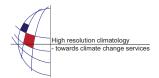
EMS Annual Meeting Abstracts Vol. 7, EMS2010-562, 2010 10th EMS / 8th ECAC © Author(s) 2010



The Standardized Precipitation-Evapotranspiration Index (SPEI): a multiscalar drought index

- S. Begueria-Portugues (1), S.M. Vicente-Serrano (2), M. Angulo-Martínez (1), J.I. López-Moreno (2), and A. El Kenawy (2)
- (1) Consejo Superior de Investigaciones Científicas, Estación Experimental de Aula Dei, Zaragoza, Spain (sbegueria@eead.csic.es), (2) Consejo Superior de Investigaciones Científicas, Instituto Pirenaico de Ecología, Zaragoza, Spain

Recently a new drought indicator, the Standardised Precipitation-Evapotranspiration Index (SPEI), has been proposed to quantify the drought condition over a given area. The SPEI considers not only precipitation but also evapotranspiration (PET) data on its calculation, allowing for a more complete approach to explore the effects of climate change on drought conditions. The SPEI can be calculated at several time scales to adapt to the characteristic times of response to drought of target natural and economic systems, allowing determining their resistance to drought.

A major advantage of the SPEI over other multiscalar drought indices such as the SPI is that it considers the role of temperature through its influence on potential evapotranspiration. Thus, the SPEI is adequate for assessing the impact of global warming on droughts.

On this communication we will discuss the advantages of the SPEI over other drought indices, and we will show some examples of use based on the SPEIbase, a global gridded SPEI database (see companion communication).