



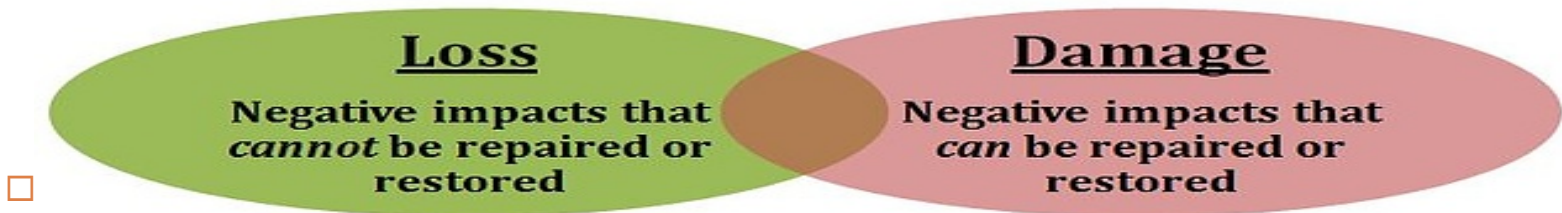
CLIMATE CHANGE ADAPTATION, DISASTER RISK REDUCTION AND LOSS AND DAMAGE

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What is loss and damage?

- **Loss** is generally thought of as impacts of climate change that cannot be recovered while **damage** is characterised as those impacts that can be recovered (Kreft et al., 2012)



- Working definitions of loss and damage:
 - “negative effects of climate variability and climate change that people have not been able to cope with or adapt to” (Warner et al., 2012)
 - “current or future negative impacts of climate change that will not be addressed by adaptation efforts” (Nishat et al., 2013)

What is loss and damage contd.?

- **Avoidable loss and damage** avoided through mitigation and adaptation measures
- **Avoidable loss and damage not avoided** because adaptation measures were not implemented
- **Unavoidable loss and damage** that cannot be avoided because of the nature of the impacts, results from:
 - Slow onset processes like sea level rise
 - Extreme events to which impacts could not be adapted to (Verheyen, 2012)
- **Acceptable risks:** Level of risk so low that DRR and adaptation not justified
- **Tolerable risks:** Where DRR and adaptation efforts required to keep risk within tolerable level
- **Intolerable risk:** Despite adaptation efforts risk threatens culture, public safety, a legal standard or a social contract (Dow et al., 2013)

How is loss and damage experienced?

- **Economic** losses and damages
 - ▣ Loss of lives, livelihoods and assets; damage to physical assets

- **Non-economic** losses and damage
 - ▣ Loss of culture, sovereignty
 - ▣ Psychological impacts



Links to mitigation and adaptation

- Loss and damage has risen to prominence on the international climate change agenda because of a failure to mitigate and adapt to the impacts of climate change
- The mitigation and adaptation choices made today will reflect the climate change impacts – and magnitude of losses and damages – experienced tomorrow



Understanding the limits to adaptation

- **Constraints to adaptation** make it more difficult to plan and implement adaptation measures
- **Limits to adaptation** are reached when “an actor is **unable to secure objectives from intolerable risks through adaptive action**” (Berkhout et al., 2013)
- When limits to adaptation are reached actors can:
 - Accept loss and damage
 - Change objectives (values and norms)
 - Implement transformational responses
- Recent research has revealed:
 - Limits to adaptation **differ across scales and time-frames**
 - **Soft limits** occur when there are no options to avoid intolerable risks (but options may become available)
 - **Hard limits** occur when there are no options available or foreseeable to avoid intolerable risks (Berkhout et al., 2013)

When the limits are reached

- When the limits of adaptation are reached decision makers' options include:
 - ▣ Supporting transformational adaptation
 - ▣ Reducing risk through early warning systems and monitoring programs
 - ▣ Risk retention initiatives like social safety nets (Berkhout et al., 2013)



Addressing loss and damage

- Loss and damage results from a spectrum of climate change impacts – **from extreme events to slow onset processes** (Warner et al., 2012)
- A range of approaches are required to address loss and damage – from risk reduction to risk transfer (e.g. insurance) to risk retention (e.g. contingency funds, social safety nets, and finally to approaches to specifically address slow onset processes (UNFCCC, 2012)

Risk reduction

- Risk reduction measures are taken before the onset of a climatic hazard and include:
 - ▣ **Structural** measures such as the building of embankments, cyclone shelters, etc.
 - ▣ **Non-structural** measures such as the use of indigenous knowledge, early warning systems, etc. (UNFCCC, 2012)



Risk transfer

- Risk transfer approaches are “usually undertaken when a country or entity assesses that the potential loss and damage that it could experience could be greater than its ability to manage that loss and damage” (UNFCCC, 2012)
- Risk transfer does not eliminate the risk of loss and damage but can reduce human suffering and development setbacks that result from climate change impacts (UNFCCC, 2012)
- Risk transfer approaches include:
 - ▣ Insurance and microinsurance products
 - ▣ Risk pooling
 - ▣ Catastrophe bonds



Risk retention

- Risk retention has been defined as measures that “allow a country to ‘self-insure’ itself against climatic stressors” (UNFCCC, 2012)

- Risk retention measures include:
 - ▣ Social safety nets/social protection measures
 - ▣ Contingency funds or loans



Approaches to address slow onset processes

- Slow onset processes will result in slow incremental changes, but will have significant impacts
- Much more research is needed to understand slow onset processes and approaches to address them
- Approaches to address slow onset processes include:
 - ▣ Livelihood diversification
 - ▣ Migration policies
 - ▣ National frameworks and policies
 - ▣ Regional agreements (UNFCCC, 2012)



Linking DRR, Climate Change Adaptation and Loss and Damage

- Normative gaps between DRR and CCA:
 - ▣ The DRR community tends to focus on extreme events and at the local and national levels where impacts are felt (Schipper and Pelling, 2006).
 - ▣ The CCA community tends to focus on addressing more incremental processes with discussions focused at the international level and strategies at the national level (Birkmann and Teichmann, 2010).

- Loss and damage is an opportunity to harmonise or integrate the work already being done in the CCA and DRR communities through a comprehensive approach that will address residual losses and damages and help reduce vulnerability (Shamsuddoha et al., 2013).

Linking DRR, Climate Change Adaptation and Loss and Damage in Practice

- Legislative and bureaucratic silos between DRR and CCA need to be overcome
- Develop a **comprehensive policy and multi-level institutional framework** for the integration of DRR and CCA to address loss and damage from the impacts of both extreme events and slow onset processes
- Establish a **policy body for loss and damage and technical bodies at relevant ministries**, to serve as knowledge hubs and to provide expertise in DRR and CCA respectively to the loss and damage policy unit
- Strengthen and **enhance the capacity for mainstreaming loss and damage into national planning processes** and develop linkages between sectors and institutions working in areas of development to ensure climate resilient development (Shamsuddoha et al., 2013).

Way Forward

- International discussions on loss and damage must eventually translate into concrete and practical approaches on the ground, where they are most needed

- Therefore, more research is needed on:
 - How to assess and address loss and damage from both extreme events and slow onset processes:
 - Methodologies to assess future loss and damage from both extreme events and slow onset processes
 - Implementing comprehensive risk management strategies

 - Options for rehabilitation; how to address non-economic losses, etc.

 - How to effectively integrate DRR and CCA under a loss and damage umbrella

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