UNIVERSITY OF TRENTO - Italy

Giornate dell'Idrologia 2016 – Monitoraggio e gestione delle risorse idriche

Hydrological alterations in the Adige catchment

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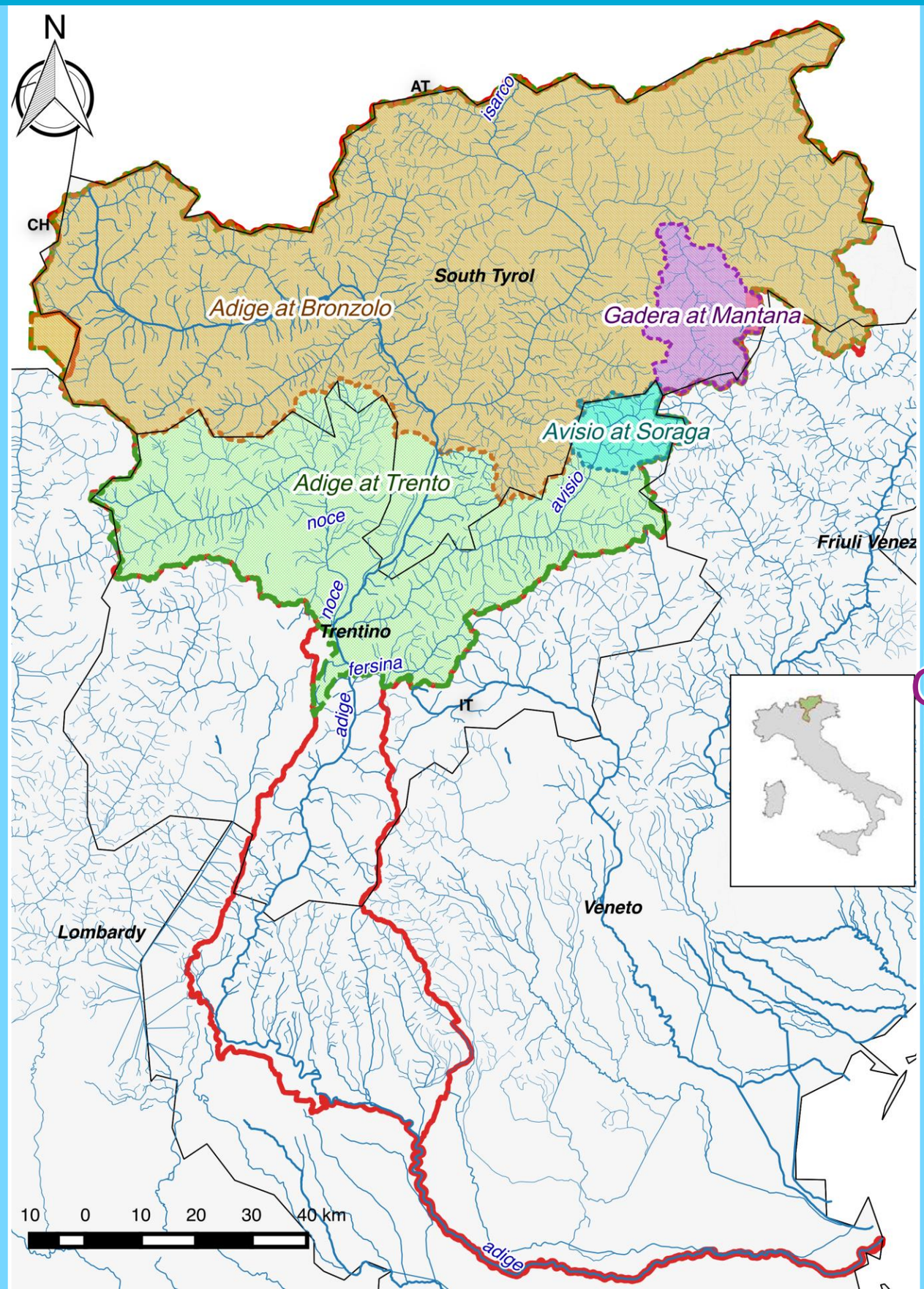
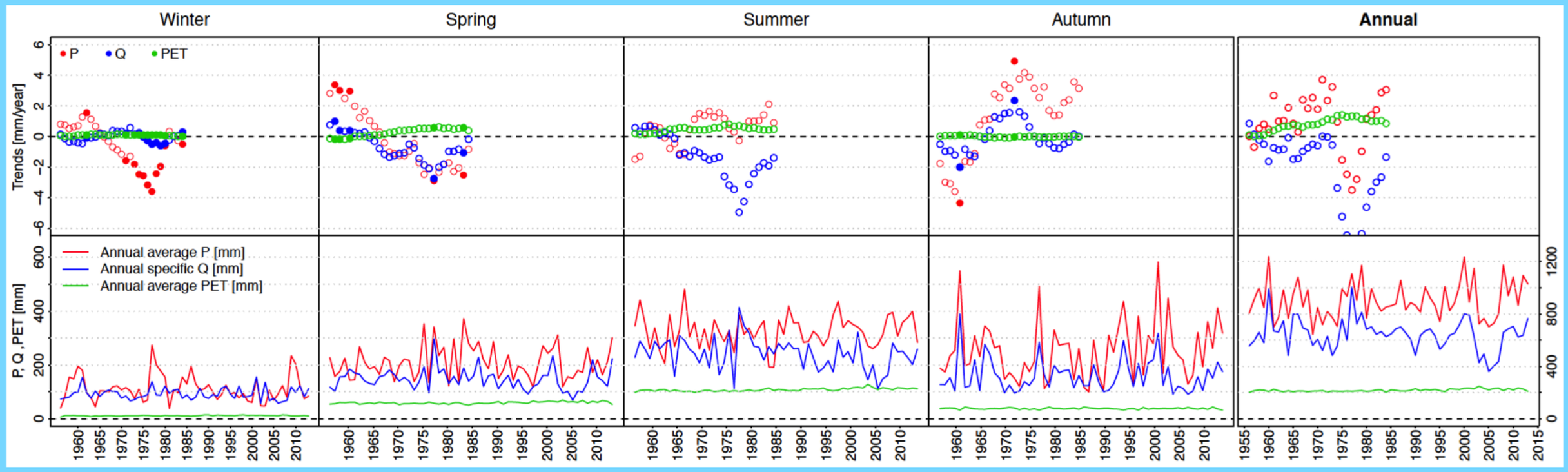


- Trends and Mann-Kendall significance test for time series of annual precipitation (P), streamflow (Q) and potential evapotranspiration (PET) computed over 30-years overlapping time windows (upper-panels);

- Time series of average annual Q registered at each gauge station, catchment-averaged P and potential evapotranspiration PET (lower-panels)



Reduction of winter P

Reduction of summer Q

Increase of autumn P

Increase of annual difference between P and Q

- This study contribute to identify the possible **drivers of climate change** at **different spatial and temporal scales**;

- The main driver of alterations of the hydrological fluxes is the **temperature**;

- The **resilience** to changes is not uniformly distributed across the catchment and it **depends on local conditions**

- Rising trends in **potential evapotranspiration** increase the risk of **water scarcity** in the warm season especially in the southern part of the catchment.

Thank you for your attention