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INDECIS: Integrated approach for the development across Europe of user oriented climate indicators for GFCS high-priority sectors: agriculture, disaster risk reduction, energy, health, water and touri...

Description

Climate, climate variability and change strongly impact Europe. Drought severely affects agriculture; precipitation extremes are associated with flooding, severe damage to properties and lives; temperature extremes can increase mortality; the seasonality and availability of snow affects water resources and winter tourism and wind speed or sunshine hours affect the production of renewable energy. These relations can be studied through the computation of climate indices, defined as tailored combinations of climate variables. To be useful, they need to be based on long and reliable climate datasets and be formulated to express relevant and comparable information. INDECIS will develop an integrated approach to produce a set of relevant climate indices targeting the high priority sectors of the World Meteorological Organization's Global Framework for Climate Services (agriculture, disaster risk reduction, energy, health, water) plus tourism.

To accomplish this, INDECIS will inventory and catalog existing datasets of precipitation, temperature, wind speed and sunshine duration, search new data holdings and develop new methods and tools to operationally assure their quality and homogeneity. In parallel, we will gather information on climate indicators routinely computed by the participating institutions and third parties across Europe and work to improve them in consultation with sectorial experts. It is also intended to use sectorial statistics and teleconnection indices to explore predictive relations and responses to climate variability and change. This will be accompanied by the development of tools for near-real time calculation, spatial interpolation, visualization and communication of climate monitoring. INDECIS will compare its products with those derived from reanalysis simulations to assess their validity as an alternate means to provide sectorial indices in the absence of observational datasets and with climate model output for validation and interpretation.

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