



Climate data analysis in the WASSERMed project

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The WASSERMed project (Water Availability and Security in Southern Europe and the Mediterranean) analyzes, in a multidisciplinary way, ongoing and future climate induced changes of hydrological budgets and extremes in southern Europe, North Africa and Middle East under the frame of threats to national and human security. Five case study areas have been chosen in order to illustrate and represent situations that deserve special attention. Within WASSERMED, this study aims at collecting and processing results from existing model simulations (e.g. those provided by the ENSEMBLES project) in the Mediterranean region with special emphasis on precipitation and on the case study areas. Among existing climate model scenarios, the set produced by the ENSEMBLES project has the advantages of being a coordinated ensemble of transient simulations covering the period 1951-2050 (or 1951-2100) and the whole Mediterranean region at high spatial resolution (25 km). Here we present an intercomparison study among model results, in situ observations at sub-regional/basin scale and also using data from EOBs and CRU data set, focusing on three case study areas: 1) Merguellil watershed (Tunisia), a river basin which concentrates multiple and conflicting water uses and characterized by rainfall highly variable in time and space 2) Jordan river basin that consists of three sub-basins, namely: the upper Jordan River, the Yarmouk River and the lower Jordan catchments. This was once a water rich area whereas it has become now very scarce in water resources due mainly to abstraction and use of water upstream 3) Nile River system, focusing mainly on Egypt that depends almost completely on the Nile river inflow.