

## Natural Disasters and Household Welfare – Evidence From Vietnam<sup>1</sup>

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### Abstract:

This study examines the welfare effects of natural disasters in a country setting using spatially disaggregated disaster maps derived from first hand meteorological data. Doing so helps mitigate issues of endogeneity that arise in the absence of sufficiently long national household panel data when estimating the welfare effect of natural disasters with the more commonly used (subjective) disaster measures. In addition, spatial correlation is also accounted for. Application to repeated cross-sectional national living standard measurement surveys (2002, 2004, and 2006) from Vietnam indicates that short run losses can be substantial, with riverine floods causing welfare losses of up to 23 percent and hurricanes reducing welfare by up to 55 percent inside cities with a population over 500,000. Households are better able to cope with the short run effects of droughts. There are also important long run negative effects, in Vietnam mostly so for droughts and hurricanes. Finally, geographical differentiation in the welfare effects across space and disaster appears linked to the functioning of the disaster relief system, which has so far largely eluded households in areas regularly affected by hurricane force winds, resulting in ever greater havoc by each subsequent hurricane.

**Key Words:** Natural disaster, household welfare, adaptation, Vietnam

**JEL codes:** C81, D12, O12

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