



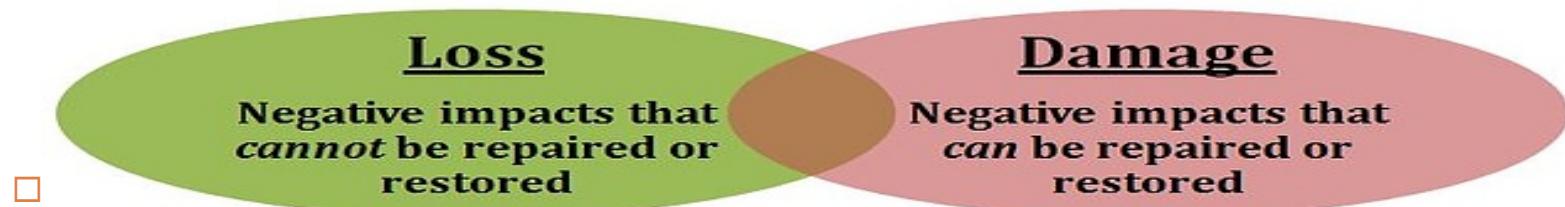
# CLIMATE CHANGE ADAPTATION, DISASTER RISK REDUCTION AND LOSS AND DAMAGE

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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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