

EGU22-7851

<https://doi.org/10.5194/egusphere-egu22-7851>

EGU General Assembly 2022

© Author(s) 2022. This work is distributed under the Creative Commons Attribution 4.0 License.



Establishing the potential impacts of climate change on extreme flood events across the UK.

Laura Ramsamy, James Brennan, Hamish Mitchell, Markela Zeneli, Claire Burke, and Kamil Kluza
Climate X, United Kingdom of Great Britain – England, Scotland, Wales (laura.ramsamy@climate-x.com)

The severity and frequency of extreme flood events has intensified both globally, and across the UK. Climate change will influence weather patterns across the UK, making it increasingly important to understand the impacts this may have on future flood events.

We developed 90m hydraulic models to simulate extreme pluvial and fluvial flood events across the UK based on observed events. The models have been climate conditioned, allowing the potential impacts of climate change on extreme pluvial and fluvial flood events to be understood. Using different climate scenarios, we examine the variation in outcome depending on what efforts are taken to reduce emissions. Modelling the impacts climate change could have on flooding at a national scale, enables us to understand the spatial-temporal distribution of flood risk. This information can be used in the real world for decision making and providing a way to mitigate against the impacts of climate change.