Flood Resilience Alliance

EXECUTIVE SUMMARY
OCTOBER 2023

Towards transformative action

The unfulfilled promise of resilient recovery

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The Zurich Flood Resilience Alliance is a multi-sectoral partnership which brings together community programmes, new research, shared knowledge, and evidence-based influencing to build community flood resilience in developed and developing countries. We help people measure their resilience to floods and identify appropriate solutions before disaster strikes. Our vision is that floods should have no negative impact on people's ability to thrive. To achieve this, we are working to increase funding for flood resilience; strengthen global, national, and subnational policies; and improve flood resilience practice.

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Executive summary

The climate crisis is causing more frequent and more severe disasters. Losses and damages from climate change for developing countries are estimated to reach US$290–580 billion per year in 2030 and US$1–1.8 trillion per year in 2050 (LSE, 2022). These costs are currently borne primarily by households; for example, Bangladeshi households spend more than double on climate change adaptation and disaster recovery compared to government spending and 12 times more than international spending in Bangladesh (Eskander and Steele, 2020). The need to repeatedly recover from disasters is increasingly trapping people in a spiral of loss, leaving them unable to fully recover and rebuild their lives before the next climate shock hits.

Though investment is needed across the full disaster cycle – from risk reduction, to preparedness, to response, to recovery – there are particular gaps in recovery. Despite long-standing awareness of the importance of 'building back better', and its incorporation in the Sendai Framework for Disaster Risk Reduction, recovery efforts remain underfunded, recovery typically rebuilds only to current conditions at best, future impacts of fast-changing climate risks fail to be considered, and broader social and livelihoods recovery are often overlooked. In practice, building back better remains far from the norm; as noted by the UNGA (2023) in May 2023, there have been 'missed opportunities to build resilience, reduce disaster risk, and make progress towards sustainable development through risk-informed recovery and reconstruction'.

Survivors walk through the liquefaction area in Petobo, Indonesia, the site of a deadly tsunami. © Mercy Corps

There is a powerful economic incentive for change. If all countries were to build back stronger in the next 20 years – ensuring that rebuilt assets can resist hazards with a 50-year return period – this would reduce global asset losses by 11.2 per cent, and global wellbeing losses (which are particularly important for people living in low-income households who have few assets) by 11.7 per cent (Hallegatte et al., 2018). The impacts are even higher in climate-vulnerable countries, with losses reduced by more than 40 per cent in Antigua and Barbuda, Dominica, Vanuatu, Myanmar, Laos, Tonga, Guatemala, Trinidad and Tobago, Peru, and Fiji (Hallegatte et al., 2018).

In this report, we draw on the evidence base gathered by the Zurich Flood Resilience Alliance (the Alliance) through the implementation of their post-event review (PERC) methodology, with a particular focus on the recovery experiences of Mexico, Nepal, and Senegal. We find that resilient post-disaster recovery is needed to lift people out of downward spirals of disaster-induced vulnerability, to reduce the need for and spending on recovery from future events, and to enable development gains despite climate change. It is important to note that resilient recovery in fragile and protracted settings would require additional considerations, which fall beyond the scope of this research.

Safe house during an evacuation drill in the Karnali River basin, Nepal, 2015. © Practical Action Nepal

From recovery to resilient recovery

Recovering effectively is more important than ever . The diagram below (Figure 1) shows the effects on communities: 1) if no recovery is takes place; 2) if the recovery is focused on building back to the pre-disaster state; 3) if recovery builds back better to face the level of current climate risks; and 4) if recovery is forward-looking and achieves climate resilience, taking into account the compounding and cascading risks associated with the climate crisis.

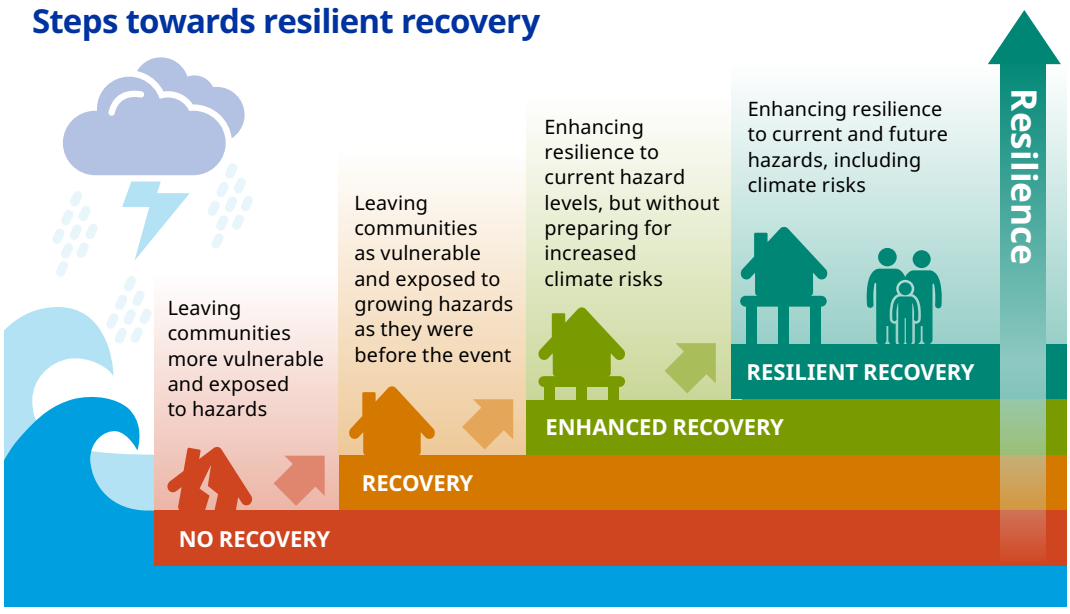
Three core principles underpin resilient recovery. To be resilient, recovery needs to be:

Risk-informed: Resilient recovery requires a comprehensive risk management strategy, acknowledging the various concurrent threats and complex risks. This includes translating climate projections and real-time scientific data into forward-looking recovery efforts so that communities have the knowledge and tools needed to face present and evolving climate hazards.

Multi-dimensional: Recovery extends beyond physical infrastructure repair; it encompasses social, human, natural, financial, and physical dimensions that are interconnected and collectively enhance resilience to climate threats.

Inclusive: A resilient recovery must address the needs of all women, men, and children affected, particularly the most marginalised and vulnerable, empowering them to actively participate in and benefit from recovery decisions. Otherwise, the recovery will exacerbate inequalities.

FIGURE 1: Steps towards climate resilient recovery



A sugarcane field in Tikapur, Nepal, 2014. Sugarcane can have ecological and flood risk reduction benefits. © Avash Pandey

Turning resilient recovery principles into practice

Recovery is a complex task; it requires bringing together multiple stakeholder groups, working across a wide range of technical, socio-economic, institutional, and environmental dimensions, and planning and prioritizing against a backdrop of often limited capacity, data, and funding. This is too important an issue, and too complex, to be pulled together in post-disaster turmoil – efforts are required before the disaster.

Enabling a risk-informed, multi-dimensional, and inclusive recovery hinges on the establishment of effective recovery frameworks before the shock[1]**.** These frameworks define the principles, processes, and capabilities necessary for managing and facilitating recovery following disasters. When implemented, they facilitate coordination among stakeholders, mobilisation of recovery financing, and implementation of monitoring and evaluation. Recovery frameworks should enable detailed plans developed in advance of a disaster to ensure recovery readiness and event-specific recovery plans developed after a disaster to address medium- and long-term recovery based on assessed needs.

The Mid-term Review of the Sendai Framework highlights the importance of integrating Build Back Better principles systematically into disaster recovery plans at national and local levels. However, recovery frameworks have often been deprioritized compared to other stages of the disaster risk management cycle. In

1 Please see IFRC's recovery report (2023) for more information: https://disasterlaw.ifrc.org/media/4230"

many cases, there is a lack of pre-planning for recovery. Instead, recovery plans are developed post-disaster and lack pre-established structures, leading to delays and challenges in initiating and operationalising recovery. Strengthening recovery capacity and decision-making before disasters is essential for effective and timely recovery efforts.

Just like the resilient recovery principles, corresponding recovery frameworks need to be risk-informed, multi-dimensional, and inclusive. They need to incorporate climate and disaster science to anticipate potential changes in hazards. They need to take a multi-hazard perspective and address disasters of various scales, from small events to large-scale catastrophes, to ensure comprehensive and effective recovery and avoid maladaptation. They need to extend beyond physical infrastructure, encompassing social and economic recovery needs that often go unaddressed. And, inclusivity is paramount to create recovery frameworks that can work for all; governments should actively involve women, marginalised, and at-risk groups in the creation and decision-making processes of such frameworks.

Capacity building and continuous learning are necessary for successful implementation of resilient recovery frameworks. Technical expertise should be integrated at local levels to support recovery efforts. Ongoing adaptation of recovery arrangements based on learning and evolving risk conditions is critical and underpins the transformation of frameworks into dynamic, living documents that are regularly reviewed and adjusted for optimal recovery outcomes.

A damaged bridge alongside a newly constructed bridge in the Karnali River Basin, 2015. © Karen MacClune

Delivering humanitarian aid in the 2020 floods in Tabasco, Mexico, 2020. © Mexican Red Cross Archive

Embedding resilient recovery in international policy

The concept of resilient recovery—though crucial for disaster risk reduction, humanitarian aid, and development—lacks unified or fully coherent and coordinated global frameworks, resulting in fragmented funding and action. Despite the establishment of the term 'build back better' after the 2004 Asian tsunami, its incorporation into the Sendai Framework, and the important knowledge sharing work of the International Recovery Platform, integrating risk reduction into recovery efforts remains limited.

Resilient recovery is partially addressed within the humanitarian and development sectors. Early recovery, combining humanitarian and developmental approaches, lays the foundation for and reconstruction. Yet, the early recovery cluster within the humanitarian sector is chronically underfunded – receiving less than 1 per cent of all humanitarian funding in 2022 (OCHA, 2022) – perhaps because it is assumed that recovery is or should be covered by development financing.

Crucially, resilient recovery intersects with climate change challenges yet has remained at the periphery of global climate policy. The COP27 decision on loss and damage offers potential to integrate climate-resilient reconstruction and recovery efforts into the new loss and damage fund and funding arrangements. There is a need to leverage the expertise of the adaptation sector for resilient recovery in a more integrated way within loss and damage discussions and related action. Resilient recovery can serve as an avenue to better adapt to climate impacts, emphasising the synergy between recovery, loss and damage, and adaptation.

Financing resilient recovery

One of the key obstacles to recovery, let alone resilient recovery, is funding. Some estimates suggest that the annual financing requirement for recovery is a staggering $200 billion (Songwe et al., 2022), a stark contrast to the limited and fragmented sources of funding that countries currently rely on. In 2020, only about $500 million of official development finance was allocated to reconstruction, relief, and rehabilitation (Dupraz-Dobias, 2022), representing a mere 0.25 per cent of estimated recovery needs. Despite the economic rationale for resilient recovery, international funding is heavily skewed towards emergency response – emergency response funding is approximately 30 times greater than funding for recovery – leaving the goal of building back better largely unaddressed. The global disaster financing landscape is fragmented, with humanitarian, DRR, development, and climate finance efforts often failing to harmonise; international grant funding for recovery remains scarce, and funding predominantly focuses on high-profile disasters, leaving out the cumulative impact of smaller, recurring events.

Post-disaster recovery funding at the national level thus comprises a patchwork of public budget allocations, loans, grants, and risk transfer instruments that generally fall short of meeting actual needs. To mitigate some of these challenges and quickly and effectively channel recovery finance, pre-planned financial mechanisms can be established that prioritize resilience in recovery through disaster financing plans that layer different financing mechanisms and consider different sizes of events. For example, financing for Mexico's now closed *Fondo de Desastres Naturales* (Fund for Natural Disasters), or FONDEN, combines federal budget allocations, which covered smaller events, with catastrophe bonds to cover larger scale events. Within this, financing that prioritizes gender-responsive recovery is crucial, recognizing the distinct needs and vulnerabilities of women in disaster-affected communities.

As a result of small-scale and fragmented international support, and the limited patchwork of funding available at the national level, governments are frequently forced to take on loans to finance recovery, contributing to escalating debt burdens. Furthermore, without climate-resilient debt clauses in loan agreements, governments are often forced to continue servicing existing debts during times of disaster, channelling away desperately needed finance from recovery. One study found that over 50 per cent of the debt increase in climate vulnerable countries is now related to funding disaster recovery (Songwe et al., 2022, cited in UNFCCC, 2023). Measures also need to be taken to address and ease the debt burden acutely felt at household level, with people shouldering the cost of recovery, taking on debt to rebuild homes and recovery livelihoods from lost crops to small business.

Conclusion

'Building back better' has for too long remained a catchphrase rather than a real commitment. It is time to put action for resilient recovery into the national and international spotlight. In a world with increasing climate impacts, the post-disaster window of opportunity for transformational change must be seized. It is senseless to rebuild systems – physical, natural, and social – that are not fit for purpose and capable of thriving in our changing climate.

While implementing resilient recovery is complex, the building blocks of good ideas and good practice already exist, including a plethora of frameworks and guidance documents. What is required now is a concerted effort at all levels – local, provincial, national, and international – and involving all stakeholders, so that resilient recovery pulls together the best capabilities of disaster risk reduction, climate adaptation, emergency response, and development to implement and advance local action.

Pre-planned, prioritized, and financed, resilient recovery has the potential to be truly transformational. Recovering resiliently can effectively address underlying risk factors, reducing vulnerability and exposure. Financially, resilient recovery can potentially save countries and donors substantial amounts of money annually. But most importantly, resilient recovery can be transformational for those communities that are currently bearing the brunt of climate change, unlocking their potential to build resilience, minimise losses and damages, and advance their prosperity and well-being. Ultimately, resilient recovery is more than a concept; it is a key strategy for societies to thrive amidst evolving climate challenges.

Post Earthquake in Nepal, 2015. © Mercy Corps

Recommendations

Resilient recovery can be transformational, but these gains will not happen without commitment and concerted efforts from national governments, strongly supported by the international community.

Recommendations for national decision-makers

National governments should establish a framework for resilient recovery by developing legal provisions, policies and plans which guide a coherent, all-of-government approach to recovery.

- Develop a national level recovery framework (comprising detailed legal provisions, policies, and plans) that establishes institutional arrangements, coordination mechanisms, and clear roles and responsibilities across sectors.
- Embed resilient recovery as a guiding principle through laws and policies – i.e., risk-informed, inclusive, and multidimensional.
- Pre-plan early recovery through institutionalised recovery frameworks, as well as multisectoral pre-event plans to reduce delay and ensure that recovery can get started immediately.
- Ensure alignment between recovery plans and broader national development and climate strategies and ensure a whole of government approach including through cross-ministerial coordination.
- Ensure alignment and effective flow of resources from central government to local authorities to undertake recovery action, which deliver on common outcomes, recognising the role of local communities and local actors as key agents of building resilient recovery.
- Improve transparency in recovery financing and accountability of all involved stakeholders to ensure that recovery programs are inclusive, context sensitive, and account for resilience.
- Commit to continuous learning, both from disaster recovery experience and from evolving climate and disaster risk, adapting recovery frameworks and recovery financing arrangements accordingly.

Establish multi-sectoral, inclusive coordination mechanisms.

- Design multisectoral recovery efforts, not only focusing on the reconstruction of physical infrastructure, but also strengthening economic, social, and environmental resilience and facilitating coordination and action to the local level.
- Establish specific coordination mechanisms that enhance collaboration across government agencies, civil society, private sector, international partners, and national governments and that support locally-led action, participatory decision-making, and (local) knowledge sharing, in all aspects of recovery pre-planning and post-disaster implementation.
- Ensure coherence between early- to medium- and longer-term recovery coordination. This should include the identification of handover points between response/early recovery and medium-to-long-term recovery stakeholders and funding mechanisms.

Pre-plan finance.

- National governments should develop and implement a disaster risk financing strategy, in partnership with international actors where applicable. It should include funding from a range of funding envelopes (development, humanitarian, climate), institutions (donors, international finance institutions (IFIs), insurance, other risk transfer mechanisms) and types (grants, highly concessional loans, and innovative mechanisms such as climate-resilient debt clauses) to ensure that adequate funding is swiftly available for resilient recovery and reaches the local level.
- Ensure financial mechanisms and pre-arranged finance for recovery facilitate access for local authorities and municipalities to access funding. The flow of support to local authorities and municipalities needs to be agreed in the pre-planning phase and integrated into frameworks and policy to ensure timely access and support for recovery support at the local level. Build pipelines of 'shovel-ready' sustainable, and risk-informed recovery projects that can be implemented in the short term.
- Disaster risk financing strategies should address the full range of disaster sizes, identifying how different size disasters are addressed and recovery funded.

Support action at the local level, with a clear role for local governments and local actors.

- Clarify roles and responsibilities, coordination structures, and finance flows and mechanisms between national, provincial, and local governments to ensure an efficient and context-specific resilient recovery that meets the needs at the local level.
- Empower local governments in their management and coordination of recovery efforts and recovery funding, including by dedicating resources to strengthen government recovery institutions, especially at the local level. This will allow sub-national institutions to effectively and intentionally link recovery programming and sustainable development.
- Fund and deliver capacity building and finance to operationalise resilient recovery, particularly for local governments through effective mechanisms, including enhancing shock-responsive social protection systems and safety nets as core components of resilient recovery.
- Local governments should empower local communities and work through local actors to actively participate in resilient recovery planning and implementation.

Woman and child in area affected by flooding in Thiès, Senegal, 2021. © Lydia Darby

Recommendations for the international community

Increase grant-financing for resilient recovery.

- The new loss and damage fund and funding arrangements should provide grant funding for resilient recovery which extends to, and proactively includes, the local level.
- Bilateral donors, IFIs, and other funding mechanisms should provide accessible, quality, and coherent funding approaches across the nexus, including both early recovery, and medium-to-long-term recovery.

Ensure that recovery loans do not lead to debt crises in climate vulnerable countries.

- International financial institutions and bilateral donors should avoid generating crippling debt burdens for climate vulnerable countries by providing highly concessional loans, applying climate resilient debt clauses to existing and new loans, and swiftly restructuring loans where required.
- International financial institutions and bilateral donors should explore and promote innovative financing mechanisms to reduce the debt burden and mobilise additional resources for resilient recovery, including debt swaps, levies, and green bonds, in line with ongoing efforts such as the Global Shield, the Bridgetown Agenda, and the Roadmap for Delivery from the Summit for a New Global Financing Pact.

Enhance cross-sectoral coordination and collaboration.

- Decision-makers across the DRR, climate, humanitarian, and development sectors should coordinate more closely to ensure a coherent and integrated approach to resilient recovery. This requires enhanced recovery mechanisms at both international and national levels, identifying key gaps and priorities within resilient recovery, enhancing the transition from humanitarian to development support for recovery, and accelerating financing opportunities.

Support the development of local-level resilient recovery.

- DRR, humanitarian, development, and climate experts – including through the International Recovery Platform – should continue to provide technical and financial assistance to countries, including working with local actors, to develop, plan, implement, and monitor resilient recovery frameworks (including laws, policies, and plans), ensuring they are informed by climate risk information.
- International institutions and mechanisms should reach local levels and empower local authorities and communities, including working with local actors, to manage their resilient recovery efforts and to strengthen government recovery institutions.

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