



## Assessment of changes in Fire Weather Index for future climate scenarios using a Climate Ensemble

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Wildfires are a major problem worldwide, especially in the Iberian Peninsula, where Portugal stands out as the country more affected by fire not only in terms of the number of fires but also in burnt area (Pereira et al., 2011). Fire season severity and total annual burnt area strongly depend on weather conditions and climate variability. In Portugal, Carvalho et al. (2011) and Pereira et al. (2013) showed that climate change will probably increase fire weather risk in the future.

Meteorological parameters and fire indices (e.g., the Canadian Fire Weather Index, FWI) have been used to model current and future fire activity and to help forest and fire managers as well as national authorities in prevention and suppression activities in the Mediterranean (Amatulli et al., 2013; Bedia et al., 2014). The main objective of this work is to analyse FWI in the Iberian Peninsula for the present-day conditions and future climate scenarios, using an ensemble of 11 models from EURO-CORDEX, with high spatial (11 km) and daily resolution.

FWI weather indexes will be computed for historical (control period, 1976 – 2005) and two future (2041 – 2070 and 2071–2100) periods, using maximum temperature, precipitation, relative humidity and wind speed data simulated for two future scenarios (RCP4.5 and RCP8.5). Results of the statistical analysis of the differences between simulations for future climate scenarios and control periods will be presented, namely in the measures of location and dispersion as well as other aspects of intra and inter annual variability. This presentation will show preliminary results from this analysis.

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