The skill of fire prediction at the sub-seasonal time scale

Francesca Di Giuseppe

ECMWF, Reading, United Kingdom (francesca.digiuseppe@ecmwf.int)

In the framework of the EU Copernicus program, the European Centre for Medium-range Weather Forecast (ECMWF) on behalf of the Join Research Centre (JRC) is calculating daily fire forecast indexes using its medium range ensemble prediction system. The use of weather forecast in place of local observations have already extended the early warnings up to 1-2 weeks allowing for greater coordination of resource-sharing and mobilization within and between countries.

Using ECMWF extended range forecast, in this work we investigates what are the limits of predictability for fire danger up to 46 days. Major fire events that took place in 2017 and 2015 are analyses and a special focus is given to the information that the use of an ensemble system can bring in providing a first probabilistic assessment of forecast uncertainties. It will be shown that at the sub-seasonal time scale, the use of probabilistic information can boost confidence in the decision process during emergency situations.