

## SUSTAINABLE DEVELOPMENT OF A RESEARCH CENTER IN BANAT REGION AND DANUBE FLOW AREA THROUGH SCIENTIFIC RESEARCH AND ENVIRONMENTAL SIMULATION TOOLS TO ASSESS AND EVALUATE POTENTIAL THREATS.

### Goal of the project

Main project objectives are: strengthening the cross-border cooperation between Banat Universities; evaluating the environmental quality (air & water) in the Banat and Danube flow area; protection of regional environment by means of identification of the pollution risk; increasing the importance of R&D in cross-border area; creation of 2D and 3D area pollutants dispersion maps for the BANAT region and Identification of the high polluted hot-spots in the Banat region; dissemination of know-how.

### Short description of the project

The project activities are structured in two stages. In the first stage the necessary air and water quality monitoring equipment will be acquired on both universities, knowledge will be disseminated and learned "by doing", the set-up will be conducted in Zrenjanin and Timisoara and joint Romanian-Serbian scientist's team will collect the water samples from main Danube tributaries and major Banat rivers. The second stage of the project will be focused on knowledge transfer and scientific research and dissemination of results.



### Project implemented by

Francisc Popescu

### Implementation period

12.06.2013 – 11.06.2014

### Main activities

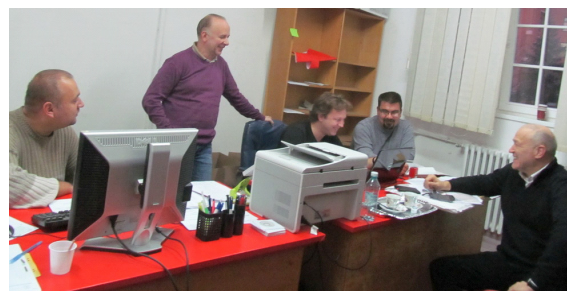
Project start-up, planning and development; Equipment acquisitions; Dissemination (workshop, conference, media, book); Data acquisition and field samples collection; Creation of iso-concentration maps.

### Results

Acquisition of high resolution equipment's for air and water quality monitoring and necessary software for simulations and creation of pollutants iso-concentration maps; Intensive training of students and Serbian scientists in use of Lagrangian and Gaussian models for air pollutant dispersion; an academic database with all resulted iso-concentration maps for Banat region; dissemination workshops and book.

### Applicability and transferability of the results

The main core result of the project is the creation of an extensive database (envirobanat.ro) with water quality measurements in Banat area and Danube flow tributaries, main air pollutants concentrations, reports and guide's that will be available for further analysis for academic scientists, students, policy makers.



## Fields of interest

Air quality monitoring, water quality monitoring, spectrophotometry, light scattering – particle sizing, aerosols, environmental protection.



## Research centre

Research centre for Thermal Machines and Equipment, Transportation and Pollution Control

## Financed through/by

EU Commission, Romania-Republic of Serbia IPA Cross-Border Cooperation Programme, Measure 1.4 - Support increased levels of R&D and innovation in the border region.

## Research team

Francisc Popescu  
Dorin Lelea  
Ioan Laza  
Gavrilă Trif-Tordai  
Adrian-Eugen Cioabla  
Olivia Bundău  
Marinela Balut  
Gavril Brateanu



## Contact information

Assist. Prof. Francisc POPESCU, PhD  
Department of Mechanical Machines, Equipment and Transportation  
Address: Bv. Mihai Viteazu, No.1, RO300222, Timisoara  
Phone: (+40) 256 403 666  
Mobile: (+40) 721 832 730  
E-mail: francisc.popescu@upt.ro  
Web: envirobanat.ro