

*UGAL International Conference Multidisciplinary HUB for the Higher Education  
Internationalization by Means of Innovative Interaction with the Labour Market and  
Society 26-27 October 2018, Galati, Romania*

**A REVIEW ON BATHYMETRIC MEASUREMENTS FROM AUGUST 2018  
CAMPAIGN ON THE LOWER COURSE OF DANUBE RIVER**

**Maxim Arseni, Adrian Rosu, Catalina Iticescu, Lucian P. Georgescu,  
Mihaela Timofti, Violeta Pintilie, Madalina Calmuc**

*Faculty of Science and Environment, European Center of Excellence for the Environment,  
"Dunarea de Jos" University of Galati, 111, Domneasca Street, RO-800201, Galati, Romania*

*Corresponding author: [maxim.arseni@ugal.ro](mailto:maxim.arseni@ugal.ro)*

**Abstract:** The presented paper shows a combination of different methods and techniques for high precision depth measurements. The results show the procedures for collecting field data from the bathymetric measurement campaign of August 2018, developed along the lower course of the Danube. Measurements were made over a total distance of 20 km. The main purpose of the measurements is to create bathymetric maps and to generate depth maps. To achieve the main purpose of this research paper, single beam bathymetric measurements were made and it was combined with GPS RTK mode determination, in local Stereo 70 coordinate system. Repeated measurements in different quarters of the year will determine the morphometric changes in time of the riverbed bed on this study area. Furthermore, based on the bathymetric maps, in the future, it can be created a coherent river terrain model, which can be used for other purposes, like 1D/2D or 3D hydrodynamic modeling and flood inundation mapping. This work was carried out in the framework of the Ministry of Research and Innovation Project – 4.07.2018 – Strategy and actions for preparation of the national participation in the Danubius – RI Project (DANS).

**Keywords:** Danube River, bathymetry, single beam measurements, hydrodynamic model

**Acknowledgement:** This work was supported by the project "Strategy and actions for preparing the national participation in the DANUBIUS-RI Project" acronym "DANS" financed by the Romanian Ministry of Research and Innovation.