Recent long-term changes in Mediterranean water cycle: transition to drier 21st century conditions?

Annarita Mariotti (1,2)
(1) ENEA, Rome, Italy (annarita.mariotti@casaccia.enea.it/+39 06 30484264), (2) Earth System Science Interdisciplinary Center, College Park, USA (amariott@essic.umd.edu/+1 301 4058468)

Under a suite of global climate change scenarios, the Fourth Assessment Report of the Intergovernmental Panel on Climate Change projects the Mediterranean region as a climate change “Hot Spot” particularly vulnerable to drought. In this study we use the CMIP3 simulations and projections to focus on the “transition phase” from recent past conditions to the much drier conditions expected at the end of the 21st century. Recent decadal changes observed in the Mediterranean region in a range of hydro-climatic variables are presented. The role of natural multi-decadal variations versus forced changes is discussed.