

The regime of precipitation in 2003 in Romanian Forests

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The results are obtained in the frame of the National Research Project "Drought Risk Monitoring In Romanian Forests" - started in 2001 – which tries to estimate in real time the risk of drought in the whole Romanian forest found, with the objective to assist the management decisions for each Forest Direction and Forest District.

The authors present on the ground of the measurements network in the plots located in 400 forest districts the monthly and seasonal variation of rainfall parameters registered in 2003 in Romanian forests. On the ground of modern computing and viewing systems (GIS, geostatistics) the real data concerning the total rainfall and effective rainfall (precipitation – evapotranspiration) are transformed in indicators of drought (relative precipitation fall - %) deficit / exceeding of rainfall and standardized index of precipitation (SPI). This index measures how far the real rainfall is (for the last 1 ... 12 month) from the mean value (for the same period) in standard deviation units (SD). Eg. $SPI = -2$ means that the rainfall are 2SD less than the mean value, and $SPI = 2$ mean that rainfall are 2 SD more than mean value of rainfall in the analyzed period. Using this Index, 5 level of drought intensity and 5 level of exceeding of rainfall can be viewed and mapped. According with these indicators, an accurate evaluation of monthly, seasonal and yearly parameters are analyzed for different regions of Romania.

In 2003 the winters were rich in precipitation in Eastern, South eastern, Western and South western regions of Romania and normal in the rest. Spring was moderately droughty ($SPI = -1 \dots -1,5$) mostly in the North, South and East Romania and very droughty ($SPI = -1,5 \dots -2$) in north western and north-eastern regions.

Summer of 2003 was very droughty – extremely droughty in SE, W, NW and Central regions and moderately – very droughty in other regions.

Autumn was very wet in south regions and near normal in the rest. In the growing season the rainfall regime in 2003 was extremely droughty very droughty in the western regions and central Transylvania and moderately droughty very drought in the eastern regions.

For the whole year 2003 the rainfall regime was excessively dry in NW and central regions, very dry in N, NE and W regions and moderately dry – near normal in southern and eastern regions of Romania. Suggestive maps and forecasts concerning the soil water regime are presented too.