README file for "Pan-European data sets of forest fire probability of occurrence under present and future climate"

Version

1.0, April 21, 2016

Description

NetCDF files containing daily probabilities of high forest fire danger in Europe under present and projected future climates. The fire danger is estimated by applying the Canadian Fire Weather Index (FWI) System. Probabilities are shown as multi-model means based on the simulations performed with the following EURO-CORDEX regional climate models (0.44° spatial resolution): SMHI-RCA4-CanESM2, SMHI-RCA4-NorESM1, SMHI-RCA4-IPSL-CM5A-MR, KNMI-RACMO22E-EC-EARTH, KNMI-RACMO22E-HadGEM2-ES and MPI-CSC-REMO2009-MPI-ESM-LR. For the period 1981–2010, the probabilities are also derived from the ERA-Interim reanalysis. The probabilities are expressed in percents in the variable "risk". The probabilities are provided separately for two different thresholds, the FWI value exceeding 20 and 45. For the future periods, information about statistical significance of the difference in the projected probability compared to the period 1971–2000 is also provided in the variable "sig". If the projected future probability differs from the historical probability at the 5% level according to the Wilcoxon signed-rank test, the variable "sig" is given a value 1, otherwise it is given a value 0.

Please see the RAIN project report D2.5 for detailed description (available at http://rain-project.eu/).

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List of files

- era-interim_fwi20_1981-2010.nc contains the daily probability (in percents) that the fire weather index exceeds 20 during 1981–2010 as derived from the ERA-Interim reanalysis data.
- era-interim_fwi45_1981-2010.nc contains the daily probability (in percents) that the fire weather index exceeds 45 during 1981–2010 as derived from the ERA-Interim reanalysis data.
- multi-model_fwi20_historical_1971-2000.nc contains the multi-model mean daily probability (in percents) that the fire weather index exceeds 20 during 1971–2000.

- multi-model_fwi20_rcp45_2021-2050.nc contains the multi-model mean daily probability (in percents) that the fire weather index exceeds 20 during 2021–2050 under the RCP4.5 scenario.
- multi-model_fwi20_rcp85_2021-2050.nc contains the multi-model mean daily probability (in percents) that the fire weather index exceeds 20 during 2021–2050 under the RCP8.5 scenario.
- multi-model_fwi20_rcp45_2071-2100.nc contains the multi-model mean daily probability (in percents) that the fire weather index exceeds 20 during 2071–2100 under the RCP4.5 scenario.
- multi-model_fwi20_rcp85_2071-2100.nc contains the multi-model mean daily probability (in percents) that the fire weather index exceeds 20 during 2071–2100 under the RCP8.5 scenario.
- multi-model_fwi45_historical_1971-2000.nc contains the multi-model mean daily probability (in percents) that the fire weather index exceeds 45 during 1971–2000.
- multi-model_fwi45_rcp45_2021-2050.nc contains the multi-model mean daily probability (in percents) that the fire weather index exceeds 45 during 2021–2050 under the RCP4.5 scenario.
- multi-model_fwi45_rcp85_2021-2050.nc contains the multi-model mean daily probability (in percents) that the fire weather index exceeds 45 during 2021–2050 under the RCP8.5 scenario.
- multi-model_fwi45_rcp45_2071-2100.nc contains the multi-model mean daily probability (in percents) that the fire weather index exceeds 45 during 2071–2100 under the RCP4.5 scenario.
- multi-model_fwi45_rcp85_2071-2100.nc contains the multi-model mean daily probability (in percents) that the fire weather index exceeds 45 during 2071–2100 under the RCP8.5 scenario.

Disclaimer

Data available for download as a result of this project were made using large-scale datasets and are intended for providing an European-wide overview of present and future probability of occurrence of extreme weather hazards. Extreme caution should be made when drawing local-scale conclusions from the maps. Therefore, the data are provided for research purposes only. No warranty is given as to their suitability for user applications. No liability is accepted by the authors for any errors or omissions in the data or associated information and/or documentation.

Citation

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RAIN project, http://rain-project.eu/

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