CIRCE

Climate Change and Impact Research: the Mediterranean Environment

Flash results

Did you know that?

- The risk aversion of water managers determines the value they give to future climate information?

  Water managers are revising River Basin Management Plans of the Water Framework Directive (WFD) under the context of climate change. We have analyzed how perception and risk aversion may influence the decisions of the river basin authorities and evaluated their willingness to pay for more accurate information that would allow for better decision-making on allocation of water.

- Efficient irrigation under water scarcity by freshwater, treated wastewater and brackish water, if available, implies application of each of these sources separately to a different group of crops?

- Some summer floods in Central-Eastern Europe are fed by water vapour accumulated over the Western Mediterranean Basin?

- Planting trees around the Mediterranean will retain the soil against sudden floods, will capture CO2, will reduce droughts and will generate employment?

- Observed temperature changes in the Mediterranean Region are consistent with climate change projections?

  We have investigated whether anthropogenic forcing is a plausible explanation for the observed near-surface temperature trends over the Mediterranean area. To this purpose observed trends over 1979-2009 period in near-surface temperature are compared to human induced changes as predicted by a set of coupled atmosphere-ocean general circulation models derived from the CMIP3 database. As indicated by the measures of pattern similarity statistics the annual and seasonal pattern of recent trends in near-surface temperature are consistent with the patterns of model-projected response to anthropogenic forcing. This consistency is found in all four seasons which is maximum in summer and minimum in winter.