



Hydrological drought for the Sava river near Županja

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Most hydrologists define hydrological drought as deficit water volume (in streams) which is lower than a reference flow rate QR, taking into account drought duration - Δt and volume deficit – D, low streamflows.

Clearly, the key issue is defining of reference flow rate QR. In this case, we have decided to use two thresholds:

Q30, 80 % = minimum average 30-day discharge of 80 % probability

Q30,95 % = minimum average 30-day discharge of 95 % probability

which are defined based on hydrological data for the Sava River near Županja for the period 1945-2006 (N = 62 years).

The paper offers recommendations for warnings (I level) and hydrological drought alerts (II and III level). This is an attempt to highlight both warnings and danger alerts for hydrological droughts. In concrete case, three levels are proposed for the Sava near Županja:

I level – warning Q65% = $663 \text{ m}^3 \text{s}^{-1}$ ($H = 188 \text{ cm}$)

II level – alert Q30,80% = $250 \text{ m}^3 \text{s}^{-1}$ ($H = -67 \text{ cm}$)

III level – alert Q30,95% = $200 \text{ m}^3 \text{s}^{-1}$ ($H = -128 \text{ cm}$)