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Understanding the role of climate change in disaster mortality: Empirical evidence from Nepal

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Climatic disaster impacts, such as loss of human life as its most severe consequence, have been rising globally. Several studies argue that the growth in exposure, such as population, is responsible for the rise and the role of climate change is not evident. While disaster mortality is highest in low-income countries, existing studies focus mostly on developed countries. Here we address this impact attribution question in the context of the Global South using disaster-specific mixed-effects regression models. We show that the rise in landslide and flood mortality in a low-income country Nepal between 1992-2021 is attributable primarily to the increased precipitation extremes. An increase in one standardized unit in maximum one-day precipitation increases flood mortality by 33%, and heavy rain days increase landslide mortality by 45%. A one-unit increase in per capita income decreases landslide and flood mortality by 30% and 45%, respectively. Population density does not show significant effects.