



Extreme Historical Droughts in the South-Eastern Alps – Analyses Based on Standardised Precipitation Index

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A b s t r a c t

Droughts are natural phenomena affecting the environment and human activities. There are various drought definitions and quantitative indices; among them is the Standardised Precipitation Index (SPI). In the drought investigations, historical events are poorly characterised and little data are available. To decipher past drought appearances in the south-eastern Alps with a focus on Slovenia, precipitation data from HISTALP data repository were taken to identify extreme drought events ($SPI \leq -2.00$) from the second half of the 19th century to the present day. Several long-term extreme drought crises were identified in the region (between the years 1888 and 1896; after World War I, during and after World War II). After 1968, drought patterns detected with SPI changed: shorter, extreme droughts with different time patterns appeared. SPI indices of different time spans showed correlated structures in space and between each other, indicating structured relations.

Key words: drought, standardized precipitation index, drought indicator diagram, HISTALP data set, south-eastern Alps.