

Asia Pacific Forum on Loss and Damage

Creating a community of practice across the Asia Pacific



The objective of the forum is to disseminate knowledge and new research on loss and damage in the Asia Pacific region so as to create a community of practice among researchers.

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Front cover: Devastation after typhoon Iloilo, Philippines © Café Pacific

Four Case Study Analysis on Loss and Damage

Loss and Damage in Vulnerable Communities Study

By: Kees van der Geest and Koko Warner
United Nations University Institute for Environment and
Human Security (UNU-EHS)

'Loss and damage' is an emerging concept in the fields of climate change adaptation and disaster risk reduction. It results from inadequate efforts to reduce greenhouse gas emissions and insufficient capacity to adapt to climate-related stressors. United Nations University Institute for Environment and Human Security (UNU-EHS) coordinated nine case studies that documented losses and damages that vulnerable communities are already experiencing today.¹ The studies looked at impacts of extreme weather events as well as slow-onset climatic changes. Four of the case studies were conducted in the Asia-Pacific Region. Key findings of these four cases in the Asia Pacific are summarized below.

Table 1. The case studies in the Asia-Pacific Region²

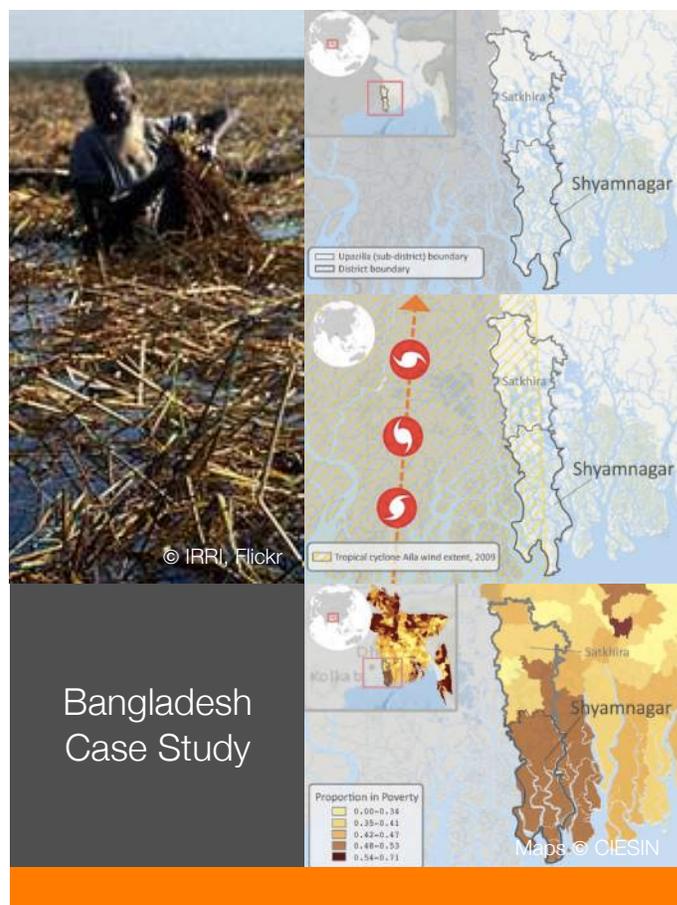
Country	District/Region	Climate-related stressors	Sample size
Bangladesh	Satkhira	Cyclones, sea level rise, salinity intrusion	360
Bhutan	Punakha	Changing monsoon patterns	273
Micronesia	Kosrae	Storm surges, sea level rise, coastal erosion	363
Nepal	Udayapur	Flooding	300

Bangladesh

Satkhira, a coastal district in Bangladesh, faces the threat of sea level rise and cyclones. Both result in saltwater intrusion, which severely impacts rice cultivation. To adapt, farmers have planted new saline tolerant-rice varieties. This worked quite well until 2009, when cyclone Aila hit and caused a sudden and drastic increase of salt content in the soil. Almost all farmers lost their complete harvest that year. Two years later, rice yields were still extremely poor and food security compromised.

Bhutan

Changing monsoon patterns are affecting the livelihoods of small-scale farmers in Punakha District, Bhutan, who depend on these rains to irrigate their rice fields. Farmers try to adapt to decreasing monsoon rains by shifting crops, developing water-sharing mechanisms, and intensifying the maintenance of irrigation channels. However, these measures are insufficient and come with additional monetary and non-monetary costs. For instance, shifting to non-irrigated crops results in an income per acre up to eight times lower than irrigated rice.



Micronesia

On the island of Kosrae in the Federated States of Micronesia, households are grappling with sea level rise, storm surge and coastal erosion. Communities adapt by building sea walls and planting trees along the shore. However, these are not sufficient to stop coastal erosion and prevent damage when storm surges flood houses and properties. Moreover, the measures have costs. Households spend scarce resources on protection and a cultural heritage site was heavily damaged when ancient rocks were used to build seawalls.

Nepal

The case study in Nepal surveyed households in the Udayapur district that are especially vulnerable to floods. Many households lose their harvest when floods hit. Food security is at stake as a result of crop losses and rising food prices in the aftermath of floods. Households apply both preventive (e.g. building physical barriers) and coping measures (e.g. reliance on aid, migration, selling property) to deal with the floods. While much effort is expended on such measures it has not been enough to counteract adverse effects.

The research reveals four loss and damage pathways. Residual impacts of climate stressors occur when:

- 1) Existing coping/adaptation is not enough;
- 2) Measures have costs (including non-economic) that cannot be regained;
- 3) Despite short-term merits, measures have negative effects in the longer term; or
- 4) No measures are adopted – or possible – at all.

Work Cited

1. Warner, K. and K. van der Geest (2013) 'Loss and damage from climate change: local-level evidence from nine vulnerable countries.' *International Journal of Global Warming* Vol. 5 No. 4, pp. 367-386 2. IBID

About the Team

Saleemul Huq is the director at ICCCAD as well as a senior fellow at IIED in London, UK. He is most well known for building negotiating capacity and supporting the Least Developed Countries (LDCs) Group as well as other work on vulnerability and adaptation.

Erin Roberts is a research consultant and PhD student at King's College London. Her research interests include approaches to address loss and damage in least developed countries.

Stephanie Andrei is a Researcher at ICCCAD and is currently helping support research related on loss and damage. She holds a BAH in Political Science and Economics from Queen's University and a MSc from the London School of Economics and Political Science in International Migration and Public Policy.

Teresa Sarroca has been working as a coordinator at IIED for the climate change group since 2013. Teresa graduated from Yale University with a Masters in Forestry in 2009 and has expertise in programme and project management and network coordination in the environmental management sector.

International Centre for Climate Change and Development (ICCCAD)
98 Park Road | Baridhara | Dhaka
Bangladesh

If you have any further comments/inquiries or if you would like to sign-up to become a member, please send us an email at: lossanddamageforum@gmail.com