

EGU2020-20647

<https://doi.org/10.5194/egusphere-egu2020-20647>

EGU General Assembly 2020

© Author(s) 2021. This work is distributed under the Creative Commons Attribution 4.0 License.



## Climate change, historical data and catastrophe modelling

**Richard Dixon**<sup>1,2</sup>, Sam Franklin<sup>3</sup>, Len Shaffrey<sup>2</sup>, and Debbie Clifford<sup>3</sup>

<sup>1</sup>CatInsight, London, United Kingdom (richard@catinsight.co.uk)

<sup>2</sup>Department of Meteorology, University of Reading, Reading, United Kingdom

<sup>3</sup>Institute for Environmental Analytics, Reading, United Kingdom

This presentation will discuss climate change in the context of catastrophe modelling and tail risk. Given that the catastrophe modelling industry typically only has short historical records that provide limited information as to whether hazard is non-stationary, what are the methods and datasets that may aid the catastrophe modelling community to better understand how and whether risk is changing temporally?

The issues will be framed by using examples of output from a multi-year multi-ensemble 60km global climate simulation, where extra-tropical windstorm daily maximum gust data has been converted into yearly aggregate European insurance loss with the help of PERILS European industry exposure data. The data is used to show how reliance on single historical datasets can produce misleading trends in catastrophe losses - but also potentially point to underlying trends in risk that single historical datasets may not be able to detect.