

DROUGHT MONITORING AS A SUPPORT TOOL FOR WATER MANAGEMENT IN WATER SHORTNESS PERIODS

M.J. Santos, & R. Rodrigues

Institute for Water (INAG), Av. Almirante Gago Coutinho 30, 1049-066 Lisboa, PORTUGAL, mariaj@inag.pt fax+351 218409218

Drought is an extreme event characterized by a scarcity of water in an extended area for a large period. Apart being difficult to predict a new drought event the slow progression of the drought phenomena leads to its accurate prediction failure. This means that usually drought detection is performed after its beginning (during the drought period). Regional aspects must be considered in order to enable the clear identification of problem areas and drought extension.

Historical characterization of hydrometeorological drought constitutes the basis for the determination of the importance of current drought events. This can be performed using both simple comparative methods and statistical models. Methods are used depending on the input variables considered implicit characteristics and data available. For instance, the evaluation of meteorological drought is based on a regional statistical model that evaluates drought risk and drought spread. For other hydrological variables, like water storage in reservoir or groundwater levels, simple comparative methods are considered.

Key points for drought analysis in Portugal are presented, considering the evaluation of regional drought return period for a current event progression. The drought's return period and drought-affected areas based on precipitation analysis can then be studied comparatively to other hydrometeorological variables and drought events evaluated in the whole. Droughts monitoring periodic reports are made available to the public through the Portuguese National Water Resources Information System through the WWW.