

The costly, unintended consequences produced by the US National Flood Insurance Program

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Since the creation of the National Flood Insurance Program (NFIP) in 1968, the U.S. government has paid over \$51 billion to cover flood

losses. Almost half of these payouts went to just 25 counties, among the fastest-growing counties by population.

A new paper published in the *Journal of the Association of Environmental and Resource Economists* examines whether insuring people against potential flood losses contributes directly to [population growth](#) in flood-prone areas. In "[Does the National Flood Insurance Program Drive Migration to Higher Risk Areas?](#)," authors Abigail Peralta and Jonathan B. Scott theorize, "While [flood insurance](#) alone reduces the private cost of risk exposure for households, the subsidized premiums offered through the NFIP may exacerbate these responses."

Mapping efforts in the early 1970s identified 13,600 communities in the US as containing areas of high flood risk. In 1979, FEMA began a long process of comprehensively mapping these communities, allowing them to enter the NFIP and access flood insurance coverage at subsidized rates. Authors Peralta and Scott leverage this initial roll-out of detailed flood maps for high-flood risk communities to estimate the impact of a community's entrance into the NFIP on [population](#) flows.

The authors find that local NFIP availability had an overall positive effect on the population size of communities enrolling in the program, and a significantly larger impact on the relatively more flood-prone locations, causing an additional 5% increase in population per one standard deviation increase in historical flood risk. Given their estimates on population growth, the results suggest the external costs produced by the NFIP may have contributed to a 6.6% increase in damages from Hurricane Katrina and up to a 14% increase in damages from Hurricane Harvey.

The paper shows that NFIP insurance adoption is a strong driver of population growth in high flood-risk areas, adding to the growing costs of increasingly frequent climate change-driven [natural disasters](#).

Shorelines in the U.S. account for only 10% of [land area](#), yet the populations residing there make up nearly 39% of the total U.S. population. The findings provide evidence that household migration patterns are responsive to insurance markets, suggesting that flood insurance rates priced below actuarially fair levels will produce inefficient sorting to flood-prone locations.

In addition to the increased costs incurred from past major disasters, the perverse incentives created by the NFIP play a major role in inhibiting adaptation to the future risks of climate change.

"This further hinders climate change adaptation," the authors conclude, "due to both the higher population needing to be moved to increase adaptation efforts and the difficulty in encouraging these moves under the currently high NFIP incentives to reside in flood prone areas." If policy intends to provide the right incentives to encourage adaptation to future risks of climate change, it must consider the unintended behavioral responses to national flood [insurance](#).

In the words of the authors, "This may mean restructuring the program sooner rather than later."

More information: Abigail Peralta et al, Does the National Flood Insurance Program Drive Migration to Higher Risk Areas?, *Journal of the Association of Environmental and Resource Economists* (2023). [DOI: 10.1086/726155](https://doi.org/10.1086/726155)

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