



Flood hazard on the Siret river, Romania

F. Popovici

National Institute of Hydrology and Water Management, Bucharest, Romania.

Tel/Fax: 004021-223.67.47; Tel-mobile: 0040743-110.350; E-mail: fexilro@yahoo.com

- The *purpose* of this paper is to illustrate one more time - if it is necessary - the *disastrous effect*, which is produced by extreme's phenomena, through numerous human's and material damages and to *pay attention* of the decision factors for premonition and exclude the vulnerability, the risk and hydrological hazards, if not in totality at least in mitigation of them.

- For this reason, I choose to *analyze three very important floods*, which are produced in Romania, on the Siret river ($L=610$ km, $F=36036$ km², $H_m=539$ m), on the hydrometrical station Lungoci, which registered hydrometrical parameters since 1951, continuously.

- The catastrophic floods are produced in:

1970 - $Q_{max} = 3.186$ m³/s (19.V.1970),

1991 - $Q_{max} = 3.270$ m³/s (31.VII.1991),

2005 - $Q_{max} = 4.650$ m³/s (14.VII.1970) all of these vs. 230 m³/s multi annual medium flow.

The causes for production of these floods, were:

- the considerable amounts of precipitations fallen,
- the massive and chaotic deforestation,
- the global climatic changes, etc.

- *Damages and prejudice*: according with these extreme's phenomena, were registered a lot of damages (losses of the human life's, perished homes, animals deaths, destruction of the infrastructure and hydrological constructions - in 1991, break-down

of the barrage from Belci-Racaciuni with the most important damages and finally, the enormous costs of the losses (human and material) caused by the flood from 2005 and 2006).

- *Measures and decisions for the mitigation and discard of the damages:* regarding all these natural catastrophes, it was necessary than the authorities and the civil population to get the stringency measures for the crisis management and to eliminate the sequels of tragedy and more important in the future to prevent these events, to improve the hydro- meteorological forecast, capital allocation for the hydrological constructions and a successfully collaboration between authorities and the population.