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# Sensitivity of seasonal hydrological forecast skill to catchment properties

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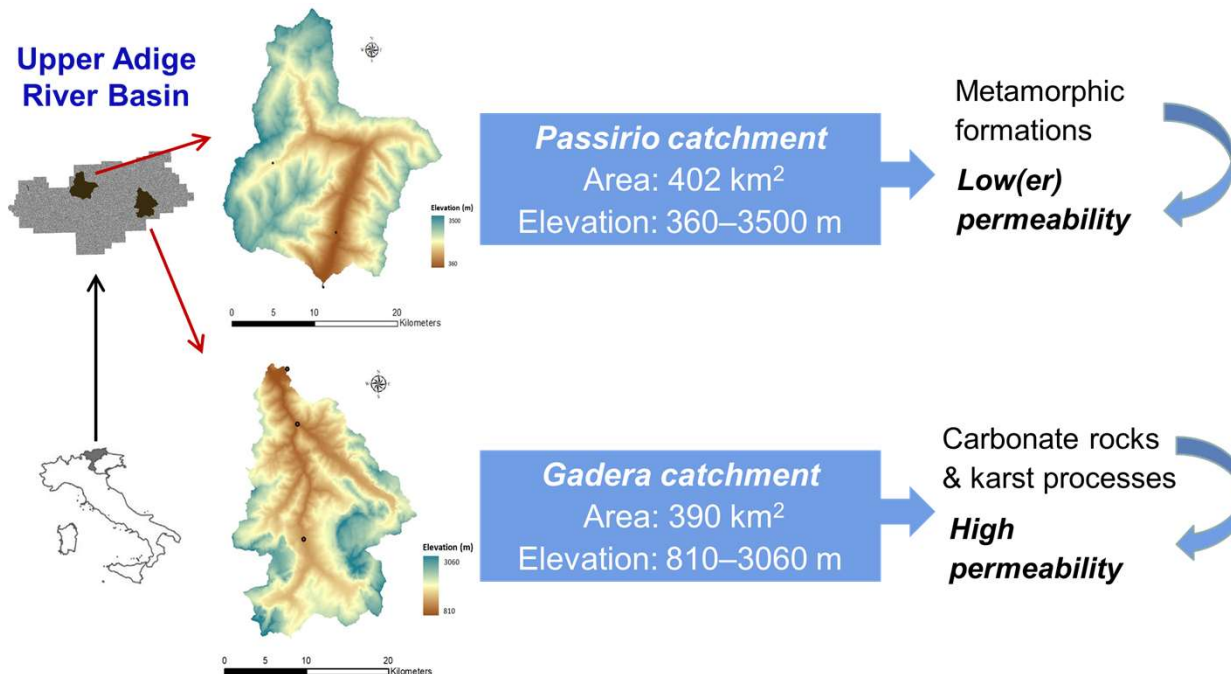
# Introduction

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- Seasonal hydrological forecasts can provide knowledge of future land surface hydrological states several months in advance
- Their skill depends on:
  - knowledge of initial land surface conditions (ICs)
  - knowledge of climate forcing (CF)
- For catchments with differing geology, the contribution of ICs and CF to the seasonal forecast skill can be diverse

# Methods

- Apply the EPB (End Point Blending) methodology to create seasonal streamflow forecasts with intermediate levels of uncertainty concerning ICs and CF
- Case studies: end members of catchment ensemble of contrasting geology



# Conclusions

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- Geological characteristics have a dominant effect on the persistence of moisture states, hence on the ICs-related seasonal streamflow predictability
- The contribution of ICs in the slow-responding Gadera catchment is generally higher compared to the contribution of ICs in the fast-responding Passirio catchment
- Whereas the ESP/revESP methodology can only individuate predictability arising from perfect knowledge of either ICs or CF, the EPB allows for a *quantification of the contribution* of each predictability source to the streamflow forecast skill

Thank you for your interest!