

# 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.*

Project Coordinators:



Supported by:



Design: Stephanie Andrei

Edited: Erin Roberts

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98 Park Road | Baridhara | Dhaka

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





*Loss and Damage represents the actual and/or potential manifestation of climate impacts that negatively affect human and natural systems*

- Framing the Loss and Damage Debate, Loss and Damage Series

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## Objective of the Forum

The objective of the forum is to disseminate knowledge on loss and damage research in the Asia Pacific region so as to create a community of practice. By providing a platform for discussion, the forum also hopes to shed light on the challenges and potential solutions to address loss and damage. Researchers are encouraged to send us links to their literature to be included on the website and to participate in the monthly Q&A sessions that will be available on LinkedIn as well as on the website (TBA).

If you would like your research to be disseminated on our website, please forward us a link along with a short abstract to: [lossandddamageforum@gmail.com](mailto:lossandddamageforum@gmail.com)

## Loss and Damage and the Asia Pacific

The Fifth Assessment of the Intergovernmental Panel on Climate Change (IPCC) has made an even stronger case for countries in the Asia Pacific to place adaptation measures higher on their priority list. Not only is the region prone to natural degradation, high population density, poverty and food insecurity, it is also highly susceptible to the negative impacts of climate change. Precipitated by an increase in the number of natural hazards, economic losses have also significantly increased. This not amounts to losses in assets and infrastructure but also in culture and traditions since more and more individuals are being forced to flee.

Over the years, literature has noted that vulnerable countries in the region not only face similar challenges when dealing with the adverse effects of climate change but are also in need of support to create comprehensive solutions to manage such risks. Since some of these impacts are not

avoidable however, the importance of enhanced mitigation and adaptation efforts should also not be overlooked.

In South Asia thus far, comprehensive research to understand how loss and damage is assessed and addressed has only been conducted in Bangladesh. From this research, conclusions have pointed to a number of policy gaps and research needs that should be made a priority in the years to come. One of the major conclusions that derived from this research was a call for increased collaboration between various stakeholders, practitioners and researchers working to improve understanding of climate change impacts. This is particularly crucial for policymakers to estimate appropriate levels of investments in disaster risk reduction (DRR), climate change adaptation (CCA) and approaches to address loss and damage.

International and regional level support is vital given the urgency to which vulnerable countries must find ways to address and respond to increasing risks especially since most national governments lack the capabilities and resources to do so.

# Bangladesh

## Leading the Way in Loss and Damage Research

By: Stephanie Andrei and Shababa Haque  
International Centre for Climate Change and  
Development

As part of the Loss and Damage in Vulnerable Countries Initiative, over the past two years ICCCAD and partner organizations have played a significant role in assessing loss and damage in Bangladesh. With the majority of the country sitting less than ten metres above sea level, this “mega-delta” is highly exposed to weather extremes ranging from storm surges, flooding, drought, salinization, cyclones, sea level rise, just to name a few. For this reason, while loss and damage is an important issue that needs to be addressed at the national level, the scale of variation of environmental hazards throughout the country makes it near-to-impossible to collate recommendations under a few categories.

Through collaborating with lead national researchers and academics great advancement has been made on loss and damage literature in Bangladesh. The research undertaken covers topics ranging from the legal aspects to addressing the impacts resulting from both slow onset processes and extreme weather events. Case studies show that even with adaptation efforts, Bangladesh is still likely bear severe negative impacts from climate change.<sup>1</sup> Most pressing however is that current projects consider future risks due to climate change, risk retention programmes are scaled up and the most vulnerable are targeted and protected.

Additional key findings from this research indicate the need to establish a comprehensive strategy to address loss and damage which should include integration of DRR and CCA policies. Mechanisms such as risk reduction, risk transfer and specific approaches for dealing with slow onset processes must also be implemented and carefully managed.

In terms of the latter, migration strategies should be considered in order to protect and/or diversify the livelihoods of vulnerable individuals.<sup>2</sup> Such initiatives must further be implemented to protect the dignity of individuals migrating. These efforts will require taking into consideration non-economic impacts such as psychological impacts, culture, heritage, traditions and language.<sup>3</sup> In terms of challenges faced, research in Bangladesh has suggested that social and political circumstances posed significant barriers to the schemes even if implemented on time. An additional concern associated with risk retention schemes was the lack of reliability when it came to selecting beneficiaries of social safety net programmes. Since not all programmes have effectively targeted the most vulnerable groups, some programmes need to be redesigned with the interest to meet the unique needs of these individuals. Therefore, it is important to consider good governance when moving forward.

Alongside research, a lot of priority was given to stakeholder engagement in Bangladesh. By conducting stakeholder workshops and meetings, constant dialogue was maintained with interested policy makers, government officials, academics, practitioners and researchers. This not only helped raise awareness but also provided a platform for research to be translated into policy. ICCCAD’s participation in climate related events both nationally and internationally contributed towards influencing policies for development and allowed collaborations with other international organizations.

This approach is not just a step forward for Bangladesh in terms of climate change research, but it is also a model for other developing countries that are planning on taking an initiative to understand and address loss and damage in their respective countries. A number of lessons can be taken from this process including the importance of expanding social capital and making collaborations with various stakeholders.

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## Philippines

The super typhoon in November 2013 was the strongest episodic extreme weather event that ever hit the Philippine archipelago.

# Recovering and Rehabilitating a Damaged Philippines

By: Angelo Kairos Torres dela Cruz  
Institute for Climate and Sustainable Cities (ICSC)

The elevation of loss and damage as a centerpiece in national discussions and international negotiations can be attributed to what appears to be a pathological lack of interest and intention by major players in curbing their carbon-heavy development pathways.

In a way, current players missed the mark to avoid manageable mitigation and adaptation commitments and to reduce the amount of avoidable losses and damages. The previous scientific projection of a 2°C warmer earth is now somewhere closer to reaching 4°C. The effects of a warmer earth will be life-changing even to developed countries that have the capacity to make immediate changes to address the impacts. But the same cannot be said for developing and least developed countries (LDCs). According to Germanwatch, the Philippines ranked in the top ten of most vulnerable countries to extreme weather events in 2012.<sup>1</sup> The vulnerability of the country to slow onset impacts is not yet established at this point but literature has shown that agriculture is one of the most exposed sectors.

### *Lost and Damaged*

The Philippines, a developing country, is a living testament how the lack of capacity to address climatic impacts worsens other societal challenges such as economic losses after typhoons, lack of support services to poor farmers, nonexistent land use planning, and a growing malnutrition rate among others.

The importance of L&D was made clear when super typhoon Haiyan hit the Philippines in a record-breaking fashion of strength, power, and amount of damages.

Super typhoon Haiyan severely affected the Philippines' agro-fisheries industries, resulting in estimated losses of \$225 million in the agriculture sector alone.<sup>2</sup> The death toll is pegged to around 8,000 individuals with more than a thousand still unaccounted for. The super typhoon also displaced millions of Filipinos and put the Philippine government's capability to respond to disasters in question.

Total damages including residential, commercial, and agro-fisheries are estimated to be \$14.5 billion, which is expected to get an insurance payout of \$700 million.<sup>3</sup> Yet according to the report "Braving the Uncertainties", the culture of insuring properties (livelihoods, houses, farms, etc.) in the Philippines lacks articulation and promotion.<sup>4</sup> The disproportion between insurance payouts and total damages means a huge number of Filipinos will not recover a single penny from the assets they lost in the storm.

#### *Conversation at the National Level*

Risk transfer mechanisms such as parametric and indemnification insurance policies are currently being pushed by different stakeholders. Currently, discussions are trying to find ways of improving the low coverage rate of insurance companies in the Philippines especially to the most vulnerable sectors of agriculture and fisheries. As an agricultural country with more than half of its gross domestic product (GDP) coming from agro-fisheries industries, creating a conducive policy environment for risk transfer mechanism products is a logical move. Policy re-formulation on the tax side of risk transfer products is a major undertaking that the government is trying to do with the help of the business and civil society sectors. A market environment that can support risk transfer mechanisms and encourage targeted consumers will be a nonnegotiable prerequisite in improving the insured rate in the country.

#### *Drawing the Lines in the International Arena*

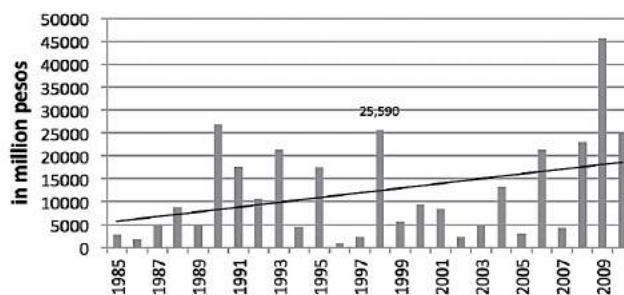
The Philippine delegation has always been at the forefront of loss and damage during international discussions and negotiations. With the help of other country partners, a proposal to create a financing mechanism funded by monies collected from climate finance targets has been set into

motion. The new mechanism will empower affected countries by providing an assessment on what has been lost and damaged, which, in turn, can be funded through the mechanism's financing windows.

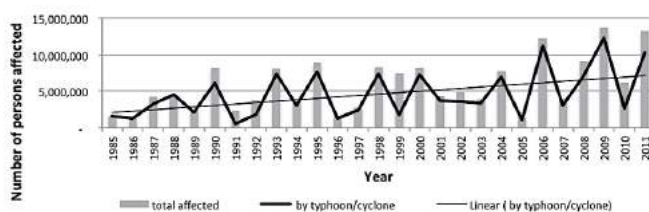
#### *The Future of L&D in the Philippines*

Loss and damage in the Philippines is a work in progress. Pushing the national agenda internationally is a redline-stricken field that seems to get more elusive as time passes. However, it seems that the Philippines has nothing left to lose except for its restrictive policies on insurance but it has everything to gain in improving the lives of the millions of vulnerable Filipinos who pay the heftiest price when it comes to losses and damages.

**Figure 1. Monetary cost of damages due to natural hazard induced disasters in the Philippines (1985-2009)<sup>5</sup>**



**Figure 2. Number of people affected by natural hazard induced disasters in the Philippines (1985-2011)<sup>6</sup>**



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## India

Floods in Uttarakhand, India, in June 2013 claimed at least 800 lives with thousands more stranded or missing. Survivors also were at risk of outbreaks of water-borne diseases.

## Why India Must Focus on Loss and Damage?

By: Mihir Bhatt

All India Disaster Mitigation Institute (AIDMI)

India is highly vulnerable to risks due to natural disasters and climate extremes. The IPCC Fifth Assessment Report confirms this and also points out the alarming rates with which this is occurring. In recent years there has been a significant increase in weather-related disasters and associated loss and damage. This has had severe impacts on infrastructure (ie. houses, roads, schools and hospitals) as well as incomes and livelihoods of the poorest citizens of India who, as it is, struggle to come out of poverty. At present India is at risk of enduring losses and damages from both slow-onset events (such as loss of agriculture due to drought and salinity ingress) as well as extreme events (such as the impacts of Uttarakhand floods and cyclone Phailin in Odisha). Though the costs of these events are often enlisted and calculated for relief and compensation purposes by

the authorities, the method, tools and mechanisms are not systematic. Additionally, the data is not readily available in the public domain.

On account of two mega climate disasters in 2013 (Uttarakhand floods and Cyclone Phailin), India has suffered similar losses as Typhoon Haiyan in the Philippines. Unlike the government of Philippines however, recovery and rehabilitation has not generated widespread international support but, instead, has been primarily the responsibility of national government. This puts considerable strains on resources and capabilities. Thus, there is clear incentive to promote better understanding of loss and damage in India but the focus has to remain on targeting those most vulnerable at the local level.

Over the past few years, loss and damage has been an issue of increasing concern for policymakers in India however there is limited knowledge available as to where to begin to start addressing loss and damage issues in the country. Understanding approaches for dealing with loss and damage is crucial for the government to estimate levels of investments for mitigation and adaptation as well as to participate effectively in the international climate change negotiations. Even at the international level challenges remain since the concept has yet to be clearly defined and comprehensive models for assessing loss and damage have lacked practical applicability.

While a range of methodologies for carrying out traditional risk assessments are available, methodologies for climate-related loss and damage are still evolving and are far from being integrated into national policies.



Another key challenge is that there does not exist a system to estimate the full range of losses in monetary or economic terms. Designating economic measures for all types of losses is also controversial. For example, how can we put a dollar figure on the loss of a human life or cultural relics or loss of employment due to heat waves in India's slums?

The IPCC has already stated (with high certainty) that the frequency and magnitude of extreme events will increase as climate change worsens. Further given these grim future projections, disaster risk reduction and adaptation efforts will not be enough to prevent losses and damages in India. A more comprehensive and integrated approach of disaster risk reduction and adaptation, including risk retention and risk transfer would be required to reduce avoidable and unavoidable losses and damages.

The current mechanisms for dealing and coping with disasters in India are not yet sufficient or capable to deal with future impacts. Furthermore, India will have to update its legal and policy frameworks and procedures. The country will also need to introduce new measures to assess and address loss and damage associated with climate change and disaster risks in order to protect the lives and well-being of those most vulnerable.



*Having access and ownership over natural resources such as land, water, and forests is thus essential for mitigating the impacts of and preparing for disasters.*

-AIDMI, Disaster Risk Reduction and the Post-2015 Development Agenda (Discussion Note)

# Nepal



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## Loss and Damage From Flooding—A Serious Concern for Poor Communities in Nepal

By: Dinesh Devkot and Sujit Karmacharya  
Integrated Development Society (IDS) Nepal

*National estimates in Nepal suggest that flood events have on average killed almost 200 people and caused \$35 million worth of damage every year since 1980.*

-UNDP, National Strategy for Disaster Risk Management

Nepal is one of the most disasters prone countries to climate change and experiences frequent landslides, debris flows and floods because of its varied topography and geological characteristics, together with torrential rain during the monsoon season. National estimates in Nepal suggest that flood events have on average killed almost 200 people and caused \$35 million worth of damage every year since 1980.<sup>1</sup> Low economic strength, inadequate infrastructure, low-level of social development, lack of institutional capacity, and higher dependency on the natural resource makes the country vulnerable to change in climatic system including variability and extreme events.

One of the most vulnerable places in the country is the Churia region of Nepal which experiences a wide range of climate impacts along with a high population density. In long run, climate implications will place serious pressure on watershed management and also potentially strain relations with India since the region shares a border. The landslides and floods that originate in the Churia range have taken many lives, damaged properties and crops and have even impacted nearby Terai plains. This has worsened the situation of farmers in the region, leaving many of them landless, helpless and vulnerable with limited



livelihood options. This has led to an increase in dependency on natural resources in the region that has, in turn, created the challenge of forest encroachment for farming and settlements. This creates a vicious downward spiral that results in increased pressure on the Churia landscape.

Terai-Churia range covers 23% of total land area in the country and hosts 48% of the population. These factors exacerbate an already vulnerable environment due to climate change. The seasonal river, that originates from the Churia range, experiences irregular high floods and debris flow (high sedimentation) causing inundation of communities in the rainy season. Such devastation will accelerate in the future as the average temperature in Nepal is increasing approximately 0.06° per annum. The pattern of precipitation will also likely cause droughts during winter. These impacts have negative effects on rural/indigenous livelihoods' and economy thereby increasing the vulnerability of communities in the region.

The survey study on losses and damages due to floods in the Udayapur district conducted by the United Nations University in collaboration with the Integrated Development Society Nepal in 2013, captures reality for communities in Churia. The report in this study reveals that households are forced to expend time and effort in preventing, coping, and adapting to destructive flood events. For example, families farming along riverbanks have been forced to rebuild the walls of their fields even as they attempt to rehabilitate soils damaged by previous events. Additionally, they have been forced to sell property including homes, livestock, and heirloom possessions to cope with these effects. The most commonly cited impact of flooding was on crop production and higher food prices in the aftermath of floods. To cope, respondents stated they had to reduce expenses (ie. school fees, health care, productive investments, etc.) and food consumption.<sup>2</sup>

### **Figure 3. Flood affected household by impact types<sup>3</sup>**

Rather than simply reacting to extreme events (e.g., disaster relief after floods), the government needs to coordinate with rehabilitation planning, control land use and prevent unsustainable resource exploitation such as the unregulated removal of sand, especially in riverine zones prone to flooding. Management of community forests to protect watersheds through improved grazing regimes, fodder plantations, and dissemination of biogas units will also help reduce impacts on forest resources. It is imperative for residents of flood-affected areas to expand and diversify their income in order to reduce their dependency on natural resources and better cope with the future impacts of climate change. In conclusion, loss and damage issues are serious concern for vulnerable communities. It will be necessary to develop appropriate assessment tools to collect evidence to better influence policy-makers.

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# 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.<sup>1</sup> 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 are summarized below.

**Table 1. The case studies in the Asia-Pacific Region<sup>2</sup>**

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.

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## About the Team

Erin Roberts is a researcher and consultant at IIED focusing on how loss and damage from the impacts of climate change is being addressed in developing countries and how these efforts can be enhanced to reduce future losses and damages. She is also studying to do her PhD at King's College on the way in the way in which loss and damage could be used to facilitate transformational change and reduce vulnerability to climate change.

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

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[lossanddamageforum@gmail.com](mailto:lossanddamageforum@gmail.com)