

ADDRESSING CRITICAL LOSS AND DAMAGE CHALLENGES: Human Mobility, Slow Onset Processes and Non-Economic Losses

By the WIM Executive Committee in collaboration with
the Task Force on Displacement and the Technical
Expert Group on Comprehensive Risk Management

Session 1: 23 April, 9:00–11:00 UTC+9



Opening Remarks

Ms. Ingrid Lundberg
COP 31 Incoming Presidency

Mr. James Thonjo
WIM Executive Committee Member

Welcome



Moderator: Angela Rivera Galvis
- WIM Executive Committee Member

Agenda for the session:

1. Welcome and introduction
2. Background information on the WIM Executive Committee
3. Mentimeter live poll
4. Small table reflections
5. Short inputs on what the practical challenges and persistent gaps are and what are countries and communities experiencing
6. Q&A and plenary reflection on key bottlenecks, knowledge/support gaps
7. Uptake of WIM Executive Committee knowledge resources
8. Key takeaways and preview of Session 2

Answer the questions for the
interactive session here:



Warsaw International Mechanism for Loss and Damage

Executive Committee

- Expert Group on Slow onset events
- Expert Group on Non-economic losses
- Technical Expert Group on Comprehensive risk management
- Task Force on Displacement
- Expert Group on Action and Support

Santiago network

- Advisory Board
- Members (organizations, bodies, networks, experts)
- Santiago network Secretariat



1. Enhancing knowledge and understanding of comprehensive risk management approaches.



2. Strengthening dialogue, coordination, coherence and synergies among relevant stakeholders.



3. Enhancing action and support, including, finance, technology and capacity-building.

Institutional arrangements and functions of the WIM

The Warsaw International Mechanism for **LOSS AND DAMAGE** Executive Committee



Mentimeter live poll

Scan the QR Code and tell us:

1. Who you are
2. Thematic focus of your role
3. Familiarity with the WIM ExCom and the Santiago Network
4. Dominant loss and damage in your context
5. Who the most affected groups are
6. Expectation from the loss and damage sessions
7. Impacts that are already irreversible



Small Table Discussions

Existing Responses & Lessons

- What responses or approaches are currently being tried?
- What has worked in practice, even as a pilot or on a small scale? What were/are success factors?
- What has not worked, and why?

Knowledge Uptake

- Are you using any existing tools, frameworks, or technical guidance (e.g. risk assessments, displacement frameworks)?
- What made these tools usable - or difficult to use - in practice?
- What is missing from current knowledge products that would make them more actionable?

Lightning Insights:

- What are the practical challenges and persistent gaps?
- What are countries and communities experiencing?



Amjad Abdulla

Director General - Ministry of
Climate Change, Environment,
and Energy, Republic of
Maldives



Rodne Galicha

Local community knowledge
holder from Asia



Pema Wangmo Lama

Indigenous knowledge holder
from Asia

Uptake of WIM knowledge resources:

How are countries using technical guides and policy-supporting materials?



James Thonjo

Kenya;
WIM Executive Committee
Member



Christopher Richter

International Organization
of Migration and Task Force
on Displacement member



Krib Sitathani

Regional Coordinator for Asia
Pacific – UNDP’s Climate
Promise & SCALA Programmes

Climate Week 3 • Yeosu, Republic of Korea • 23 April 2026

Loss & Damage in Bhutan

Applying WIM Knowledge Products in Country Practice



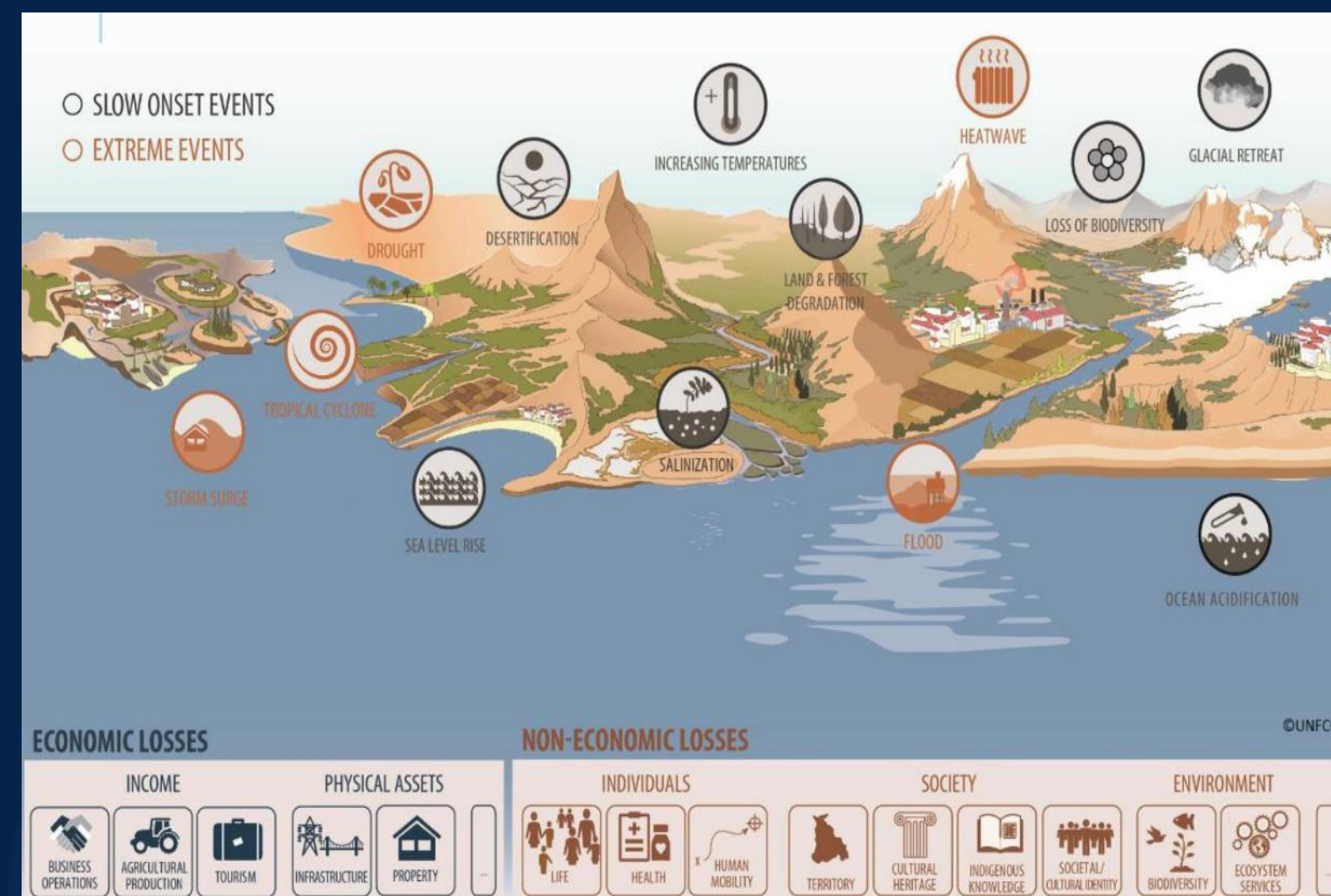
Bhutan at the Frontlines of Loss & Damage

Bhutan is one of the world’s few carbon-negative nations — yet it ranks 41st most climate-vulnerable globally. Agriculture employs 60% of the population; hydropower accounts for 13% of GDP. Both face existential risk from glacial retreat, GLOFs and extreme events.

Average Annual Loss from climate events: USD 169.3M (6.9% of GDP). Climate risks could reduce GDP by up to 3 percentage points by 2050.

For Bhutan, a GLOF or flash flood is not just a local disaster — it is a national economic collapse.

Context: Bhutan is navigating LDC graduation while confronting accelerating climate impacts. 17 glacial lakes classified as dangerous. Glaciers retreating 30–60m/decade. 7,700+ people flooded annually, rising to 10,700 by 2030.



“These impacts are already contributing to significant loss and damage, threatening food and water security, infrastructure, energy systems, biodiversity, cultural heritage, and human wellbeing.”

— Bhutan L&D Assessment, 2025

Six L&D Signatures: Bhutan's Country-Owned Framework

Terrestrial & freshwater biodiversity loss • Energy insecurity from glacier melt threatening 13% of GDP • Sacred glacier peaks, 500-yr-old temples at risk from GLOFs and fires.

1

Food & Water Insecurity

Temperature changes, erratic precipitation, windstorms, droughts, land degradation

2

Human Health & Wellbeing

Heatwaves, forest fires, landslides, floods

3

Infrastructure & Property Damage

Floods, GLOFs, windstorms, landslides

4

Terrestrial & Freshwater Ecosystems

Temperature changes, glacier melt, forest fires

5

Energy Insecurity

Glacier melt, precipitation changes, GLOFs – threatens 13% of GDP from hydropower

6

Cultural Heritage

Glacier melt, floods, forest fires – sacred glacier peaks & 500-yr-old temples at risk

From Framework to Country Practice

The Bhutan L&D Assessment was designed using the WIM ExCom's Compendium on Comprehensive Risk Management Approaches — Vol. 2. **It provided internationally recognised categories and a structured framework when no national methodology existed.**



01 • L&D Signatures Framework

Bhutan directly adopted the WIM Signatures approach to define its 6 national L&D Signatures — giving the assessment internationally recognised, policy-credible categories aligned with WIM ExCom guidance.



02 • Comprehensive Risk & Response Framework

Structured Bhutan's interventions as pre-emptive action, contingency arrangements and managing impacts — bridging disaster risk reduction, adaptation and residual L&D into one integrated picture.



03 • Non-Economic Loss Guidance

Informed the approach to cultural heritage loss, wellbeing impacts and erosion of traditional knowledge — losses invisible to conventional economic assessments and standard disaster reporting systems.

Key Findings: Real Losses Across All Signatures

ECONOMIC LOSSES: DOCUMENTED

Hydropower at risk: 66.3% of external debt is hydropower-linked. The 2023 Yungichhu flash flood (32 MW) killed 23 workers, required USD 450,000 in emergency mitigation.

GLOFs: The 1994 Punakha GLOF killed 21 people and destroyed a 500-year-old temple. Thorthormi Lake, now rapidly expanding, risks a mega-GLOF 4× more severe than 1994.

Agriculture & Infrastructure: Declining productivity, crop/livestock losses; roads, bridges, and communication systems recurrently damaged by floods and landslides.



NON-ECONOMIC LOSSES: INVISIBLE BUT SEVERE

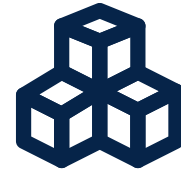
Sacred landscapes: Mountain deities inhabit glaciated peaks; as glaciers retreat, sacred sites and rituals face existential threat.

Biodiversity: Significant and multifaceted biodiversity loss driven by climate change — a critical dimension for Bhutan's forests and ecosystems.

Social cohesion & knowledge: Mental health, community trauma, displacement, and erosion of traditional ecological knowledge — real but absent from conventional reporting.

Lessons Learned & The Path Forward

Three lessons from applying WIM knowledge products in a data-scarce, LDC context — and one clear ask for the road ahead.



01 • WIM Signatures = Powerful Consultation Tool

The WIM Signatures framework gave communities and sectors a shared language, structured national dialogues, and produced a country-owned definition aligned with the global framework.



02 • Critical Gap: Non-Economic Loss Data

Cultural heritage loss, biodiversity impacts, mental health and traditional knowledge erosion are real — but absent from existing monitoring systems. Countries need WIM guidance on data architectures that capture what GDP cannot.



03 • Closing the Loop from Knowledge to Finance

Bhutan is ready to engage the FRLD and Santiago Network — but needs continued support on costing non-economic losses, establishing a national L&D data repository, and accessing dedicated L&D finance distinct from adaptation.



Assessment of Climate-Induced Loss and
Damage in Bhutan

Department of Environment and Climate Change, Ministry of
Energy and Natural Resources, Royal Government of Bhutan
and United Nations Development Program- Bhutan, 2025

THANK YOU

Questions & Discussion

**DECC, Royal
Government of
Bhutan**

Key Takeaways



Thank you for participating!

Please join us **tomorrow** for **Session 2**

24 April, 10:30 – 12:30 UTC+9

Seminar 2, Yeosu Convention Centre



Warsaw International Mechanism on Loss and Damage (WIM)

Knowledge Products and Technical Guides

01



02



03



04



05

