

Topic: An assessment of agricultural water use in the Mediterranean Region in the context of climate change

Agriculture is the single largest water user amongst all the economic sectors in the Mediterranean region. Water scarcity and intensification of water variability as a result of climate change pose serious threats on agricultural production and food security. The overall objective of this study is to assess the impact of climate change on agricultural water use and crop yield in the region and possible adaptation measures. The concrete research tasks include: 1) investigation into current agricultural water use in food production with a focus on major staple food crops; 2) projection of impacts of climate change on agricultural water use and crop yields under the IPCC climate and socio-economic scenarios; 3) investigation of potentials of agronomic measures to adapt climate change. Regions of high risk of negative impacts will be highlighted.

This topic can be incorporated into an on-going project in our research group.

Necessary skills: Basic knowledge of ArcGIS; programming skills (VB, Fortran or others)