WATER RESILIENCE TRACKER

NOVEMBER 2026

TECHNICAL BRIEF

The Hanging House: Closing Nepal's Loss and Damage Evidence-to-Finance Gap

Authors: Shisher Shrestha, Darshan Karki, Regan Sapkota, Santosh Nepal, and Darshini Ravindranath. International Water Management Institute (IWMI).

KEY MESSAGES

1. Treat assessment as one connected process. Rapid, detailed and targeted follow-up assessments should contribute to a single, traceable evidence base, preserving, verifying and expanding initial findings as losses persist, emerge or change.
2. Combine a national minimum dataset with targeted NELD modules. Community-centred evidence should capture psychosocial wellbeing, livelihoods, displacement, unequal service and care burdens, ecosystems, culture and institutional trust.
3. Cost the response, not the loss. Link documented NELD to costed measures, responsible institutions and financing sources, including psychosocial support, safe housing, restored services and cultural access, and ecosystem rehabilitation.

1. Why Nepal needs an integrated Loss and Damage evidence system

Nepal faces substantial risks from floods, landslides, droughts, extreme rainfall, and cryosphere-related hazards, including glacier collapse and glacial lake outburst floods (GLOFs). Their consequences extend beyond the physical damage and economic losses typically recorded in post-disaster assessments. In this brief, damage refers to impacts that can be repaired or restored, while loss includes impacts that may be irreversible.

Assessments of the 2021 Melamchi flood and the 2024 Thame GLOF have focused largely on physical damage and economic loss (Parajuli et al., 2023; Maharjan et al., 2025). Yet disasters also cause psychological distress, displacement, disrupted social networks, loss of cultural heritage and ecosystem loss, increased unpaid care and gendered burdens, and a diminished sense of place and security.

These consequences are often described as non-economic loss and damage (NELD). Such losses are context-specific, difficult or inappropriate to express in monetary terms, and inadequately represented in conventional assessments (Serdeczny et al., 2016). Yet they shape wellbeing and recovery long after infrastructure has been rebuilt.

Nepal has foundations to build on. The National Framework on Climate Change-Induced Loss and Damage provides a basis for assessment and response, while the Building Information Platform Against Disaster (BIPAD), government institutions, and sectoral agencies collect disaster information (MoFE, 2021).

However, these systems are not yet integrated. Recent institutional analysis identifies fragmented and overlapping mandates, limitations in data availability and quality, and uneven capacity across levels of government (Dhakal et al., 2026). Psychosocial, cultural, environmental, gendered, and long-term livelihood losses are recorded inconsistently. Differences in tools, indicators, and reporting practices limit the comparison, consolidation, and use of local evidence.

The issue is increasingly urgent as the finance architecture is moving from design to disbursement. Operationalized at COP28, the Fund for Responding to Loss and Damage (FRLD) is the first multilateral fund dedicated to Loss and

Damage, and its mandate covers both economic and non-economic losses (UNFCCC, 2023).

Under the Barbados Implementation Modalities, the FRLD is allocating US$342 million through 2026, with individual requests of US$5–20 million and a 50% minimum floor for least developed countries and small island developing states (FRLD, n.d.). This remains small relative to reported pledges and estimates of global Loss and Damage needs. But the start-up phase will also help shape the Fund's longer-term operating model. The evidence submitted by early applicants may, therefore, influence how different forms of loss, including NELD, are understood, prioritized, and monitored.

Nepal's early engagement with the FRLD adds urgency to this discussion. Nepal secured US$ 20 million through its FRLD proposal (Giri, 2026), followed by a separate US$21.6 million allocation in response to the government's urgent request after the 26 August 2026 Rasuwa–Bhotekoshi flood (Mishra, 2026). Although this was the first time a global climate fund activated emergency procedures for a specific climate disaster, the funding covered less than 1% of the initially assessed loss and damage. These assessments also inadequately captured longer-term psychosocial, cultural, gendered, and livelihood losses.

Nepal therefore needs assessment and information systems that capture the full range of losses experienced by affected communities. This brief proposes an integrated loss and damage evidence architecture that combines community-centred assessment with standardized information that can move through government systems and support engagement with the FRLD.

2. The Evidence Gap in Nepal

Current assessments provide essential information for emergency response, relief and reconstruction, but offer only a partial account of disaster impacts and recovery. Three gaps leave important NELD under-documented.

First, the gap is **methodological**: many non-economic losses have no observable market value, are experienced differently across people and places, and require contextual, participatory evidence (Serdeczny et al., 2016; Anderson and Singh, 2020).

Second, the gap is **institutional**: responsibilities are fragmented across agencies, with overlapping mandates, uneven capacity, and limitations in data availability and quality (Dhakal et al., 2026). Agencies use different categories, indicators, and formats. Qualitative findings are also difficult to incorporate into national systems when methods and quality-assurance procedures differ (PRC, 2025; NDRRMA, 2025).

Third, the gap is **temporal**: initial assessments prioritize visible, urgent impacts, while livelihood disruption, displacement, psychosocial distress, and environmental change may persist or deepen during recovery. A single assessment cannot capture this trajectory (Ayeb-Karlsson et al., 2016; Tschakert et al., 2019).

Loss and damage therefore vary by type, timing, and duration. Physical damage to infrastructure can generate longer-term livelihood, psychosocial, cultural, and social consequences. **Table 1** illustrates these interconnected effects using recent evidence from Nepal. Because they cannot be assessed in isolation, the evidence system must accommodate diverse forms of evidence, connect information across institutions, and track losses beyond the initial assessment period.

Table 1: Economic and non-economic Loss and Damage across time

	IMMEDIATE AND SHORT-TERM EFFECTS	LONGER-TERM AND CUMULATIVE EFFECTS
ECONOMIC	**Damage to housing, infrastructure, agricultural land, crops, livestock, and other productive assets.** **Example:** The 2024 Kanchanpur assessment documented substantial losses to agriculture, infrastructure and household assets (NDRRMA, 2025).	**Persistent livelihood and income losses caused by damaged land, infrastructure and productive assets.** **Example:** In Bethanchowk, the loss of agricultural land, perennial trees and access routes affected food production, tourism, homestays and household recovery over time.
NON-ECONOMIC	**Loss of life, psychological distress, displacement, educational disruption and damage to cultural or religious places.** **Example:** Assessments in Melamchi and Kanchanpur documented mental stress, educational disruption, displacement, and impacts on cultural sites and community spaces (Parajuli et al., 2023; NDRRMA, 2025).	**Prolonged psychosocial distress, loss of place and cultural access, involuntary immobility, weakened social relationships and declining institutional trust.** **Example:** In Bethanchowk, affected people described persistent fear during rainfall, unsafe but standing houses, disrupted access to cultural landscapes and concerns about the fairness of relief processes.

3. What Nepal's disaster experiences reveal

Recent assessments show growing recognition of NELD in Nepal, but also substantial differences in methods, indicators, and institutional arrangements. Rapid assessments establish the scale of a disaster and inform immediate decisions but may miss household experiences, informal livelihoods, psychosocial effects, and losses that emerge during recovery. Community-centred follow-up can document these consequences, but its findings need to remain connected to the initial record.

The two cases below illustrate this progression. Rasuwa–Bhotekoshi shows what rapid multisectoral assessment can establish immediately after a complex disaster, while Bethanchowk shows what follow-up can reveal about 18 months later.

3.1. RASUWA–BHOTEKOSHI: ESTABLISHING THE INITIAL EVIDENCE BASE

The 26 August 2026 Rasuwa–Bhotekoshi flood originated as an ice-and-rock avalanche in the upper Lhende Khola watershed. It developed into a debris flow and caused downstream flooding along the Bhotekoshi–Trishuli–Narayani River corridor (Figure 1). Across several districts, it damaged settlements, agricultural land, transport and communication networks, hydropower facilities, water systems, and other essential services (NDRRMA, 2026).

The government-led Rapid Damage and Needs Assessment (RDNA) estimated economic impact at US$ 2.70 billion, and recovery and reconstruction needs at US$ 4.77 billion (NDRRMA, 2026), drawing on administrative records, field observations, satellite and drone imagery, geospatial analysis, census data and modelled estimates.

Conducted under emergency conditions, the RDNA prioritized evidence on the disaster's scale and immediate consequences. As a result, it examines tenure, informal livelihoods, displacement, poverty, protection, environmental effects, and inclusion less deeply than visible physical and sectoral impacts.

Crucially, it distinguishes among reported, estimated, modelled, and verified information and flags unresolved issues for further assessment (NDRRMA, 2026). It should therefore be treated as a starting point in evidence process. The initial records can provide a basis for detailed assessment and targeted follow-up as recovery progresses and additional consequences become visible.

The key question is whether the initial findings remain traceable and can be revisited, verified, and expanded over time. The Bethanchowk case illustrates what follow-up can reveal once recovery is underway.



Figure 1. Rasuwa–Bhotekoshi flood impact area along the Bhotekoshi–Trishuli–Narayani River corridor (Source: NDRRMA, 2026)

3.2. BETHANCHOWK: WHAT FOLLOW-UP CAN REVEAL

Bethanchowk Rural Municipality was severely affected by the September 2024 floods and landslides. During the consultation, a municipal representative reported 11 deaths and said the municipality's initial assessment had estimated approximately NPR 9 billion in damage to private property, roads, agricultural land, drinking-water systems, and other public infrastructure.

The Water Resilience Tracker team visited the municipality from 23 to 25 March 2026. Fieldwork included community consultation and key-informant interviews with local stakeholders and examined long-term economic and non-economic losses that had persisted, evolved, or become clearer during recovery.

Participants were informed of the purpose of the consultations, and their consent and privacy were respected. Sensitive experiences were discussed carefully to minimize distress and avoid creating expectations of compensation or assistance.

Livelihood losses extend beyond damaged land

Productive khet and bari were washed away or buried under debris, while crops were destroyed shortly before harvest. High-value perennial trees, including lemon and avocado, were also lost, erasing several years of investment. One participant described the loss of crops just before harvest:

> "Our fields and crops were washed away. The crops were ready for harvest (mukha ma aako bali), when the flood swept them away. The fields remain in the same condition, and no agency has come to ask about the lost harvest." – *Community Participant, Madanbas (24 March 2026)*

The phrase "*mukha ma aako bali*" conveys the loss of months of labour just as crops were about to provide food and income. Some households subsequently had to buy food and fodder, seek wage labour, or cultivate others' land.

Damaged access routes also reduced tourism and homestay income. They restricted access to temples, monasteries, caves, waterfalls and other culturally and environmentally important places, affecting cultural practices and



Figure 2. Houses affected by riverbank erosion in Bethanchowk following the September 2024 rainfall. (Photo: Darshan Karki)

attachment to place. A single physical impact can therefore generate interconnected livelihood, cultural and other non-economic losses.

A standing house may no longer be habitable

Residents described precarious structures as "*jhundera baseko ghar*", or "hanging houses". Although still standing, erosion, unstable slopes, damaged foundations, or loss of surrounding land had made some homes unsafe.

> "Under current laws, we cannot call a 'hanging house' fully damaged; it is classified as partially damaged. But the land is gone, and people cannot live there. Those with resources have another place to stay, but poor households have no option and remain in high-risk areas." - *Bethanchowk Rural Municipality representative (23 March 2026)*

The "hanging house" exposes the gap between structural classification and actual living conditions. A household may retain its physical structure while losing habitability, safety, and viable relocation options. For poorer households, remaining in a high-risk location may reflect involuntary immobility, rather than a preference to stay.

Psychosocial, service-related and gendered losses

Participants described persistent anxiety, sleeplessness, and fear during heavy rainfall, often linked to unresolved physical and economic insecurity. A municipal official noted that mental stress was not included in the original assessment form, leaving these effects outside the official evidence base. One participant described dhuk-dhuk, a persistent sense of fear and a pounding-heart sensation triggered by heavy rain.

Damage to the Ek Ghar Ek Dhara, or "One House, One Tap," system required some residents to walk 30 to 60 minutes to collect water. Women often carried this additional burden alongside fodder collection and livestock care. The increased workload reduced women's available time and may have constrained their participation in livelihood, community, and recovery activities.

4. From disaster assessment to an Integrated Evidence System

The two cases illustrate connected stages of evidence building rather than competing approaches. Rapid assessment establishes the initial records. Detailed assessment verifies and expands it. Targeted follow-up identifies losses that persist, emerge, or become clearer during recovery.

This requires a traceable system that connects evidence over time and translates it into recovery and financing decisions. Recent research similarly emphasizes that stronger climate and weather data systems, standardized assessment methods, and improved inter-agency coordination are needed to support Nepal's access to Loss and Damage finance (Dhakal et al., 2026).

4.1. CONNECTING ASSESSMENT AND FOLLOW-UP

No single assessment method can capture the full range of loss and damage. Participatory approaches can identify losses that structured surveys overlook, while household assessments and follow-up monitoring can show how losses change over time (Anderson and Singh, 2020; Ayeb-Karlsson et al., 2016).

Nepal should therefore connect the government's existing mechanisms, such as the RDNA and Post-Disaster Needs Assessment (PDNA) processes, with targeted follow-ups and monitoring. Methods should reflect the hazard, affected population, stage of recovery, and intended use.

A connected assessment process could include:

- **Rapid assessment**, such as RDNA, establishes an initial baseline covering casualties, physical damage, displacement, service disruption, and early indications of NELD.
- **Detailed assessment**, such as PDNA, verifies and expands initial findings. It assesses priority economic and non-economic losses and recovery needs through household, participatory, and technical methods.
- **Targeted follow-up and monitoring** track losses that persist, emerge, or change during recovery, including livelihood disruption, housing habitability, prolonged displacement, psychosocial distress, unequal service burdens, and cultural or environmental loss.

Common definitions and identifiers should allow each phase to update rather than replace earlier findings. Records should retain their source, date, and verification status so that losses can be traced through recovery. The timing and scope of follow-up should reflect the disaster, affected population, remaining evidence gaps, and intended use.

4.2. A MINIMUM DATASET WITH TARGETED MODULES

Building on the National Framework (MoFE, 2021), Nepal should establish a concise minimum dataset for use across rapid, detailed, and follow-up assessments, covering deaths

and injuries, physical damage, housing habitability, displacement, productive-asset and income losses, service interruptions, and early indications of NELD. Where assessments identify significant or persistent non-economic losses, targeted modules should examine them in greater depth (**Table 2**).

The modules would provide a common structure, not a fixed national checklist. Participatory methods should allow affected people to identify losses within, across, or beyond these domains. Rapid and detailed assessments should flag priorities for further investigation, while follow-up should revisit losses that persist, emerge or change.

Standardization should translate locally expressed losses into usable indicators without stripping them of meaning. For example, Bethanchowk's "hanging house" could inform indicators of habitability, site safety, displacement and viable relocation options.

5. Cost the response, not the loss

The purpose of documenting long-term loss and damage is to identify what response is required, who should act, and what it will cost. This does not require assigning monetary values to intangible losses.

Assessments should instead link each documented loss to the affected people or places, required intervention, responsible institution, indicative cost, and potential financing sources. Follow-up should track both delivery and outcomes.

The Bethanchowk case shows what this could mean in practice:

- **Safe repair or assisted relocation** for "hanging houses." Expand damage criteria to include habitability and site safety. Cost engineering assessments, safe-site identification, repairs where feasible, and relocation support were necessary.
- **Water-service restoration.** Cost repairs to the Ek Ghar Ek Dhara system, including intake and pipeline works, to reduce the reported 30 to 60-minute water-collection burden.
- **Restored cultural and environmental access.** Cost the restoration of trails and crossings that provide access to temples, monasteries, caves, and waterfalls.
- **Ecosystem rehabilitation.** Cost slope stabilization, riverbank protection and debris removal from buried khet and bari.
- **Psychosocial support.** Cost the expansion of school-based counselling, including counsellor time, referral pathways and training.

Where local unit costs are unavailable, assessments should identify what must be costed and by whom rather than inserting unsupported figures.

Connecting evidence to costed responses, finance, and monitoring would help local governments prioritize recovery. It would also support provincial and federal institutions in addressing needs beyond local capacity and strengthen Nepal's engagement with the FRLD and other climate-finance mechanisms.

Table 2: Proposed targeted NELD modules

PROPOSED MODULE	WHAT IT SHOULD DOCUMENT	REFERENCES
Psychosocial wellbeing and perceived safety	Distress, anxiety, trauma, fear of recurring hazards, perceived safety and effects on daily functioning.	(Tschakert et al., 2019);
Livelihood-linked wellbeing and household security	Loss of livelihood identity, dignity or autonomy; food insecurity; family strain; and costly or unsustainable coping strategies.	(Ayeb-Karlsson et al., 2016); (Tschakert et al., 2019)
Displacement trajectories and mobility constraints	Prolonged or repeated displacement, barriers to return or relocation, involuntary immobility, family separation and loss of belonging or security.	(UNFCCC, 2013, 2024); (Ayeb-Karlsson et al., 2023)
Unequal service consequences, care burdens and gendered mobility	Effects of service interruption on health, schooling, care time, water collection, safety and mobility across affected groups.	(Anderson and Singh, 2020); (Ayeb-Karlsson et al., 2023)
Cultural heritage, ecosystems, biodiversity and attachment to place	Loss of cultural practices, sacred places, local knowledge, habitats, biodiversity, ecosystem services, identity and access to valued landscapes.	(UNFCCC, 2013, 2024);
Social cohesion, participation and institutional trust	Changes in social networks, collective action, participation in recovery decisions, perceived fairness and confidence in public institutions.	(Tschakert et al., 2019);

6. Recommendations

Nepal needs an integrated loss and damage evidence architecture that informs recovery, resilience planning and finance. Current systems are constrained by fragmented mandates, inconsistent methods, limited interoperability, uneven capacity, and weak links between evidence and finance. The following actions address these barriers through existing government processes rather than creating a parallel system.

- **Connect assessment phases:** Designate a federal lead agency to establish common definitions, identifiers, minimum data requirements, and triggers for follow-up across the RDNA, PDNA, and subsequent monitoring. Guidance should specify how records move between phases and when unresolved or emerging losses require further assessment.
- **Assess habitability and site safety:** Expand damage criteria beyond structural condition to include surrounding land, access, continuing hazard exposure, and the feasibility of safe repair or relocation.
- **Clarify responsibilities and data flows:** Establish concise operating protocols specifying which agencies initiate, conduct, verify, store, and update assessments at each level of government. These protocols should use existing mandates and systems to reduce duplication.
- **Translate significant losses into costed responses.** Link each documented loss to the affected people or place, required intervention, responsible institution, indicative cost, and potential financing source.
- **Build reusable national and subnational capacity.** Use recovery and climate finance to strengthen existing government assessment, data, planning, and monitoring systems rather than create parallel or one-off arrangements.

7. Conclusion

Nepal does not need to capture every consequence in a single assessment. It needs a connected system that preserves and updates evidence, reflects community experience, and documents losses that persist or emerge during recovery. Linking this evidence to costed responses, responsible institutions, and financing sources would improve recovery decisions, strengthen resilience, and support Nepal's access to international loss and damage finance.

8. References

Anderson, C., and Singh, J. 2020. "A participatory approach to assessing non-economic loss and damage." APN Science Bulletin 10 (1). https://doi.org/10.30852/sb.2020.1241.

Ayeb-Karlsson, S., Chandra, A., and McNamara, K. E. 2023. "Stories of loss and healing: Connecting non-economic loss and damage, gender-based violence and wellbeing erosion in the Asia-Pacific region." Climatic Change 176: 157. https://doi.org/10.1007/s10584-023-03624-y.

Ayeb-Karlsson, S., van der Geest, K., Ahmed, I., Huq, S., and Warner, K. 2016. "A people-centred perspective on climate change, environmental stress and livelihood resilience in Bangladesh." Sustainability Science. https://doi.org/10.1007/s11625-016-0379-z.

Dhakal M, Ullah A, Pandey S, Khanal SN, Kafle KR, Yadav A and Saeed F (2026) Climate-induced loss and damage in Nepal: attribution analysis and institutional readiness for international support. Front. Clim. 8:1782991. https://doi.org/10.3389/fclim.2026.1782991

Fund for Responding to Loss and Damage. (n.d.). Barbados Implementation Modalities. https://www.frld.org/nodebim (Access date: 16 October 2026)

Giri, A. (2026). Nepal secures $20 million from Loss and Damage Fund, awaits decision on Bhotekoshi plea. The Kathmandu Post, 9 September 2026. https://kathmandupost.com/national/2026/09/09/nepal-secures-20-million-from-loss-and-damage-fund-awaits-decision-on-bhotekoshi-plea (Access date: 16 October 2026)

Maharjan, S.B., Sherpa, T.C., and Shrestha, A.B. (2025). Thame Valley Glacial Lake Outburst Flood 2024: Causes, impacts and future risks. ICIMOD; NDRRMA. https://doi.org/10.53055/ICIMOD.1101

Ministry of Forests and Environment (MoFE). 2021. National Framework on Climate Change-Induced Loss and Damage. Kathmandu: Government of Nepal.

Mishra, S. (2026). Nepal to get $20m from UN climate fund after deadly flash floods, covering just 1% of recovery bill. The Independent. https://www.independent.co.uk/climate-change/news/nepal-flash-floods-damage-costs-un-climate-b3072078.html (Access date: 25 October 2026)

National Disaster Risk Reduction and Management Authority (NDRRMA). 2025. Assessing Loss and Damage from Extreme Rainfall in Kanchanpur District. Kathmandu: Government of Nepal. http://ndrrma.gov.np/np/report/203.

National Disaster Risk Reduction and Management Authority (NDRRMA). 2026. Rapid Damage and Needs Assessment: Rasuwa–Bhotekoshi Flood 2026. Kathmandu: Government of Nepal. https://ndrrma.gov.np/mediafiles/rasuwa/Rapid_Damage_and_Needs_Assessment_RDNA_Rasuwa-Bhotekoshi_Flood_2026.pdf. (Access date: 16 October 2026)

Parajuli, B. P., Baskota, P., Singh, P. M., Sharma, P., Shrestha, Y., and Chettri, R. P. 2023. Locally-Led Assessment of Loss and Damage Finance in Nepal: A Case of Melamchi Flood 2021. Kathmandu: Prakriti Resources Centre. https://prc.org.np/wp-content/uploads/2024/12/4728a43864befa1aab1f6905a0768931.pdf.

Prakriti Resources Centre (PRC). 2025. Loss and Damage Booklet: Nepal. https://prc.org.np/wp-content/uploads/2025/05/Loss-and-Damage-Booklet-English.pdf. (Access date: 16 October 2026)

Serdeczny, O., Waters, E., and Chan, S. 2016. Non-Economic Loss and Damage in the Context of Climate Change: Understanding the Challenges. Discussion Paper 3/2016. Bonn: German Development Institute. https://www.idos-research.de/uploads/media/DP_3.2016.pdf.

Tschakert, P., Ellis, N. R., Anderson, C., Kelly, A., and Obeng, J. 2019. "One thousand ways to experience loss: A systematic analysis of climate-related intangible harm from around the world." Global Environmental Change 55. https://doi.org/10.1016/j.gloenvcha.2018.11.006.

United Nations Framework Convention on Climate Change (UNFCCC). 2013. Technical Paper on Non-Economic Losses in the Context of the Work Programme on Loss and Damage. FCCC/TP/2013/2. Bonn: UNFCCC.

United Nations Framework Convention on Climate Change (UNFCCC). 2023. Operationalization of the New Funding Arrangements, Including a Fund, for Responding to Loss and Damage. Decisions 1/CP.28 and 5/CMA.5. Bonn: UNFCCC.

United Nations Framework Convention on Climate Change (UNFCCC). 2024. Technical Paper on Non-Economic Losses: Loss of Territory and Habitability, Ecosystem Services and Biodiversity, and Cultural Heritage. Bonn: UNFCCC.

WRT operates under the Just Transitions for Water Security (JTWS) program funded by the UK Government's Foreign, Commonwealth & Development Office (FCDO). It is delivered by the Alliance for Global Water Adaptation (AGWA), the International Water Management Institute (IWMI), Arup, and Deltares

www.waterresiliencetracker.cc