



Global temperature trends and local historical events: impression or connection?

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Thanks to the efforts of many amateurs of local history, it is nowadays possible to obtain records of local events with a significant time extension. These records, being the merging of different and independent sources, are not homogeneous neither complete. These records, in general, are not regular annotations of events but mainly a collection of peculiar episodes that captured the attention of people for the severity or peculiarity of their impact. For this reason, these events deserved to be recorded and remembered. For this reason, these rhapsodic historical records cannot be directly used to obtain information on local climate change but, maybe, can supply evidences of the connections between global climate change (described by global temperature variations) and main local severe events (assuming that they are caught by historical records).

An attempt of this joint use of historical records and global atmospheric temperatures has been made for Friuli Venezia Giulia (Italy), a region on the border between Italy, Slovenia and Austria. The historical register used spans from 500 A.D. to 1900 A.D. and is referring only to the Friuli Venezia Giulia Region. The events taken into account retrieved by this register are divided in three classes: droughts, cold spells, floods and severe thunderstorms. Classification has been done on “a priori” criteria based on the description of historical events (e.g., extension of the area, severe wind mention, temperature mention, hail, etc.). Unclassified events (e.g., famine or shortage generally related to adverse meteorological conditions) were not taken into account for this analysis.

The classified events (101 events on a record of 134 events in 1400 years) were superimposed to the northern hemisphere temperatures trends (temperature anomalies by F. C. Ljungquist).

The chronological superposition between northern hemisphere temperature anomalies and severe weather episodes showed that “flood” events tend to be in opposition of phase with “severe thunderstorm”, “drought” and “cold” events. Moreover, “flood” events tend to be more frequent during cooling periods (diminishing of temperatures) while “severe thunderstorm”, “drought” and “cold” events tend to be more frequent during warming periods (increasing of temperatures).

A more robust statistical assessment might confirm and reject this naïve evidence, in any case this work has showed that useful information might be retrieved through the contaminations between different cultural branches of knowledge.

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