

PRESENT UNDERSTANDING IN DEVELOPING A FRAMEWORK FOR ASSESSMENT OF LOSS AND DAMAGE

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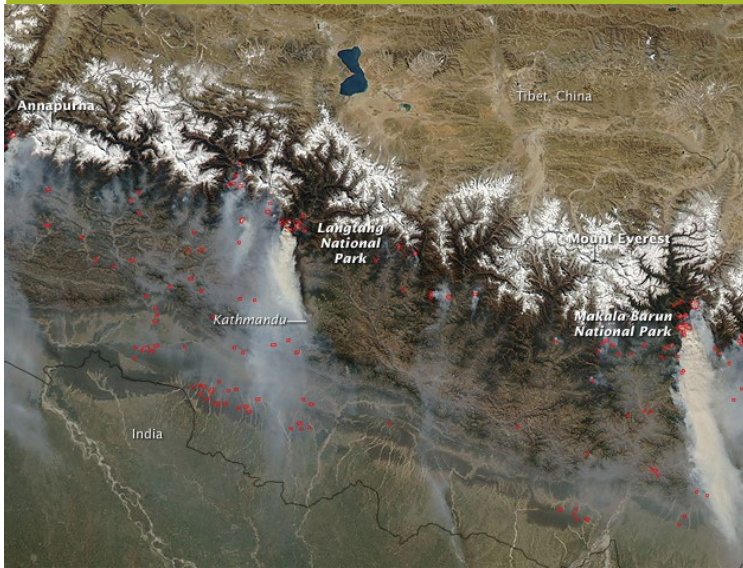
Consultative Conference on 'Development of multi-hazard risk and loss and
damage framework of HKH'

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Kathmandu, Nepal

Understanding L&D in HKH context

Incidences of forest fires in HKH



12 March 2009 © Google Earth

Landslide hazards



5 September 2019 © The Kathmandu Post

Catastrophic flood- Melamchi, Nepal



17 June 2021 © Hindustan Times

Climate vulnerability ranking of HKH Nations

- A country's ND-GAIN index score is composed of a Vulnerability score and a Readiness score. Vulnerability measures a country's exposure, sensitivity and ability to adapt to the negative impact of climate change. ND-GAIN measures the overall vulnerability by considering vulnerability in six life-supporting sectors – food, water, health, ecosystem service, human habitat and infrastructure.

<u>Rank</u>	<u>Country</u>	<u>Income group</u>	Score
168	<u>Afghanistan</u>	Low	0.579
154	<u>Bangladesh</u>	Lower middle	0.541
136	<u>Bhutan</u>	Lower middle	0.519
68	<u>China</u>	Upper middle	0.396
132	<u>India</u>	Lower middle	0.506
147	<u>Myanmar</u>	Lower middle	0.530
139	<u>Nepal</u>	Low	0.521
147	<u>Pakistan</u>	Lower middle	0.530

Objectives of L&D Session

- Articulate the L&D assessment issues under UNFCCC architecture to develop a common understanding
- Gather inputs to develop *L&D Assessment Framework* that is tailored to HKH needs within the global architecture.

Significance of L&D Assessment

- The UNFCCC CoP 27 decision to establish Loss and Damage (L&D) as a new climate finance mechanism
- Now UNFCCC has adopted a three pillar mechanism to channelize climate finance 1) Mitigation, 2) Adaptation and, 3) Loss and damage
- The decision note reads as- *‘Decides to establish new funding arrangements for assisting developing countries that are particularly vulnerable to the adverse effects of climate change, in responding to loss and damage, including with a focus on addressing loss and damage by providing and assisting in mobilizing new and additional resources, and that these new arrangements complement and include sources, funds, processes and initiatives under and outside the Convention and the Paris Agreement’.*

Understanding the L&D in UNFCCC Architect

- No official definition of L&D at UNFCCC level
- Working definitions that reflect the spirit include:
 - 'L&D is the adverse effects of **climate-related stressors that cannot be or have not been avoided** through mitigation or managed through adaptation efforts' (Zommers et al., 2016).
 - L&D is defined as adverse effects of **climatic stressors resulting from inadequate efforts to reduce greenhouse gas emissions and insufficient capacity to reduce the risks** associated with climatic stressors, to cope with impacts of climatic events, and to adapt to climatic changes (Van der Geest and Schindler, 2017).
- Analysts also define L&D from the disaster risk management perspective.

Understanding the L&D in UNFCCC Architect

- 7 major areas of cooperation under L&D
- Early warning systems
- Emergency preparedness
- Assessing risks of slow onset events
- Climate events that may involve irreversible and permanent loss and damage
- Comprehensive risk assessment and management; risk insurance facilities, climate risk pooling and other insurance solutions
- Non-economic losses; and
- Resilience of communities, livelihoods and ecosystems.

Understanding the L&D in UNFCCC Architect

- Approaches to L&D Action (Offers clues)
 1. **Non-economic losses**
 2. **Comprehensive risk management**
 3. **Human mobility**
 4. **Action and support**
 5. **Slow Onset Events**

Understanding the L&D in UNFCCC Architect

- Approaches to L&D

Characteristics of non-economic and economic aspects of L&D

Non economic loss and damage	Economic loss and damage
Individuals: Life, health, human mobility	Income: Business operations; agricultural production (crops yields, livestock fisheries); Tourism
Society: Territory, cultural heritage, indigenous knowledge, societal cultural identity	Physical assets: Infrastructure (buildings, bridges, roads, railways, irrigation canals, reservoirs, trails, power generation stations, dams, dykes, etc.), property (house, land, etc.)
Environment: Biodiversity, ecosystem services	

Understanding the L&D in UNFCCC Architect

- Approaches to L&D

Comprehensive risk management

1. **Includes** risk assessment, risk reduction, risk transfer and risk retention.
2. **aims** at building long-term resilience of countries, vulnerable populations and communities to loss and damage,
3. **Encourage** : emergency preparedness; measures to enhance recovery, **rehabilitation**; social protection instruments, including social safety nets; and **transformational approaches**.
4. **Support**: enhancing knowledge, **understanding of comprehensive risk management approaches**,
5. **Acts on**: issues related to **finance, data, technology**, regulatory environments and **capacity-building**.

Understanding the L&D in UNFCCC Architect

- Approaches to L&D

Slow onset events

- Include increasing **temperature, desertification, loss of biodiversity, land and forest degradation, glacial retreat, sea level rise**, ocean acidification, and salinization.
- **Aim to improve the understanding of slow onset events**, as well as enhancing the capacity to address them, particularly at regional and national levels.

Understanding the L&D in UNFCCC Architect

- Approaches to L&D

Human mobility

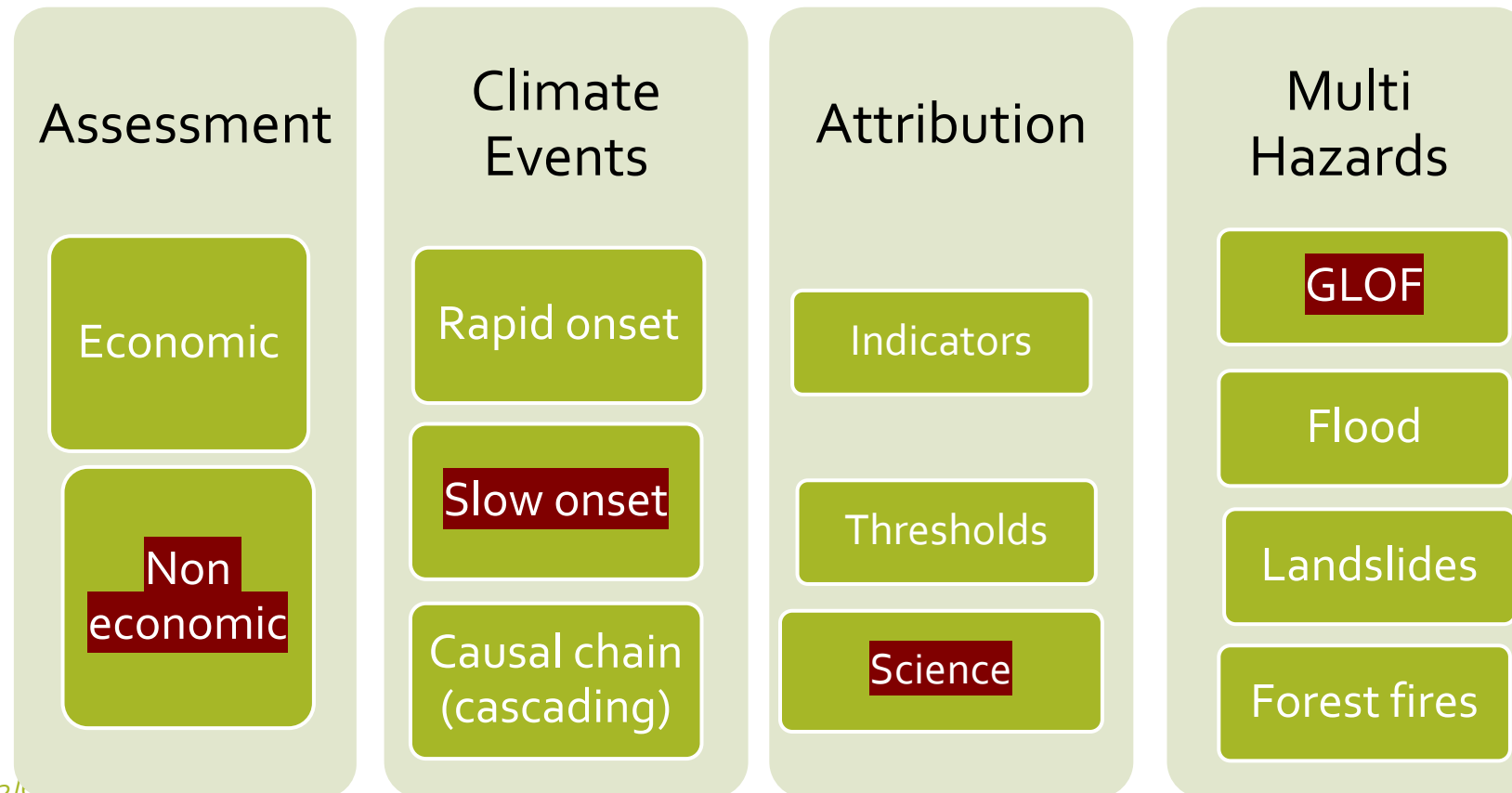
1. Comprises **migration, displacement** and **planned relocation** related to the adverse impacts of climate change.
 - To better understand the impacts of climate change on human mobility,
 - To minimize and address displacement related to the adverse impacts of climate change, as well as facilitate stakeholder engagement for further action.

Action Support

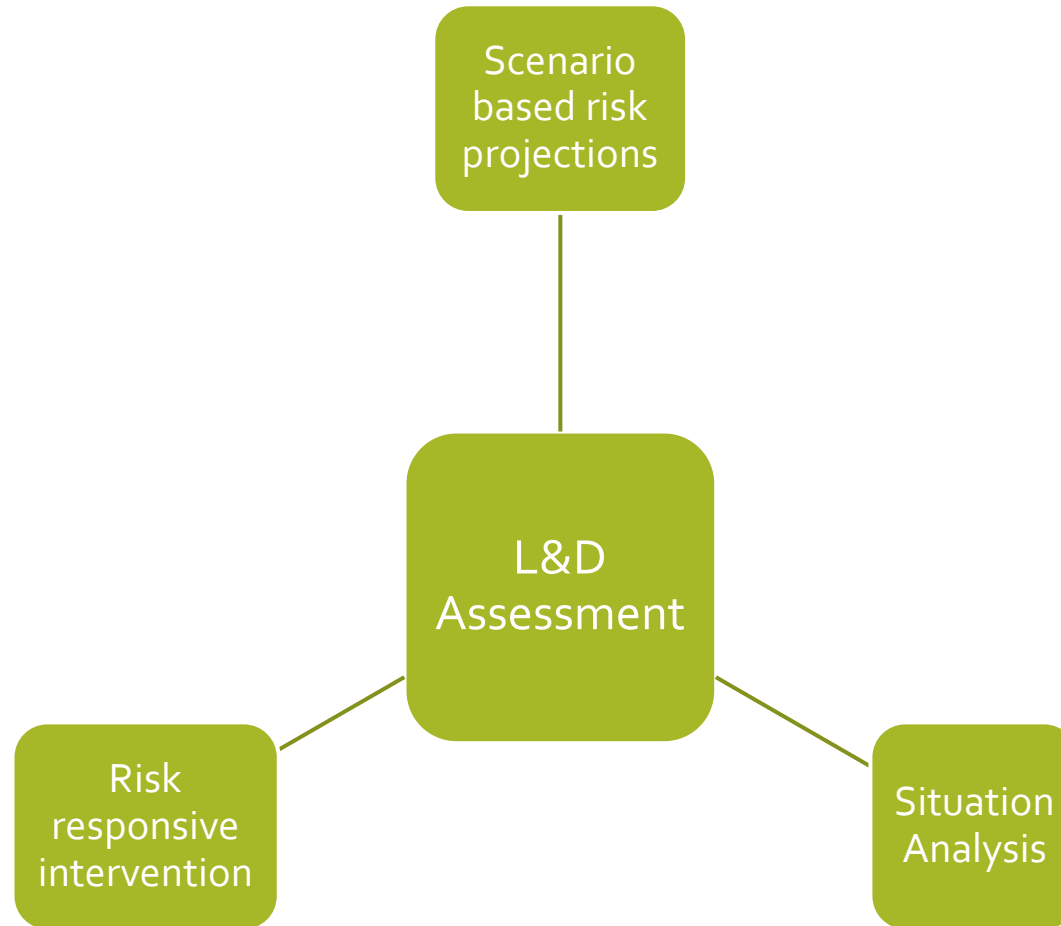
- To promote **supportive action** mainly through **finance, technology and capacity-building**, to address loss and damage associated with the adverse effects of climate change.

Issues Surrounding L&D Assessment Framework

- We have multiple sets to variables and their underlying elements to put in a priority order to develop a methodological framework.



Emerging approaches to assess L&D



Emerging approaches to assess L&D

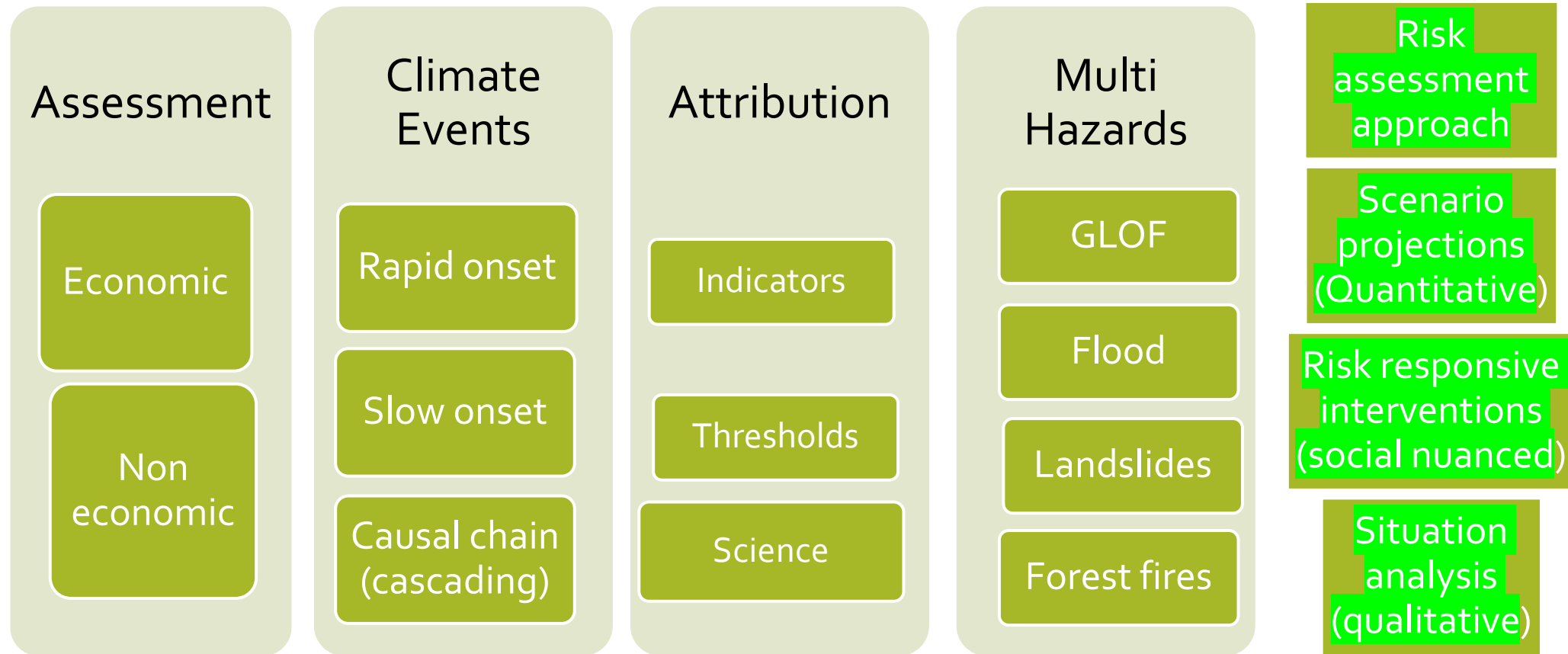
- **Scenario based risk analysis:**

- Assessment of cumulative risks with respect to
 - slow onset,
 - rapid onset
 - causal chain (cascading)
- **Assessment of cumulative risks with implications to L&D (attribution).**
- Non economic- Individual, Society and Environment
- Economic- Income and Physical Asset
- **Attributions: Event Inventory**

Emerging approaches to assess L&D

- **Situation analysis (Mixed of qualitative and quantitative):**
 - Stocktaking of losses and damages during pre event or post event in affected regions, communities, infrastructures or ecosystems.
 - Intended to keep record and feed planning appropriate response measures.
- **Risk Responsive Interventions (Qualitative):**
 - Assessment as part of risk reduction interventions.
 - Intended to retrofit the prior actions as precautionary measures.
 - Multiple approaches to risk responsive interventions:
 - Layering,
 - Tailored to the needs,
 - Case study approach (bottom up, lived experiences)
 - Customized approach (responding tipping points /projected risks, e.g. safe **draining out glacial lakes**).

Composite frame of variables relevant to MHR responsive L&D Framework



Possible indicators for multi hazard risk attribution on loss and damage

Type of hazards	Intensity	Scale and frequency for qualifier indicators	Attribute to climate change	Sensitive zone and season	Type of loss
Flood	Extreme	Frequency of 20 years flood reduced to 5 years; cascading effects	Rainfall intensity and duration, avalanche/ landslide	Mainly in river valley and plains; extended monsoon	Economic and non economic
Landslide	Extreme/Slow onset	Increased scale and frequency	Rainfall intensity and duration	Mountains and hills; extended monsoon	Economic and non economic
GLOF and avalanche	Slow onset	Increased scale and frequency	Temperature rise/albedo in high altitude	Mountains and hills; summer	Economic and non economic
Forest Fire	Extreme/Slow onset	Increase in area and incidence	Increase in fuel load from drought	Area with forest vegetation; Jan to May	Economic and non economic
Biodiversity loss	Slow onset	No of declining species and abundance	Loss of habitat, shifting habitat	PAs & other forested area and wetlands;	Non economic

Ways forward to develop L&D assessment methodological framework

- To develop a common understanding on L&D (can be a departure from conventional DRM defined L&D to one under UNFCCC architecture).
- To identify the areas of convergence and departures for a common understanding regarding more appropriate methodological approaches to HKH region.
- To develop inventory of data, methodologies and policies that we already have and can serve as building block for assessment of L&D.
- To identify gaps, challenges and barriers for developing L&D assessment in the HKH region.

Thank you!