

Evidence

Social deprivation and the likelihood of flooding

Project summary

This report uses up-to-date data to provide in-depth evidence on flood risk exposure and social deprivation inequalities in England.

The Environment Agency will use the findings to update its evidence base on the social distribution of flood risk and associated decision-making rules for investment.

Background

The analysis in the report examines if flood risk exposure is concentrated among more socially deprived communities. It updates a study published by the Environment Agency in 2006 which found evidence in support of the presence of socioeconomic-related flood risk inequalities in England.

Method

Statistical analysis was used to examine whether there is a socioeconomic-related flood risk inequality. A measure called the Concentration Index was used to determine whether socially deprived communities are more or less likely to be exposed to flooding.

Three main datasets were used for the analysis:

- the Environment Agency's 2018 National Flood Risk Assessment
- National Receptor Database 2014 version
- the 2015 version of the government's Index of Multiple Deprivation

The findings were compared with similar work published over the past 10 years that examined the social distribution of flood risk in England.

Main findings

- There is an inequality in terms of social deprivation and flood risk exposure from all sources of flooding. In other words, people from areas that are classed as more deprived disproportionately face more flood risk than those in less deprived areas. This is the case when taking into account nearby flood defences.

- Deprived coastal communities still experience significant inequalities for high and medium likelihood of flooding. These inequalities within coastal communities are more pronounced than those in inland ones.
- The inequalities found within rural areas are greater than those in urban areas.
- The size of the inequality is smaller than the 2006 study. This is primarily because the National Flood Risk Assessment now takes into account the risk reducing capability of nearby flood defences. In the last 10 years approximately 60,000 homes in deprived communities have been better protected.

Conclusions

The findings from this analysis suggest that recent investment has been relatively successful in addressing social deprivation and flood risk exposure inequality for the 20% most deprived areas in England. There are, however, still significant inequalities in rural and coastal areas in England.

This summary relates to information from the following project:

Title: Social deprivation and the likelihood of flooding

November 2020

Project manager: Peter Bailey, Economics and social science

Authors: Michael Hall and Peter Bailey

This project was funded by the Environment Agency.

Enquiries: enquiries@environment-agency.gov.uk

© Environment Agency