Future Flood Explorer

A new way of looking at flood risk, change and adaptation

Increase in properties at risk
- <50%
- 50-100%
- 100-200%
- 200-300%
- >300%

Properties at risk in deprived areas
- <50
- 100-200
- 200-500
- 500-1000
- >1000
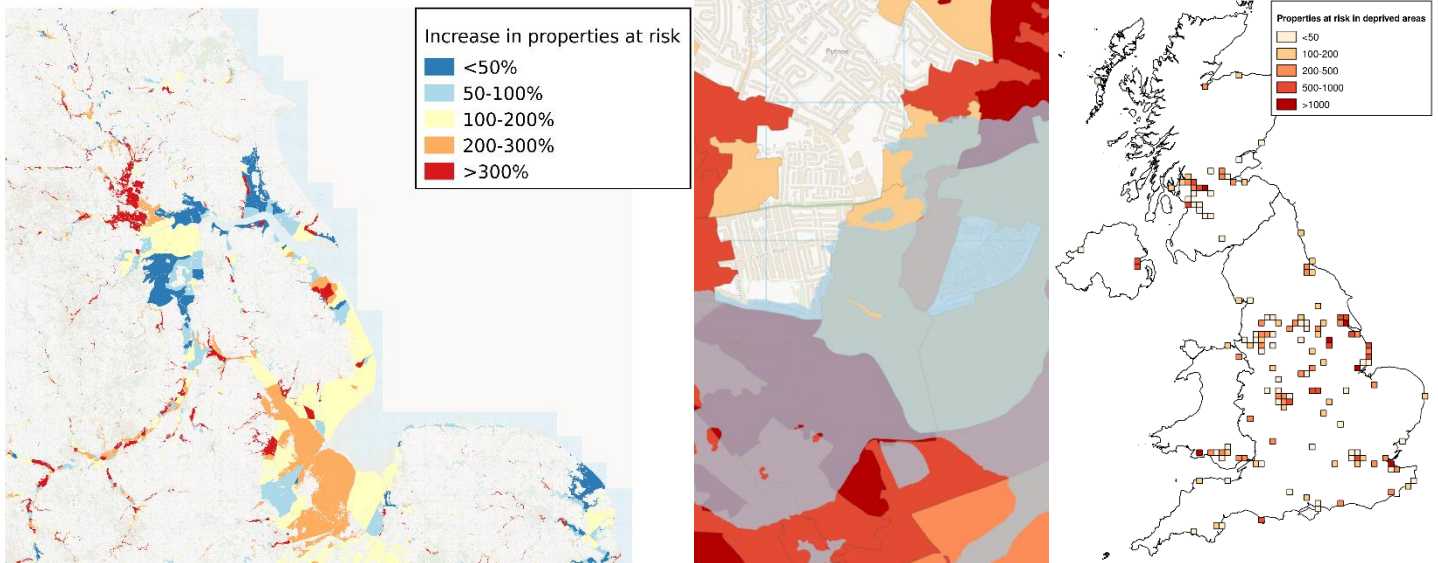
Capabilities

The Future Flood Explorer allows flood risk managers to understand risk under climate and socioeconomic change, and how effective adaptation policies are in offsetting these changes. The Future Flood Explorer represents coastal, fluvial, surface water and groundwater sources of flooding, and can quantify risk to a wide range of receptors such as residential and non-residential properties, infrastructure sites, and transport links. Analysis is possible across a range of scales from national to neighbourhood.

A key capability of the Future Flood Explorer is the ability to quantify the effects of adaptation strategies on risk, including defence construction, rural and urban catchment management, property level resilience measures, spatial planning and forecasting/warning.

Team

The Future Flood Explorer is developed by a team of internationally renowned experts in flood risk management: Paul Sayers, Dr Matt Horritt and Prof Edmund Penning-Rowsell. The team provides advice based on the latest science, engineering and social research.

Contact

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Projects

The Future Flood Explorer has been used on a range of projects including:

Climate Change Risk Assessment 2017 for the Committee on Climate Change. This project considers projections of future flood risk for the UK, finding that significant additional investment and adaptation action will be needed to counter the increase in UK flood risk projected under a 2°C rise in global mean temperatures, and that even the most ambitious adaptation scenarios will not be able to avoid the large increase in UK flood risk implied by a 4°C rise in global temperatures. In addition, long stretches of current coastal flood defence structures in England will become highly vulnerable to failure as sea levels rise.

For more information see full report here.

Flood Resilience for Disadvantaged Areas for The Joseph Rowntree Foundation. This project identifies those communities that may be most vulnerable to flooding in the UK now and in the future, taking account of both climate and demographic change. The FFE is used to understand the nature of flood disadvantaged areas; where they are, what makes them particularly vulnerable and how their resilience might change in the future given alternative policy options.

For more information see summary here.