

# Flood risk to new homes in England and Wales will increase in disadvantaged areas

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The building of new homes continues in flood-prone parts of England and Wales, and losses from flooding remain high. A new study, which looked at a recent decade of house building, concluded that a

disproportionate number of homes built in struggling or declining neighborhoods will end up in high flood-risk areas due to climate change.

The study, by Viktor Rözer and Swenja Surminski from the Grantham Research Institute, used property-level data for new homes and information on the socio-economic development of neighborhoods to analyze spatial clusters of disproportional increase in the flood exposure of newly built homes and investigated how these patterns evolve in different [climate](#) change scenarios. Their findings, which discuss the issues of spending on flood defenses and the role of spatial planning in adopting to climate change, are published in the IOP Publishing journal, *Environmental Research Letters*.

Over the last decade, 120,000 new homes have been built in flood-prone areas in England and Wales. The use of spatial planning and other incentives to reduce the number of new properties built in flood-prone areas, including areas likely to become flood prone, is a key component of long-term flood risk management. At the same time, making people and assets more resilient to flooding through adaptation and efficient recovery is increasingly included in national policies and local flood risk management practice. However, no available studies provide an empirical analysis that captures the effects of recent spatial planning decisions on the dynamic changes in flood exposure and their interactions with the development of local communities in the context of climate change.

Viktor Rözer points out: "The spatial shift of flood risk areas as a result of climate change is expected to disproportionately impact new build homes in declining or struggling areas. What might appear as an attractive option to meet housing demand and stimulate the local economy right now is likely to increase inequality, with those who can afford to moving away from high risk areas, leaving those least able to

cope exposed.

"The analysis shows that without further action the share of homes built between 2008 and 2018 that will be at high risk by the 2050s is expected to increase from five percent to eight percent under a 2°C warming scenario and could almost triple to 14% under a high-end warming scenario."

The conclusions suggest that in struggling neighborhoods, this can lead to knock-on effects where an inability to cope with increasing flood risks can decrease both the attractiveness and property value of a larger area, as chances for a full recovery after a flood event decrease and community development is impaired. This could cause a wider risk with systemic implications, such as an increase in mortgage defaults and foreclosures due to a combination of decreasing real estate prices and lower chances of financial recovery

The analysis is accessible to a broad readership and could have important implications for broader awareness of the range of exposure outcomes associated with risky housing development in the UK, the affordability of private level flood protection, and [flood](#) insurance in the face of [climate change](#).

**More information:** Viktor Rözer et al, Current and future flood risk of new build homes across different socio-economic neighbourhoods in England and Wales, *Environmental Research Letters* (2021). [DOI: 10.1088/1748-9326/abec04](#)

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