



The 2003 drought on the Danube River Romanian branch

M. Matreata

National Institute of Hydrology and Water Management, Bucharest, Romania
(marius.matreata@hidro.ro / Fax: +40 21-2302157)

The amplification of the drought phenomenon in the last decades has important implications upon the social and economical potential of the country.

The droughty aspect, from the 2002 autumn period, was extended in the spring, summer and autumn period of 2003, too.

The characteristics of the hydrological drought in 2003 on the Danube River and some national rivers were analyzed statistically and also by the method of analogs.

The results of this analysis have shown the analogs years for the Danube in 1950, 1946-1947 and for the national rivers in 1950, 1959 and 1990.

The hydrological regime of the Danube River in 2003 is the most severe reported to the 1840-2003 period and was strongly influenced by the poor raining regime in its superior and middle basin.

Regarding the internal rivers, the most affected areas had medium monthly discharges of 0.2-0.3 from the medium multi-annual monthly values, generating some negative effects in the economical and social fields.

The statistical analysis highlighted the increasing frequency of the droughty and very droughty years between 1982-2003.

The paper also presents, for the mean internal rivers and romanian sector of Danube, the errors of the hydrological long term forecasts of discharges from summer-autumn 2003 period.