Geophysical Research Abstracts
Vol. 13, EGU2011-10632, 2011
EGU General Assembly 2011

Generation of a database from regional climate change projections over Castilla-La Mancha region (Central Spain): analysis of climatic processes and impact evaluation assessment

Noelia López de la Franca Arema (1), Raquel Romera (1), Marta Domínguez (1), and Enrique Sánchez (2)
(1) Environmental Science Institute (ICAM), University of Castilla-La Mancha, Toledo, Spain (Noelia.LopezFranca@uclm.es), (2) Faculty of Environmental Science, University of Castilla-La Mancha, Toledo, Spain

The Iberian Peninsula (IP) is one of the regions in Europe that is expected to suffer larger increases in temperature and decreases in precipitation. A Spanish regional project (POII10-0255-8836, Junta Castilla-La Mancha, 2010-2013) is being developed to perform detailed studies on these issues. Castilla-La Mancha region (CLM) covers most of the inner part of the IP, and therefore where these climatic changes are expected to be clearly relevant. The dominant mediterranean climate of this area, where summers are typically hot and important hydrological stresses are present, make the projected climate changes specially interesting to be studied. And not only for pure scientific purposes, but also as they potentially can impact on the economy and the society of the region. There are several sectors than can be affected and be interested on these studies: agriculture, livestock, renewable energy, water resources, forestry, health, tourism, etc. The main objective of this project is to generate an updated and detailed database from climate change regional model projections over CLM. Our research group (PROMES) has participated in all the major EU projects devoted to the generation of regional climate change projections in the past years (PRUDENCE, 2001-2004 and ENSEMBLES, 2004-2009). PROMES group is also currently leading ESCENA (2008-2012) Spanish National project (Dominguez et al., 2011, also presented in this General Assembly), devoted to generate regional climate projections over the whole IP. Based on the results of these three projects, the most complete database of climate projections for the Castilla-La Mancha region is being generated, with high spatial resolution (25 km^2) and daily temporal resolution. A specific analysis of the projected change in extreme events (dry periods, intense precipitation events, heat waves and cold waves, etc.) is being done. The other main aim of this project is to facilitate the use of such data to private and public entities and research groups for climate change impact studies. Meetings with stakeholders of CLM region are planned in order to know the specific needs in each field, and also to provide specific advice in the proper use of these data in impact studies.