



## **The comparison of weather types in the years of extreme drought over Croatia**

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Since the year 2000 there were 3 extremely drought years in Croatia: 2003, 2011 and 2012. The long-term lack of precipitation was observed in whole country having great impact on reducing in agricultural production and causing problems in water supply.

The consequences of extreme drought was especially evident in increased number of wild fires, not only in Adriatic region, but also in the year 2003 in mountainous region and in the 2012 in the continental parts of northwestern and eastern Croatia.

The analyzed synoptic situations were classified in the weather types for several regions in Croatia (northwest region, north, middle and south Adriatic). The weather types with similar weather characteristics are grouped in 5 weather regimes. The comparison of weather types and regimes for 2003, 2011 and 2012 was done. They were compared mutually and then to mean relative frequency of weather types and regimes for reference period 1991-2003.

It was shown that the frequency of weather types classified in radiative regime in analyzed drought years was significantly higher than mean annual average in the reference period 1991-2003. Seasonally, the greatest difference was observed in summer and winter in the whole Croatia. The greatest difference in radiative weather types was observed in appearance of ridge of high pressure (hr) which was significantly more frequent in the year 2012 than usual.

As opposed to that precipitation regime was less frequent. For example, the weather type front sector of cyclone (C1) in the continental part was about two times less frequent in all three analyzed years. This difference in Adriatic regions wasn't so explicit what could lead to conclusion that the cyclone paths over Mediterranean basin were moved more to the south.