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C3S European Tourism: Fire danger products

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Copernicus Climate Change Service (C3S) European Tourism is a service that aims to provide a user-driven climate information system to the tourism sector. By delivering critical pan-European climate indicators relevant to tourism (e.g. snow conditions, holiday climate index, lake water temperature, forest fires index), the service aims to facilitate ongoing and long-term adaptation of the tourism sector to a changing climate.

The service will offer interactive web applications, based upon high-level quality data and tools from the Copernicus Climate Data Store (CDS). The applications will cover different timescales including: past climate (reanalysis data), short-term (seasonal forecast products) and long-term (regional climate projections). Data will be made freely available through various means (web mapping service, download of raw data, download or graphics based on post-processed information), thus refined to account for user specific needs.

The service is oriented towards a highly diverse array of users, including intermediaries (such as consultancy companies and environment agencies), businesses (such as tour operators and investors in tourist infrastructure and services), destination managers, tourist associations and, finally, policy makers. Thus, a set of case studies will be made available to concretely illustrate possible use of the C3S European Tourism services in different decision-making contexts.

The indicators to be provided under the C3S European Tourism application concern the mountain, rural, urban and coastal tourism sectors. As far as the rural sector is concerned, the Fire Weather Index (FWI) is the indicator of choice and will be provided via the application. FWI is a daily meteorologically based index used worldwide to estimate fire danger. Fire danger will be provided for the whole European domain, both for seasonal forecasts and future projections. With respect to the seasonal forecast, the ECMWF system 5 forecasts at a horizontal resolution of 1 degree are used, while for the future FWI projections, the forecasts originate from state-of-the-art regional climate models developed within the EURO-CORDEX initiative at a horizontal resolution of 12 km.

As far as the FWI case studies are concerned, these include seasonal FWI forecasts to support planning for the coming season and future projections for planning long-term investments. These forecasts will be used in Crete, Croatia and Sardinia in order to meet the needs of the Local Ecotourism operator GreenTour Crete, the Croatian Camping Union and the international tour operator company of Thomas Cook, respectively.