Historical freezing rain cases in Europe based on the ERA-Interim reanalysis in 1979–2017

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General Introduction

This dataset contains the identified freezing rain cases in Europe for 1979–2017 based on the ERA-Interim reanalysis (https://www.ecmwf.int/en/forecasts/datasets/reanalysis-datasets/era-interim) and the freezing rain detection algorithm presented by Matti Kämäräinen et al. in 2017 in https://doi.org/10.5194/nhess-17-243-2017. The years 1979–2014 of the dataset were used in the publication.

Description of the data

The file ERA-Interim_FZRA_grid_1979-2017.nc contains all data in the dataset. It is a NETCDF file with gridded three dimensional structure, where dimensions are (***time, lat, lon***). The 6-hourly time dimension contains 56 980 time steps. Latitude dimension contains 69 values and longitude dimension 119 values. The data variable ***fzra_i*** is a binary parameter which indicates freezing rain events by “1” and non-events by “0”.

The uncertainty of detection of freezing rain grows with altitude, and for that reason results in mountainous regions might be at least partly erroneous. The spatial coverage of the data as

well as the total number of the 6-hourly freezing rain cases during the 39 years can be seen in Figure 1.

Sharing and Access information

Acknowledgements

The freezing rain cases in this dataset were identified in the Climate Service Centre of the Finnish Meteorological Institute. This work was partly funded by the European Union's Seventh Programme for research, technological development and demonstration under the RAIN project (Risk Analysis of Infrastructure Networks in response to extreme weather; http://rain-project.eu/; grant agreement no. 608166). The work has also received funding from the State Nuclear Waste Management Fund in Finland and from the Swedish Radiation Safety Authority through the EXWE project (Extreme weather and nuclear power plants) of the SAFIR2018 programme (The Finnish Nuclear Power Plant Safety Research Programme 2015–2018; http://safir2018.vtt.fi).

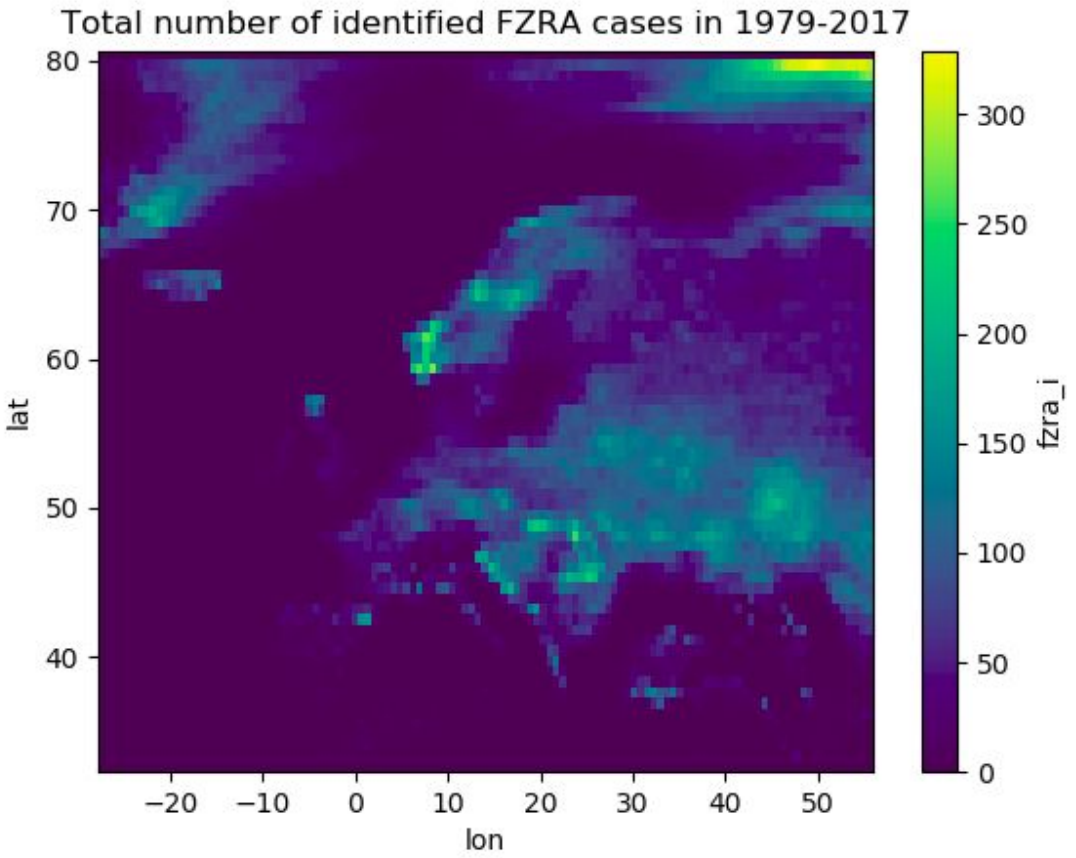

Figure 1. Total identified number of 6-hourly freezing rain cases in ERA-Interim in 1979–2017. The mainland of Europe, parts of the North Atlantic Ocean, Iceland, western Russia, and most of the Mediterranean are covered.