WRW 2014

2nd International Conference

# Water resources and wetlands

## Programme and Book of Abstracts

11-13 September, 2014 Tulcea (Romania)

Editors: Petre Gâstescu, Włodzimierz Marszelewski, Petre Bretcan

Editura Transversal

# FLOOD RISK PERCEPTION AND EDUCATION ASSESSMENT. CASE STUDY: FLOODS OF SEPTEMBER 2013 IN GALAŢI COUNTY

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**Abstract**

In September 2007, Galaţi County was seriously touched by floods affecting approximately forty localities, and causing significant human and material losses. The floods were the consequence of high precipitation recorded in September 12 to 15 that cumulated, at several gauging stations within the County, over 150 – 200 mm (more than one third of annual precipitation specific for the region). The hydrologic response of these rainfall events was the flash floods occurrence on the majority of rivers situated on the southern extremity of Bârlad Plateau, floods which generated the inundation of built-up areas, transport infrastructure and agricultural lands along rivers. This paper aims on one hand, to emphasise the features of the floods on Geru and Suhurlui Rivers and, on the other hand, to analyse the perception of the population on floods and to assess the degree of education concerning the flood risk. The paper is based on processing of hydroclimatic data (acquired from "Romanian Waters" National Administration – Prut Water Directorate), spatial data (obtained from topographic, geological and pedological maps and digital sources: SRTM and CORINE Land Cover database) and also on the information resulted from field investigation (50 questionnaires applied in 2 localities). The methodology is mainly based on statistical analysis and GIS based processing of spatial data (using ArcGIS 10.1 software). In this paper we highlight the features of the studied catchment areas, the main factors that led to the occurrence of these floods and their characteristics (increasing and decreasing time, total time, water volume). On Geru River, at Cudalbi gauging station, the flood of September 2013 reached the maximum peak recorded during 1980-2013 period: 118 $m^3/s$ (2,060 times higher than the annual average flow, which is only 0.087 $m^3/s$). In the case of Suhurlui River, the flood's peak was 22.8 $m^3/s$ (140 times higher than the mean annual discharge of 0.163 $m^3/s$). The results of the questionnaires given to the inhabitants of two localities (Cudalbi and Valea Mărului) situated on Valea Gerului River, localities severely affected by the floods of September 2013, show that the population has a low level of education regarding the flood risk and indicate the necessity of local action implementation for risk culture development, actions that would allow awareness rising and adaptation of the population to this hazard.

**Keywords**: flood , flood risk perception, Geru and Suhurlui Rivers, Galaţi County