climada module **storm europe[[1]](#footnote-1)**  13 Mar 2017

<https://github.com/davidnbresch/climada_module_storm_europe>

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This climada module contains the European winter storm (WS) hazard event sets as used in the following publication:

Schwierz, C., P. Köllner-Heck, E. Zenklusen Mutter, D. N. Bresch, P.-L.Vidale, M. Wild, C., and Schär, 2010: Modelling European winter wind storm losses in current and future climate. Climatic Change (2010) 101:485?514, doi: 10.1007/s10584-009-9712-1[[2]](#footnote-2).

Test the module with

**winterstorm\_TEST**

and consider help winterstorm\_TEST

The entity in ../data/entities/WS\_Europe.xls is a dummy entity to test the hazard sets, it contains the damage function as used in the paper. Please consider using the module country\_risk[[3]](#footnote-3) to generate assets (based on GDP) and hazard sets for e.g. all European countries.

Note that winterstorm\_blend\_hazard\_event\_sets blends the control hazard events into one (larger) hazard event set, which improves the statistics (stability) of results, but is quite a pragmatic step.

winterstorm\_compare\_severity: Compare the hazard severity of different hazard sets (calls winterstorm\_severity). See also winterstorm\_compare.

winterstorm\_compare: Run a winterstorm Europe analysis for a given entity with different damage functions and different hazard event sets. See also winterstorm\_validate and winterstorm\_compare\_severity.

WS\_intensity\_correction: correct WS intenisty as documented in the paper cited above. If applied a second time, the correction is reversed. WARNING: a truly expert level code, to be used with utmost caution. See also winterstorm\_compare and winterstorm\_compare\_severity.

A good source for European winter storm damage functions: [Feuerstein, B.](mailto:bernold.feuerstein@essl.org), Groenemeijer, P., Dirksen, E., Hubrig, M., Holzer, A. M., Dotzek, N., 2011: Towards an improved wind speed scale and damage description adapted for Central Europe

<http://dx.doi.org/10.1016/j.atmosres.2010.12.026>

1. Formerly named climada\_module\_ws\_europe, changed 20151224 [↑](#footnote-ref-1)
2. <http://www.iac.ethz.ch/doc/publications/Schwierz.pdf> [↑](#footnote-ref-2)
3. <https://github.com/davidnbresch/climada_module_country_risk> [↑](#footnote-ref-3)