interest groups including NGOs

- Anthropogenic pollution - especially air and water quality - is mainly caused by industry. The eligible region is industrialized on both sides (Romania and Serbia) with major mining industry, shipyards, rubber industry, copper and iron industry, all with high pollution potential. This makes the industry our target group with direct involvement of NGO's and public decision makers. One feasible indirect solution to reduce the cross-border pollution is to involve the industry, NGO's and decision makers in environmental aspects of life and to make them understand and become aware that a better economic situation is insufficient if not completed with a better environment in order to have a better life. This target group will be addressed

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Target groups

5. Higher education and research

- This target group is relevant for the project because the young scientists (engineers) will be trained and educated on most important environmental issues: water quality. This target group is formed by the students (bachelor, master and PhD) involved in the project, on both sides of the border. They will take part to trainings, conferences and onsite measurement campaigns and probe sampling, and as future specialists in environmental sciences from their knowledge improvements will indirectly benefit, in the future, entire region.



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Target groups

6. Education/training centre and school

- The target group is formed by the pupils, who will be involved in the awareness raising campaigns and greening activities. In the campaigns we will involve 10 schools in Romania and 5 schools in Serbia with minimum 500 participants in total.



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Target groups

7. General public

- The cross-border area society/population, in general is a target group mainly through the project public character and implementation transparency. All project findings, conferences and events, project results and studies conducted will be advertised in local and regional media and also published on project webpage.

Any interested parties will have direct and total access to all project outputs.

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Cross-border impact of the project

The environmental issues and especially surface water quality are not of local concern but by definition a regional or global concern. By the means of this surface water quality will be determined by direct measurements on Danube river and some of its main tributaries and the values obtained will contribute to improve the regional capabilities of policy making authorities for a better and sustainable development of the cross-border area. The educational and R&D contribution is significant; two major universities and two regional important NGO are directly involved through their scientists in solving common water quality related problems and increase the public awareness on the necessity to protect our natural heritage, biodiversity and richness of natural protected areas and Natura 2000 sites. Also, the partners cooperated successfully on previous research and educational projects, a strong connection been built between us at one hand and our teachers/researchers on the other hand.

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Project coherence with other programs

The project fits Lisbon & Gothenburg strategies, contributing to future sustainable development, based on current environmental realities and promoting developing competitiveness in our area through the involvement of specialist from important universities and NGO's.

Also, thru the scientific research involved and state-of-art analytical equipment acquisition, the project will also contribute to HORIZON 2020 strategies, by strengthening our universities capacity for development of future research grants proposal. The Romanian national strategy programme for durable development is also targeted, as the project objectives fits well in the strategy goal "7. Protection and promotion of Romania's cultural and natural heritage"

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Sustainable development

The project fits well on the EU 2020 strategy for Sustainable Development, as this strategy “stands for meeting the needs of present generations without jeopardizing the ability of futures generations to meet their own needs – in other words, a better quality of life for everyone, now and for generations to come”.

A better quality of live is not possible in absence of clean environment ... and a clean environment is not possible if the region inhabitants are not aware on the need to protect our natural heritage.

Also the project fits on the EU Environment Action Programme 2020, as one of the programme key objective is “to protect, conserve and enhance the Union's natural capital”

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EU contribution: 532,932.26 €



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Cooperation beyond borders.

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