

Future flood damages unevenly distributed among households

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Interactions between ecological degradation and climate change threaten to exacerbate social and economic inequality globally. Increases in flood risk epitomize the impacts of these interacting global changes on human well-being. This study demonstrates that although climate change is likely to result in substantial increases in flood damages, floodplain restoration has the potential to mitigate those impacts. In addition, we find that lower value property owners and mobile home owners face greater flood risk compared to higher value properties. Climate change may slightly mitigate this disparity, however higher value property owners will likely benefit most from risk reduction activities. These findings are based on a simple, yet novel and generalizable framework for estimating flood risk to property owners under a range of alternative scenarios. Our study area is focused on the Lake Champlain Basin in Vermont, USA, a region where heavy rainfall events are expected to occur with greater frequency and severity in coming years. Together, the results of this study highlight that climate-induced flood damages will play an important role in mediating social and economic outcomes in future years. As policy-makers reconceptualize how investments in hazard mitigation are prioritized, we argue that floodplain restoration, as well as other nature-based solutions, have a critical role to play in both building resilience to climate change and addressing inequality within society.



*Credit: Kathleen Masterson, Vermont Public Radio.*

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