Do existing transformative and curative options effectively reduce non-economic losses and damages in Western India?

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Abstract

While an increasing trend has been observed for various loss and damage indicators from climate extremes, non-economic loss and damage indicators; loss of lives, land degradation and desertification, impact of ecosystems and biodiversity, etc., are most often vaguely reported. Nevertheless, in the developing nations, such impacts are expected to be more significant than economic ones. Recently, the international negotiation under United Nations Framework Convention on Climate Change has specifically emphasized the need for comprehensive climate risk management. However, understanding the relationship between climate change and non-economic loss and damages are so far less explored. Taking Kutch District of Gujarat State, frequently affected by droughts, as a case, this study aims to analyze the role of transformative and curative adaptation measures in reducing non-economic loss and damage. Irrigation (transformative) and crop-insurance (curative) are found to be the most frequently used adaptive measures in the study villages. Around 186 households were surveyed and a discrete choice model (probit) was estimated. Overall, this study reveals that irrigation reduces the impact of climate extremes, whereas crop-insurance failed to mitigate the impacts. From the policy perspective, this study recommends revision of the existing insurance mechanisms to improve risk management.

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