

# Towards transformative action

The unfulfilled promise  
of resilient recovery





**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.

Find out more: [www.floodresilience.net](http://www.floodresilience.net)

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#### **Acknowledgements:**

The lead authors of this report are Rachel Norton (ISET-International), Barbara Rosen Jacobson (Mercy Corps), Kanmani Venkateswaran (ISET-International), Karen MacClune (ISET-International), and Debbie Hillier (Mercy Corps) with case study insights provided by Bikram Rana, Kritiy Shrestha, Dharam Uprety (Practical Action Nepal), Alioune Ndiaye, Papa Idrissa Diene (Practical Action Senegal), Jimena Cuevas, and Brenda Ávila Flores (the Mexican Red Cross).

Thank you to the many people who provided contributions, support, and feedback, in particular Sophia Swithern (consultant), Linde Waijers (Mercy Corps), Michael Szónyi (Zurich Insurance), Mary Friel, Kirsten Hagon, Rachel Macleod, Francisco Ianni (IFRC Red Cross Red Crescent Climate Centre), Colin McQuistan (Practical Action), and Swerja Surminski (LSE).

Thank you also to Thanh Ngo, Andrew Duthie, Patrick Morrison, and Amanda Dian for the editing, design, and publication process.

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# Acronym list

<b>CAT DDO</b>	Catastrophe Deferred Drawdown Options	<b>NDMAS</b>	National Disaster Management authorities
<b>CDF</b>	Contingency Disaster Financing	<b>NGO</b>	Non-governmental organization
<b>CSO</b>	Civil Society Organization	<b>PDNA</b>	Post Disaster Needs Assessment
<b>DFID</b>	Department for International Development	<b>PGISS</b>	Projet de gestion integree des inondations (the Senegal Integrated Flood Management Project)
<b>DRM</b>	Disaster Risk Management	<b>PERC</b>	Post-Event Review Capability
<b>DRR</b>	Disaster Risk Reduction	<b>PROGEP</b>	Projet de Gestion des Eaux pluviales et d'adaptation au changement climatique (the Senegal Storm Water Management and Climate Change Adaptation Project)
<b>FONDEN</b>	Fondo de Desastres Naturales (Mexico's Fund for Natural Disasters)	<b>SDGS</b>	Sustainable Development Goals
<b>FOPREDEN</b>	Fondo para la Prevención de Desastres (Mexico's Fund for Disaster Prevention)	<b>SERRP</b>	The Saint Louis Recovery and Resilience Project
<b>G7</b>	Group of Seven	<b>SIDS</b>	Small Island Developing States
<b>GFDRR</b>	Global Facility for Disaster Reduction and Recovery	<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>GNI</b>	Gross National Income	<b>UNGA</b>	United Nations General Assembly
<b>IFIS</b>	International Financial Institutions	<b>UNDP</b>	United Nations Development Programme
<b>IFRC</b>	The International Federation of Red Cross and Red Crescent Societies	<b>UNDRR</b>	United Nations Office for Disaster Risk Reduction
<b>IRP</b>	International Recovery Platform	<b>V20</b>	The Vulnerable 20 Group of Finance Ministers
<b>MDGS</b>	Millennium Development Goals	<b>WIM</b>	Warsaw International Mechanism
<b>MOFAGA</b>	Ministry of Federal Affairs and General Administration (Nepal)	<b>WUI</b>	Wildland-Urban Interface
<b>NBS</b>	Nature-based solutions		
<b>NDRRMA</b>	National Disaster Risk Reduction and Management Authority (Nepal)		



Residents of Dhungkhark, Nepal work to reduce the risk of landslide during the monsoon season. © Tom van Cakenberghe for Mercy Corps

# 1. Introduction

The climate crisis is causing more frequent and more severe disasters, trapping people in a spiral of loss, unable to recover and rebuild their lives before the next climate shock hits. Yet despite growing recovery needs, recovery efforts remain underfunded, and typically rebuild only to current conditions at best. Future impacts of cascading and compounding climate risks fail to be considered, and broader social, economic, and environmental recovery are often overlooked. As a result, the bulk of recovery needs are often met and paid for by vulnerable households themselves, or by borrowing from neighbours and local moneylenders. For example, in Bangladesh, households spend almost US\$2 billion a year on climate change adaptation and disaster recovery – which is more than double compared to government spending and 12 times more than international spending (Eskander and Steele, 2020).

With losses and damages from climate change estimated to reach \$290–580 billion in 2030 and \$1–1.8 trillion in 2050 for developing countries (LSE, 2022), it is clear that investment is needed across the full disaster risk management (DRM) cycle – from risk reduction, to preparedness, to response, to a resilient recovery – to minimise climate impacts where possible and build back more resiliently when impacts are unavoidable. In this context, there is a need to focus on, and invest in, designing recovery to be as future-proof as possible. In 2015, the Sendai Framework for Disaster Risk Reduction (the Sendai Framework) set out the principle of ‘build back better’ in its priority actions, and experts estimated that investing in building back better could reduce disaster losses by 40 per cent in highly vulnerable countries (Hallegatte et al., 2018). Nonetheless, the findings of the Midterm Review of the Sendai Framework states that progress has been ‘limited’, and ‘significant opportunities are missed to build back better, to accelerate development and improve resilience post-disaster’ (UNGA, 2023).

This report asserts the need not only for a recovery that effectively brings a community back to the place they were before the disaster, but a recovery that is resilient – a recovery that harnesses climate science to account for changing, cascading, and compounded risks, that actively includes the most marginalised groups, and that considers all dimensions of social, physical, and environmental resilience.

## 1.1. The potential of resilient recovery

If recovery is designed to build resilience, it will significantly reduce vulnerability, exposure, and therefore risk (see Figure 1). Instead of ‘bouncing back’ after a disaster, there is an opportunity to bounce forward to create a ‘positive transformation’ to address underlying risk factors (Sudmeier-Rieux et. al., 2019, p. 97).

Resilient recovery not only creates benefits for human lives, livelihoods, and well-being, it can also save affected households and communities, as well as national governments and donors, significant money. Estimates suggest that for every \$1 invested in risk reduction and preparedness, including through well planned and executed post-disaster recovery, there are savings of \$15 in future crises.<sup>1</sup> And according to the World Bank, if all countries were to build back stronger during a 20-year window, then global asset losses due to disaster events would be reduced by 11.2 per cent, from \$382 billion to \$339 billion annually.

**FIGURE 1:** Interactions of risk drivers (IFRC, 2023a).

*This framework shows that vulnerability, exposure, the impact of weather and climate events, and coping capacity are interacting drivers of risk. By implementing resilient recovery, which can help to reduce vulnerability and exposure, communities can be better prepared for future climate events.*



<sup>1</sup> [Strengthening Capacities for Post-Disaster Needs Assessment and Recovery Preparedness \(PDNA Rollout II\) \(undp.org\)](#)



However, there are far-reaching and severe consequences when resilient recovery is not the norm, consequences that amplify disaster impacts and hinder long-term progress, including:

- **Economic costs:** If recovery is not resilient, the same or greater costs will need to be borne to rebuild and restore the same services and structures after the next disaster. At household, local government, and national government levels, the cumulative financial burden can become overwhelming, diverting funds from other critical areas of development and hindering long-term economic growth. Not implementing resilient recovery can lead to prolonged economic instability and decline, perpetuating a cycle of poverty and dependence. According to one Bangladeshi: ‘Every year, we build a house, and every year a flood takes away our house... we have limited income. With the money we should use to feed ourselves, we use that to build the house’ (Sylhet and Sunamganj, 2022).
- **Livelihoods:** Disasters have devastating effects on livelihoods of all kinds, destroying assets, investments, and infrastructure, disrupting business continuity, and preventing the sale of products at markets. This is compounded by the increased frequency of disasters. For example, in the weeks after Typhoon Noru hit the Philippines in September 2022, farmers started planting their crops, only to see them destroyed again by Tropical Storm Nalgae the following month (Beltran, 2022). As one farmer from the Tarlac province asked, ‘How can we feed ourselves and continue farming knowing the next misfortune for our harvest can happen at any time?’ (ibid).
- **Increasing inequalities:** Disasters affect everyone, but the impacts are felt very differently: for some people, the impacts of a disaster could be relatively limited, whereas for others they can be catastrophic. The negative effects of climate disasters disproportionately fall on the most vulnerable individuals and households, who risk falling into poverty traps from which they cannot escape. If this is not proactively addressed during the recovery phase, it exacerbates existing inequalities and can lead to social fragmentation.
- **Environmental degradation:** Disasters can result in salinisation, the release of hazardous substances, contamination of water and sanitation facilities, and damages to ecosystems (UNEP and ISDR, 2009). Failure to integrate environmental considerations into recovery can lead not only to continued environmental degradation but also to adverse effects on peoples’ health and well-being (World Health Organization, 2002), in addition to increasing the likelihood of disasters happening in the future.

While the need for resilient recovery has been recognised in policy and guidance documents in the disaster risk reduction (DRR) sector, there remain considerable

gaps in resilient recovery implementation and financing that urgently need to be resolved, as confirmed by the Midterm Review of the Sendai Framework (UNGA, 2023). Outside the DRR sector, resilient recovery has not been central in policy and finance discussions, though there is a growing window to policy change. The G20 DRR working group provides a new forum to enable progress on resilient recovery, and the UNFCCC has started to address recovery in the context of Loss and Damage discussions at United Nations Framework Convention on Climate Change (UNFCCC). These developments provide a key new opportunity to enable resilient recovery within broader climate and finance discussions.

This report seeks to engage national and international policymakers and foster debate and catalyse action for a stronger focus on, and funding for, resilient recovery. Our goal is that the learning from this report, and the approach that we propose, will help governments and donors make resilient recovery a reality for the most vulnerable who are already bearing the brunt of today's climate crisis.

## 1.2. Methodology

This report builds on evidence gathered by the Zurich Flood Resilience Alliance (the Alliance) through the implementation of their post-event review methodology (PERCs).<sup>2</sup> A PERC is an independent and detailed review used to learn from disasters to build resilience for future events. It looks at what went well, as well as opportunities for improvements, and provides a set of recommendations that can be operationalised to enable resilient recovery. Since 2013, the Alliance has conducted over 20 PERCs following disasters, primarily floods, in countries around the world (see Annex 1); these have been used as background resources to inform this report.

In addition to the PERCs, this report draws on existing literature, as well as on interviews conducted in three countries – Mexico, Nepal, and Senegal – where the Alliance is implementing programs. Some of the examples provided in this text come from these interviews, PERCs, and secondary sources. In total, over 20 interviews were conducted in these three countries, with local and national authorities, as well as implementing agencies. The three countries were chosen as they provide a variety of pictures of recovery due to the different ways in which climate risk manifests, their different government structures, and their different states of socio-economic development.

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<sup>2</sup> See <https://floodresilience.net/perc/>

### 1.3. Scope and terminology

This report puts a spotlight on resilient recovery, a largely overlooked topic. It is a broad and complex issue, and we recognise that this report cannot cover everything.

While this report provides a general overview of building resilience into disaster recovery, most of the evidence and examples provided focus on floods and wildfires, given the scope of the Alliance and the PERCs it has conducted. The examples provided in the report are not always from purely climate-induced disasters, not least as the determination of whether a disaster is purely climate-related has not always been made, but also as disasters do not exist in a vacuum and are the result of the complex interplay between hazards, vulnerabilities, and exposure. In addition, while most of the examples included in the report are on single hazard events and/or sudden onset disasters, we recognise that in the context of the current climate crisis, disasters are compounding and cascading with multiple disasters striking at the same time (such as floods and storms) or triggering a series of other disasters (such as landslides and water-borne diseases), and that these compounding risks, in addition to slow-onset disasters, are and will be a threat to many people's wellbeing. Slow-onset disasters (e.g., sea-level rise) are beyond the scope of this report, as are disaster-induced migration and resettlement. Nevertheless, resilient recovery from these kinds of hazards and impacts is equally important. Furthermore, it is important to note that resilient recovery in fragile and protracted settings would require additional considerations, which also fall beyond the scope of this research.



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

This report focuses on 'resilient recovery' – integrating climate resilience into the recovery phase – which is broadly synonymous with the more commonly used term 'building back better'. This concept was first coined after the 2004 tsunami to denote the integration of DRR into reconstruction, though its definition and use has broadened over time. While 'building back better' has been utilised in various policy areas, most notably the Sendai Framework, this report emphasises the importance of a recovery that is forward-looking and integrates the social and economic components of resilience, beyond the reconstruction of physical infrastructure. Therefore, we use the concept of 'resilient recovery', rather than 'building back better', to emphasise those elements.

The report first explores, in Chapter 2, the elements that turn a recovery into a resilient recovery. Chapter 3 focuses on how to make resilient recovery a reality at national level, through pre-planned, multidimensional, and inclusive frameworks that enable effective implementation. Chapter 4 addresses the international architecture of resilient recovery, exploring the degree to which it is covered within, and across, the DRR, humanitarian, development, and climate sectors. Chapter 5 examines perhaps the biggest obstacle to the operationalisation of resilient recovery – finance – and how this can be generated at national and international levels. The report concludes with recommendations for both national decision-makers and the international community, recognising the specific roles and responsibilities each will need to shoulder to make resilient recovery a reality.



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

# 2



Post Earthquake in Indonesia, 2018. © Mercy Corps

## 2. The elements of a resilient recovery

### Key messages

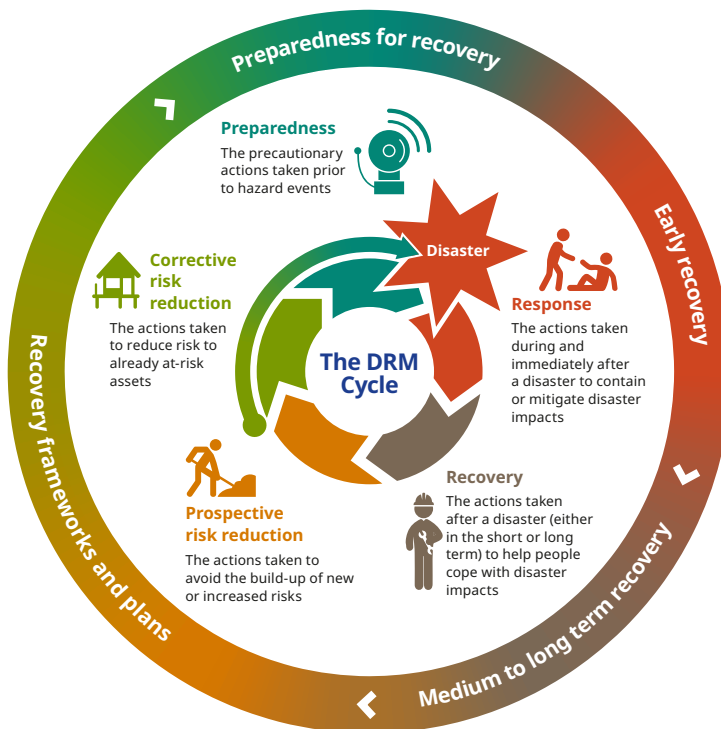
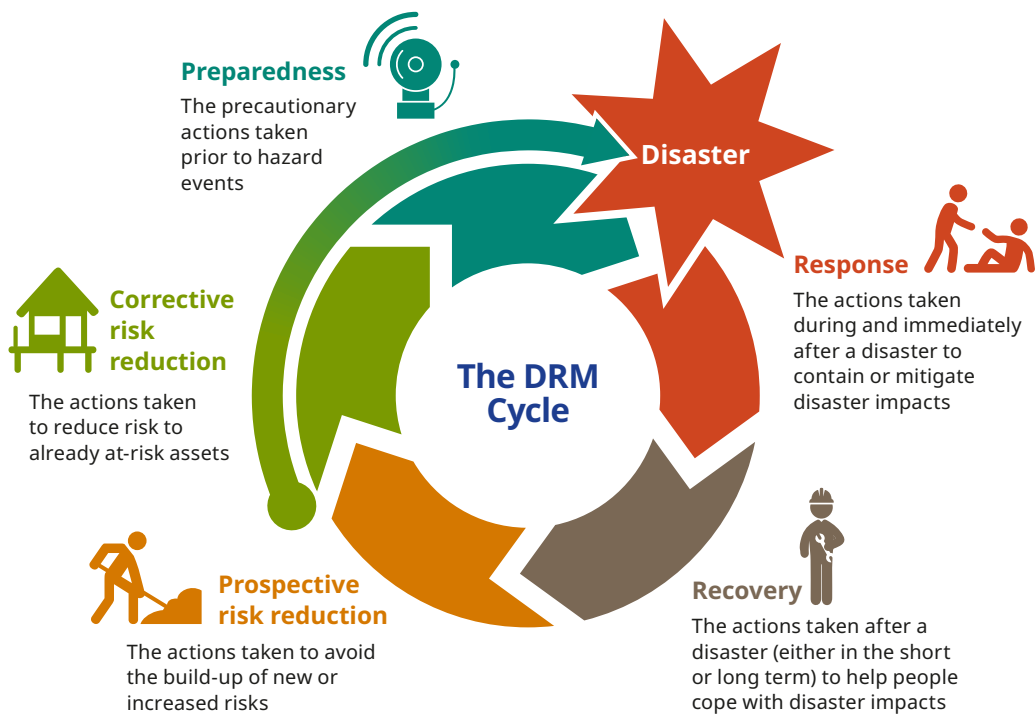
- 1. Recovery is a critical element of the DRM cycle:** yet it is often overlooked or deprioritized.
- 2. In the context of the climate crisis, building back is no longer sufficient, we must build back more resiliently:** Resilient recovery is essential to address underlying risks and vulnerabilities and prepare communities for current and future climate risks.
- 3. Resilient recovery should be risk-informed:** Recovery efforts should be based on a comprehensive risk management approach that addresses compounding, cascading, and complex risks, and integrates climate projections into the recovery phase, to help prepare communities for current and future climate threats.
- 4. Resilient recovery should be multi-dimensional:** Disasters impact various aspects of people's lives. An effective resilient recovery should consider the social, human, environmental, physical, and financial factors that enhance people's resilience to climate disasters.
- 5. Resilient recovery should be inclusive:** Recovery efforts must be inclusive of all population groups – especially the most vulnerable, marginalised, and hardest to reach – and empower them to participate in decision-making processes.

Recovery is a critical component of the DRM cycle (see Figure 2); it is the stage in which people, communities, and governments address disaster impacts so as to return to their pre-disaster development trajectory. During this phase, the focus shifts from immediate life-saving response measures to early recovery, followed by longer-term reconstruction. Effective recovery is essential for fostering resilience and minimising the long-term impacts of disasters on individuals, communities, governance, and economies.

Recovery encompasses several stages, often referred to as 'early', 'medium' and 'long-term' recovery. The differences between the stages are ill-defined; in fact, 'the idea that a society progresses linearly from humanitarian crisis to separate stages of recovery and then to development has been proven false' (PHAP, n.d.). As such, recovery should be considered throughout the DRM cycle (see Figure 3).

**FIGURE 2:** The Disaster Risk Management cycle.

*The DRM cycle includes recovery as a critical component of disaster risk management.*



**FIGURE 3:** Recovery in the DRM cycle

Ahead of a disaster, preparedness for recovery needs to be considered, including through pre-event recovery plans (see Chapter 3), as well as pre-arranged finance (see Chapter 5). After a disaster, early recovery is implemented alongside emergency response, to lay the foundations for medium-to-long term recovery, guided through updated post-event recovery plans (see Chapters 3 and 4), and in turn, lessons from these recovery phases should be integrated when preparing for future recovery events (Chapter 3). Given today's increased compounding and cascading risks, these phases are likely to take place simultaneously and alongside each other, hence the need for robust recovery frameworks underpinning this recovery cycle (Chapter 3).

Despite the importance of the recovery phase in the DRM cycle, it is often de-prioritized at the global level (see Chapter 4) and under-funded (see Chapter 5). Instead, emphasis tends to be on the initial response and relief efforts, with limited attention and resources allocated to the crucial recovery phase. As a result, communities struggling to cope with the aftermath of a disaster may find themselves trapped in a cycle of loss, hindering their ability to fully recover and build resilience. Neglecting recovery can heighten vulnerability and exposure to avoidable losses and damages, and in certain contexts can perpetuate a dependency on external aid and undermine the long-term sustainability of disaster-affected areas.

## 2.1. Recovery and resilient recovery

**Resilience in the DRM cycle** The ability of a system, community, or society to pursue its social, ecological, and economic development and growth objectives, while managing its disaster risk over time in a mutually reinforcing way (Keating et al., 2014).

Recovering effectively is now more important than ever, with communities facing climate-induced disasters that are increasing in frequency and intensity. The diagram below shows the effects on communities: 1) if no recovery takes place; 2) if the recovery is focused on building back to the pre-disaster state; 3) if recovery builds back better to face only 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.

While recovery is needed, the remainder of this chapter unpacks what the elements of resilient recovery should be – risk-informed,

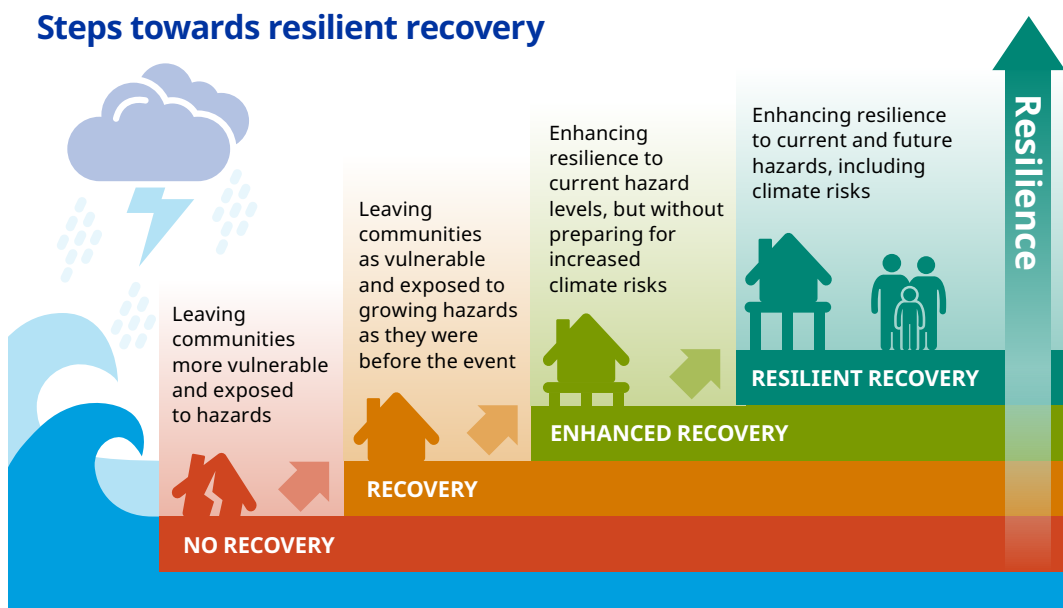
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**'When countries rebuild stronger, faster and more inclusively after... disasters they can reduce the impact on people's livelihoods and well-being by as much as 31 percent...major benefits totalling US\$173 billion per year are possible.'**  
– Hallegatte et al., 2018

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FIGURE 4: Steps towards climate resilient recovery



multi-dimensional, and inclusive – building on the Global Facility for Disaster Reduction and Recovery’s (GFDRR) classification of building back stronger, building back faster, and building back more inclusively.

## Resilient recovery is risk-informed

The climate crisis makes it essential to understand the complex, compounding, and cascading risks of today and the future. The importance of risk-informed policies, decision-making, and investments are referred to in the Sendai Framework, in the 2030 Agenda for Sustainable Development (UNDRR, 2022c), and in regard to development writ large (UNDP, 2022; Opitz-Stapleton et al., 2019). To integrate risk information into recovery, we need to consider current hazards, exposure and vulnerability, and understand the drivers of that vulnerability and exposure, in particular for those communities left furthest behind. We also need to understand how that vulnerability and exposure is changing and will change due to development, population changes, and climate change.

### Risk-informed

**recovery** is a recovery that integrates information on complex, compounding, and cascading risks to strengthen a community’s ability to withstand and adapt to current and future climate-related hazards.

Obtaining this understanding requires disaggregated data on populations and their institutional and social connections (Fakhruddin et al., 2022). Combined with hazard, exposure, and current climate data, these datasets can provide an initial foundation for risk-informed decision-making. For example, the recovery effort may prioritize strengthening housing infrastructure in areas with high vulnerability and exposure to reduce future risks, while social recovery programmes can be designed to address the needs of particularly vulnerable groups to enhance their adaptive capacity. It is important this includes multi-hazard data, as the focus on one hazard only will not provide a comprehensive picture of a

community's risks and vulnerabilities, and could even transfer risks from one hazard to another, or from one community to another.

To move from building back better to forward-looking, climate resilient recovery, this foundational risk information, on current seasonal and weather risks, needs to be complemented by information on likely future climate hazards and exposure. This information should include climate projections and the modelling and mapping of new risk zones. Despite the complexity of climate and disaster science, risk-informed and multi-hazard recovery is becoming more feasible; there are increasingly sophisticated scientific tools<sup>3</sup> and data that can be used to support recovery decision-making (Cremen et al., 2022). These include the use of climate projection data that indicates the types and intensities of climate events that are currently happening or likely or possible in the future. For example, climate projections can help inform the design and construction of resilient infrastructure that are able to withstand extreme weather events. It can also help farmers make informed decisions about which crops to grow based on projected changes in temperature and rainfall patterns, and help guide ecosystem restoration efforts by identifying plant species that are well-adapted to the changing climate.

However, even the best climate projections include significant uncertainty. As a result, making decisions now on how to build a recovery for future conditions remains challenging. In addition, the post-disaster context is characterised by high levels of urgency, during which it is difficult to take the time to analyse and implement comprehensive risk management approaches. Therefore, it is critical to plan in advance for how and when to use vulnerability, climate, and exposure data in recovery efforts and for the data sourcing and technical capacity building that will be needed (see Chapter 3). In the absence of pre-planning, it is virtually impossible to incorporate climate data or take the time to explore different approaches and develop the commitment for, and funding needed, to build back differently.

## Resilient recovery is multi-dimensional

The multi-dimensional impacts of disasters on peoples' lives and livelihoods emphasises the need for recovery beyond the restoration of physical infrastructure. The Sendai Framework also recognises this through its call for DRR practices to be 'multi-hazard and multisectoral' (UN 2015, pg.10) and through understanding disaster risk in 'all its dimensions of vulnerability, capacity, exposure of persons and assets, hazard characteristics and the environment' (UN, 2015, pg. 14).

<sup>3</sup> <https://drmkc.jrc.ec.europa.eu/inform-index/Other-INFORM-Products/INFORM-Climate-Change-Risk>

**A multi-dimensional recovery** is a recovery that goes beyond the reconstruction of physical infrastructure and includes all dimensions affecting peoples' lives and livelihoods, including social, human, environmental, and financial factors.

### **BOX 1: The Zurich Flood Resilience Alliance's 5 Capitals Framework**

The five capitals (5C) framework developed by DFD in 1997 and adopted by the Zurich Flood Resilience to be used as a framing to categorise disaster impact and for developing and targeting needed recovery actions, aids in understanding the elements that comprise a multidimensional recovery. The 5Cs framework consists of five interconnected capitals – social, physical, financial, natural and human – that individually and combined provide insight into a community's resilience.

The importance of multi-dimensional recovery was highlighted by the PERC in Mexico. While physical infrastructure plays an important role in managing flood risk in Mexico, the research found that grey infrastructure came with important limitations, especially when it is not accompanied by other resilience-building measures. For example, without risk awareness, there can be an over-reliance on grey infrastructure, which can have catastrophic consequences when the limits of these structures are surpassed. To address these limitations the PERC recommended the integration of green infrastructure with grey infrastructure and highlighted a need for investments in human and social capital (Cuevas et al., 2022b; Cuevas et al., 2022c).

As flagged by the Mexico example, investing in Nature-based Solutions (NbS) is an important element of going beyond grey infrastructure. These solutions have seen growing interest in recent years given their potential for yielding short-, mid-, and long-term dividends and bolstering 'social, economic and environmental recovery', while strengthening climate resilience (Hoffman & Henly-Shepard, 2023). For example, in Nepal, concrete barriers used for managing flood risk are expensive, and there can be severe consequences for communities when their hard limits fail. The Alliance worked with communities in the Karnali River basin to implement bodykes, which not only helped manage flood risks, but also helped to protect agricultural land and provided space for additional crops, thereby enhancing disaster-resilient livelihoods (Practical Action, n.d.). Such nature-based approaches are highlighted in the UNDRR's 2022 Global Assessment Report, which emphasises that accompanied by actions to address inequalities and human development, the adoption of green approaches in disaster recovery has 'long been needed' (UNDRR, 2022a, p. 66).

A final element critical to a multidimensional recovery is the full consideration of climate hazards, changing climate risks, and climate impacts at multiple scales. Not considering the full impacts of climate change on recovery can result in maladaptive recovery. This is particularly clear in the case of infrastructure reconstruction; if climate hazards are already damaging infrastructure now,

rebuilding as was will not be sufficient for future climate. New zoning, building codes, and design approaches are needed (Szönyi et al., 2022; Norton et al., 2019). However, to focus on only strengthening physical infrastructure, without considering the other dimensions of resilience, also risks social maladaptation. This was the case for the Jaxaay plan, implemented in Senegal.

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**The Jaxaay plan in Senegal was launched in 2006 by official decree and implemented from 2006-2012, with the aim of relocating populations affected by flooding to a new city 30 km from Dakar. Ultimately, more than 3000 housing units were built, coupled with an improved, gravity-based drainage system complemented by emergency pumps and retention basins, on cleared land. However, results were mixed due to delays and the limited number of housing units, and the additional costs were borne by the affected population. Additionally, the area is now flood-prone, and there is no recovery plan to enable the local government to manage and reduce the impacts of recurrent flooding (PERC research).**

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## Resilient recovery is inclusive

Poverty and inequality continue to make some communities more vulnerable to disaster impacts and less able to recover and prepare for future shocks than others. Women, people with disabilities, older adults, excluded groups and ethnic minorities, indigenous groups, children, and the chronically ill are all disproportionately impacted by disasters. Yet disaster risk reduction efforts do not always sufficiently take the needs of marginalised groups into account.

Resilient recovery is most effective when it incorporates efforts to address underlying vulnerabilities. Focusing on the root causes of inequality and social and economic disadvantage can support resource optimisation during recovery (Fordham, 1999) and yield cost savings and/or co-benefits by prioritizing what communities themselves will find most effective in enabling their recovery. If all countries had the ability to provide the poorest people with the post-disaster support found in developed countries, global well-being losses due to climate disasters could be reduced by nine percent (Hallegatte et al., 2018; UNDRR, 2022a).

### **An inclusive recovery**

is a recovery that proactively addresses the needs of the most vulnerable and marginalised groups and enables the active participation of affected communities in their recovery process.



Flooded primary school in Thiès, Senegal, 2021. © Lydia Darby

To ensure no one is left behind, recovery efforts need to be able to reach and address the needs of all vulnerable groups, including those who are '1) out of sight, 2) out of reach, 3) left out of the loop, 4) out of money, or deemed to be 5) out of scope' (IFRC, 2018, p.9). This is in line with the 2020 Agenda for Sustainable Development's commitment to 'Leave no one behind'<sup>4</sup> (UN, 2015) and the Sendai Framework's call for a 'broader and more people-centred preventative approach to disaster risk' (UNDRR, 2015, pg. 10).

A resilient recovery necessitates particular attention to gender (Enarson, 2012). While gender encompasses a multitude of identities that should be considered, women's often unequal socio-economic position influences their disaster preparedness, response, and opportunity for recovery (Erman et al., 2021; Robles & Benavidez, 2020; Tanaka and Ishiwatari, 2019; Gender Action Plan 2016-2021, 2016). This can create 'negative feedback loops' where pre-existing vulnerabilities exacerbate vulnerability to disasters (GFDRR, 2020a; The World Bank & GFDRR, 2021). For example, the Senegal PERC found that following the 2020 floods, women-headed households were disproportionately impacted due to their higher

<sup>4</sup> Full statement: 'Leaving no one behind therefore became the top-level objective of the successor to the MDGs, the SDGs'. States pledged that no one will be left behind: '[r]ecognising that the dignity of the human person is fundamental, we wish to see the goals and targets met for all nations and peoples, for all segments of society. And we will endeavour to reach the furthest behind first' (UN, 2015).

vulnerability, as indicated by their access to fewer resources and lower education levels (Ndiaye et al., 2021). Proactively including women in the recovery process is therefore essential.

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**After the 2015 earthquake in Nepal, women played a crucial role in rebuilding efforts; some women were trained as masons to help repair and reconstruct houses, infrastructure, and cultural sites. Women’s groups also successfully advocated for the integration of gender equality and women’s empowerment in disaster recovery and reconstruction efforts in the country. This resulted in the 15-point Kathmandu Declaration on disaster risk management, endorsed by government authorities and development partners, that set out key demands for gender-responsive recovery and reconstruction (Lovell et al., 2019; Tanaka and Ishiwatari, 2019).**

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Resilient recovery should not only focus on reaching the most vulnerable, it should also be locally-led and result in, amongst other outcomes, the localisation of skills, knowledge, materials, and equipment and it should strive for the inclusion of traditional and indigenous knowledges alongside scientific data.<sup>5</sup>

The Principles for Locally Led Adaptation, developed by the Global Commission on Adaptation, aim to transform adaptation programs, funding, and practices so these processes are increasingly ‘owned by local partners.’ As forward-looking, risk-informed recovery integrates adaptation into its efforts, the principles of Locally Led Adaptation should apply as well to a people-centred recovery in which:

- devolved decision-making is emphasised;
- underlying structural inequalities facing the most vulnerable are addressed;
- consistent funding is provided;
- local capacity is built;
- climate risk and uncertainty are understood;
- programs and learning are flexible;
- accountability and transparency are integrated; and
- collaborative action and investment exist.

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<sup>5</sup> As outlined in the Sendai Framework it is important to ‘To ensure the use of traditional, indigenous and local knowledge and practices, as appropriate, to complement scientific knowledge in disaster risk assessment and the development and implementation of policies, strategies, plans and programmes of specific sectors, with a cross-sectoral approach, which should be tailored to localities and to the context’ (UNDRR, pg. 15).

## **BOX 2: Nepal case study**

### **A case for enabling local recovery through national planning and resources**

In the last decade, Nepal's approach to DRM and recovery has evolved with the federalisation of the government and through their experience implementing a more resilient recovery in the aftermath of the 2015 Gorkha Earthquake. The government has passed several laws and policies<sup>1</sup> focused on reducing risk and supporting disaster-affected households and have since established the National Disaster Risk Reduction and Management Authority (NDRRMA), under the Ministry of Home Affairs, for both ex ante and post-disaster recovery. These are positive steps, however, Nepal's disaster recovery experience in the last decade reveals opportunities for improvement and learning-focused recovery planning.

### **Planning a resilient recovery to the Gorkha Earthquake**

In 2015, Nepal was hit by the Gorkha earthquake. The 7.8 magnitude earthquake and aftershocks caused damages, landslides, and avalanches that decimated villages. All told, close to 9,000 people were killed, 23,000 people were injured, and over 600,000 structures damaged (National Planning Commission, 2015). The earthquake also had cascading impacts on economic productivity impacting manufacturing, agriculture, and tourism. The severity of the earthquake necessitated whole-scale effort around recovery.

Recognising the overwhelming needs, the National Reconstruction Authority (NRA) developed the Gorkha Earthquake Post-Disaster Recovery Framework 2016-2020, based on the Sendai Framework and the results of the Post-Disaster Needs Assessment (PDNA). Interviewees confirmed that it was widely considered a systematic, structured, and prioritized framework for implementing recovery and reconstruction and overall, 'building back better'. Developed post-disaster, it supported the creation of new institutional arrangements to support the recovery process. It also led to streamlining the influx of international and domestic funding for early and long-term recovery through the Prime Minister's Disaster Relief and Recovery Fund.

### **Operationalising a resilient recovery to the Gorkha Earthquake**

At the time of the earthquake, there was a concern that local governments had limited technical and financial capacity to operationalise long-term recovery processes; local and provincial government staff assigned as recovery focal points did not have the authority to use or mobilise funds and were typically not technically well placed to lead on recovery. In response to this, and to ensure operationalisation of the Post-Disaster Recovery Framework, the national government provided funding for reconstruction and established a mechanism

## BOX 2 CONTINUED....

for reconstruction and recovery funds to flow from the national to local level. The national government also established new building codes, and to support their implementation in reconstruction, engineers and evaluators were placed with local government units.

### Planning for future disasters

Despite the positive efforts made by the federal government to plan and enable recovery from the Gorkha Earthquake, interviewees indicated that this learning has not always been carried forward to other disasters. Firstly, post-event recovery plans have not been consistently developed for subsequent disasters, such as the floods and landslides Nepal contends with on an annual basis during monsoon period (June to September each year). One national government interviewee stated, 'Risk reduction isn't in our culture. We invest more in response and least on recovery'.

Secondly, recovery decision-making can be slow. Decision-making for recovery from the Gorkha Earthquake was significantly sped up by the creation of the NRA, which was mandated to lead on earthquake recovery and reconstruction and reported directly to the Cabinet. National-level recovery for other events sits under the Ministry of Home Affairs, is not positioned at Cabinet level, and has different decision-making processes.

In 2014, there was significant flooding in the Karnali region. Though this disaster occurred prior to the 2015 earthquakes, the recovery from the floods is ongoing and has not benefited from the recovery mechanisms put into place after the earthquakes; interviewees reported that the recovery process has been fraught and slow, with the earthquake response taking precedence, and in the context of significant constitutional changes. Interviewees indicated that some municipalities had only begun to receive funds for rebuilding their homes in 2023, nine years after the floods. In addition, where household-level payments were made, they were paid in installments which made it difficult for households to invest in better-constructed homes.

National government interviewees confirmed that the NDRRMA faces systemic challenges, including the lack of federal budget, such that it needs to find its own funding for its strategies and activities and lacks direct access to the Cabinet level. Interviewees from local government offices reflected that there is a lack of national resources, and as a result their recovery efforts are often



*A temporary shelter built in response to the Gorkha earthquake of 2015. © Tom van Cakenberghe for Mercy Corps*



## BOX 2 CONTINUED....

limited to data collection of losses and damages and chasing resources from higher levels of government.

Here, there is a huge opportunity to move towards a resilient recovery by applying the good practices that emerged from the Gorkha earthquake recovery, including the consistent development of post-event recovery frameworks, empowering national level institutions to make timely decisions and quickly mobilise resources during the recovery phase, articulating cross-scalar coordination mechanisms, and providing local governments with technical and financial support for recovery.

### **Promising steps**

Promisingly, Nepal is making strides towards improving local DRM, including recovery. The National Disaster Risk Reduction and Management Act, the overarching DRM policy for Nepal, mandates that all levels of government increase investment in DRRM – this includes DRR, preparedness, response, and recovery. In addition, Nepal has developed extensive adaptation planning, in particular at the local level, through Local Adaptation Plans for Action, which has potential to be better linked to DRM planning.

While investments for DRM have increased, local governments tend to prioritize these funds for response; however, local governments that have received technical and decision-making support from external organizations can and do invest that money into ex ante interventions like nature-based solutions. This suggests that with concerted technical support, local governments could more intentionally invest in and facilitate a resilient recovery.

Finally, the Ministry of Federal Affairs and General Administration (MOFAGA) is drafting recovery guidelines that local governments can use to develop local socio-economic recovery frameworks, as well as a Local Level Participatory Recovery Guideline; though not focused on resilience, these developments are indicative of national recognition of the need to improve recovery processes.

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<sup>1</sup>These include the Disaster Risk Reduction and Management Act 2017, Disaster Risk Reduction and Management Rules 2019, National Policy for Disaster Risk Reduction 2018, and the Disaster Risk Reduction National Strategic Plan of Action 2018-2030

# 3



*Residents of Dhungkhark, Nepal work to reduce the risk of landslide during the monsoon season. © Tom van Cakenberghe for Mercy Corps*

# 3. National frameworks for resilient recovery

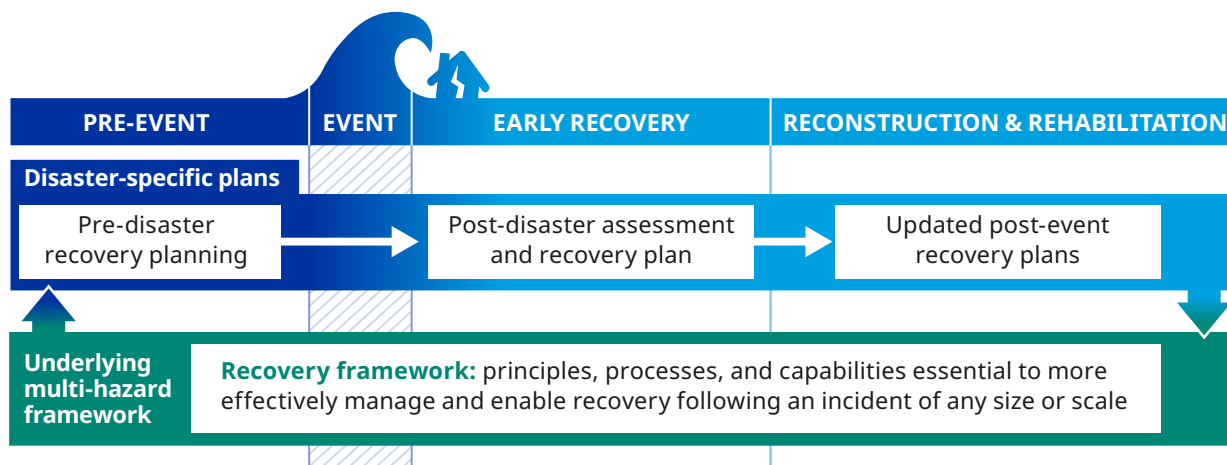
## Key messages

- 1. Resilient recovery needs to be pre-planned:** Successful resilient recovery necessitates the establishment of robust frameworks at the national level, pre-planned and with clear roles, responsibilities, and coordination mechanisms outlined. This can be promoted by introducing legal provisions which require pre-event recovery planning, clearly allocate responsibility for this task to relevant government, and prescribe the minimum contents of pre-event recovery plans.
- 2. Recovery frameworks need to be comprehensive:** Risk-informed, multi-hazard, and multi-sectoral resilient recovery frameworks are crucial to address the complexities of recovery and to optimise resources.
- 3. Recovery frameworks need to be inclusive:** Inclusion in the development and implementation of resilient recovery frameworks means all stakeholders, including marginalised groups and affected populations, need to be represented and have a voice in how recovery is conducted.
- 4. Technical capacity is essential for operationalising a resilient recovery framework:** Successful recovery implementation requires building the technical capacity of decision-makers and practitioners. Capacity building is particularly important at the local level, where most implementation takes place.
- 5. Resilient recovery planning should be an ongoing, iterative process:** Resilient recovery plans should be considered 'living documents' that are continually adapted based on new learning and knowledge, and linked to climate change adaptation planning.

To enable a risk-informed, multi-dimensional, and inclusive recovery, having effective frameworks in place is key. A recovery framework identifies the 'principles, processes, and capabilities essential to more effectively manage and enable recovery following an incident of any size or scale', including how stakeholders collaborate and coordinate, recovery financing is mobilised, and monitoring and evaluation is implemented (UNDRR, 2017). These frameworks

FIGURE 5: Timeline – adapted from IFRC (2023)

## Disaster recovery planning



should facilitate pre-disaster and post-disaster planning (UNDRR, 2017; IFRC, 2023) (see Figure 5) and should focus on immediate and medium-term recovery needs, which are often most visible, but should also include provisions for long-term recovery, which is often missing (IFRC, 2023).

The Midterm Review of the Sendai Framework identified the need to create recovery frameworks and plans that support a resilient recovery and recommended that ‘build back better’ principles be systematically included in disaster recovery plans at both the national and the local levels (UNDRR, 2023, pg.105). Yet recovery frameworks, including the creation of an enabling regulatory environment, have often been deprioritized compared to frameworks developed for the other stages of the DRM cycle. The IFRC Disaster Recovery Report (2023b) states that ‘[d]omestic disaster laws generally address recovery in less detail compared to other phases of disaster management and many jurisdictions do not systematically develop detailed pre-event recovery plans’, with only 16 per cent of the main disaster laws reviewed from 100 countries containing detailed provisions for disaster recovery, compared to 54 per cent for risk reduction, 75 per cent for preparedness, and 75 per cent for response.

### Resilient recovery framework:

The ensemble of laws, policies, plans, and the institutional arrangements at global, national, and local levels that enable a recovery that is timely, risk-informed, inclusive, and multi-dimensional.

## 3.1. Pre-planning for recovery

**‘[R]esilient and effective recovery and reconstruction is possible only if the appropriate policies and tools are made available to affected households, firms, and local and national authorities **before the disaster hits.**’**

**– Building Back Better, Hallegatte et al., 2018.**

Data from across the body of PERCs indicates that, in practice, recovery is rarely pre-planned, and therefore institutional arrangements tend to be insufficient for operationalising a recovery process that is timely, risk-informed, inclusive, and multi-dimensional (Venkateswaran and MacClune, 2020; Szönyi, 2023). Challenges to pre-planning for recovery include a lack of recognition of the need for such plans, a lack of funding, and a lack of technical capacity. Where disasters become more frequent, the need for, and value of, dedicated technical staff and funding approaches, encapsulated by frameworks, becomes apparent, as they facilitate pre-planning for recovery and, following a disaster, the effective implementation of these plans. In locations subject to repeated disasters, the value of such frameworks is particularly apparent. In the absence of clearly demonstrated need, however, pre-planning for recovery is hard to ‘sell’ to communities and decision makers, similar to the challenges inherent in convincing stakeholders to take ex-ante action to avoid climate or disaster impacts. If stakeholders cannot see the immediate value-add of an action, it is more difficult to justify the expense required to do so.

In the absence of pre-planning, recovery plans are developed post-disaster. While post-event plans are necessary to respond to the specific recovery needs of affected populations, their design can take a considerable amount of time, and can even delay the start of the recovery process when there are no pre-established recovery frameworks in place to streamline coordination, finance, procurement, and other processes. These delays, in turn, can have negative impacts on human lives and livelihoods (UNDP, 2021b). In addition, given the time and funding needed for resilient recovery, as compared to recovery that does not take resilience into account, policymakers tend to opt for easier solutions that provide quicker wins in the absence of resilient recovery frameworks (see Szönyi et. al., 2022).



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

To enhance a country's ability to implement resilient recovery, actions to strengthen recovery capacity and decision-making must begin well before a disaster strikes (Hallegatte et al., 2018). According to the GFDRR, pre-planning recovery supports 'building back faster'; using contingency plans, advance procurement arrangements, pre-approved contracts, and/or financial arrangements could reduce well-being losses by as much as \$75 billion per year (GFDRR, 2018).

Global entities such as the GFDRR, UNDP, UNDRR, and the IFRC have developed guidance documents and recommendations to support nations to develop both sectoral and overarching recovery frameworks (see Annex 2). With some notable exceptions, the existing guidance documents and recommendations focus predominantly on post-event recovery planning rather than pre-event recovery planning (IFRC, 2023). As the IFRC Disaster Recovery Report (2023)<sup>6</sup> recommends, this can be addressed by introducing legal provisions which require pre-event recovery planning, clearly allocate responsibility for this task to relevant government actors, and prescribe the minimum contents of pre-event recovery plans. Another important point to note is that much of the existing guidance and recommendations do not focus on resilient recovery and how to mainstream risk-informed, multi-dimensional, and inclusive recovery considerations into recovery frameworks. The remainder of this chapter focuses on the integration of these three elements of resilient recovery into recovery frameworks.

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<sup>6</sup> Please see: <https://disasterlaw.ifrc.org/media/4230>.

## 3.2. Creating frameworks for resilient recovery

### 3.2.1 Resilient recovery frameworks need to be risk-informed

#### Frameworks need to be informed by climate and disaster science

As identified in Chapter 2, disaster recovery frameworks should be informed by climate science, particularly information regarding potential changes in the frequency and intensity of hazards over time.

Weather and climate information, while addressing different timescales, can be important to integrate into resilience recovery frameworks: weather forecasts provide reliable information of risks on short timescales of days to weeks; seasonal forecasts can help to prepare for the coming 3–6 months; and, at the longest timescale, climate projections provides information about the coming years to decades, which allows long term planning for more variable weather conditions, changing vulnerabilities, and new extreme weather events. Factoring these projections into recovery frameworks ahead of disaster events will help governments and communities better prepare for future risks. An example from a PERC conducted on the 2017 and 2018 wildfires in California, USA highlights how factoring climate change projections into stronger building codes provide communities with the opportunity to prepare for intensifying wildfire risk.

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**Following the 2017 Tubbs Wildfire in Santa Rosa, California, the over 6000 homes and other structures lost to the fire were only required to incorporate California’s wildland-urban interface (WUI) building codes during reconstruction if they were in a very high fire hazard severity WUI zone. However, the WUI maps did not take into account the way climate change is rapidly intensifying and potentially expanding wildfire risk in California, nor did they consider the hazard posed by burning structures, which has been repeatedly observed to cause cascading structural ignition. While some households outside of the very high fire hazard severity zone did decide to rebuild to the higher standards even though they were not required to, others opted not to, which was a lost opportunity to increase the fire robustness of housing stock at no additional cost<sup>7</sup> (Norton et al., 2019).**

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<sup>7</sup> Constructing a new home to fire-resistant standards costs approximately the same amount as constructing a similar ‘typical home’ and can significantly improve fire robustness (Headwaters Economics, 2018).

However, integrating climate and risk assessment data into recovery frameworks is challenging. Climate projections are not always available at the local level, in many regions climate data is limited and/or not easily accessible, when data is available it is often difficult to use and translate into action, and even with the best climate projection data there remains a high degree of uncertainty. Further, a risk-informed and multi-dimensional recovery relies on an understanding of the impacts of this data across sectors, yet the way climate data is typically presented can make it difficult or impossible to work with without specialized skills and expertise. Consequently, significant pre-planning, capacity building, and pre-event data development and analysis, complemented by clear policies, standards, and expectations is needed well in advance of a recovery if the recovery is realistically going to be climate resilient. As our research in Nepal shows, this needs to include building capacity at the local level to integrate climate into disaster risk reduction efforts.

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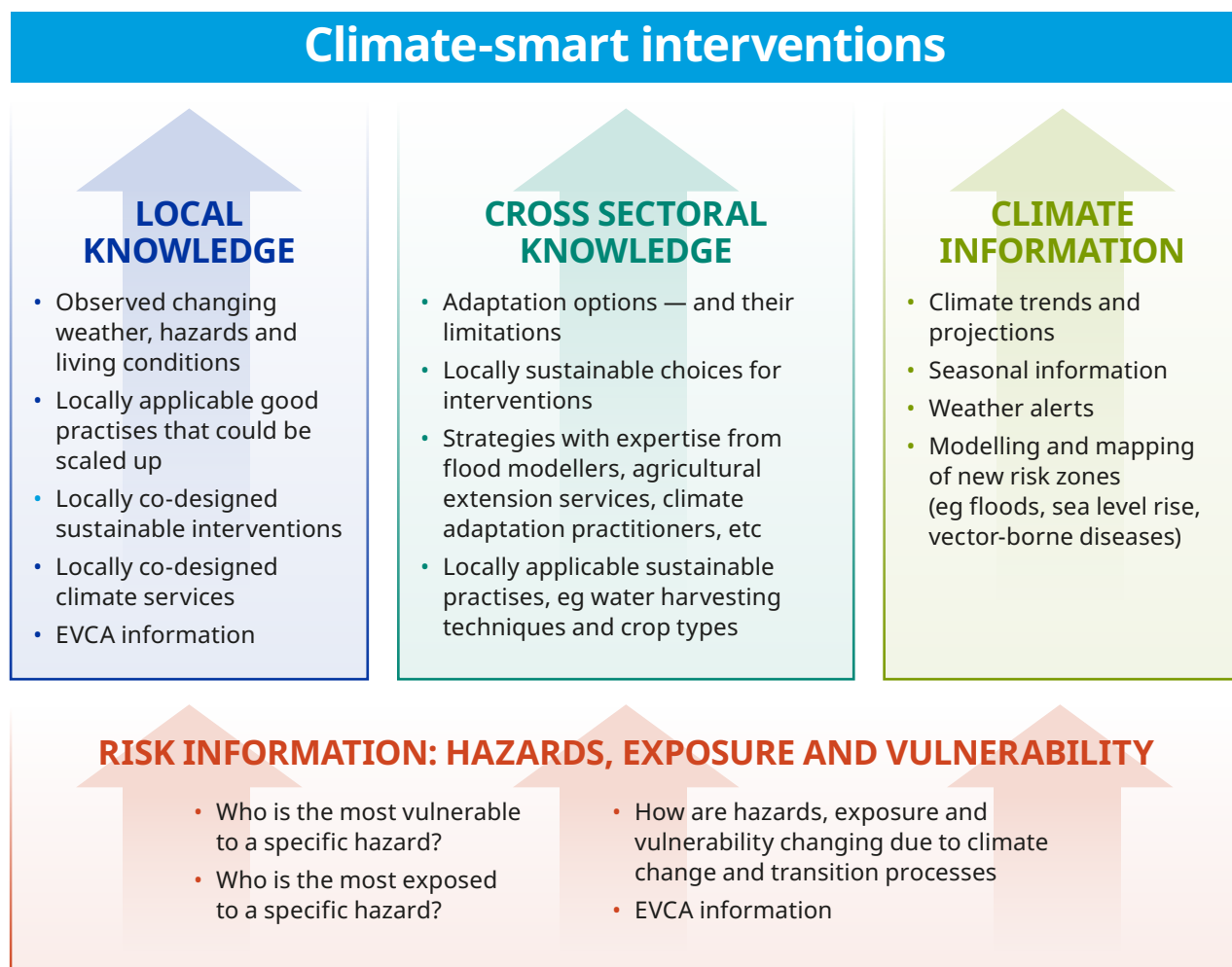
**In Nepal, a comprehensive national policy—the National Climate Change Policy 2019—aimed at providing guidance on reducing climate impacts, was introduced and there are a number of Local Adaptation plans and programmes that have been implemented in Nepal over the last decade. However, there remains room to more comprehensively integrate climate change into planning and programming at the local level and mainstream it into reconstruction and local recovery processes. For example, interviewees reported that they rely on historical climate data for reconstruction of public infrastructure, though they are aware that this data does not account for future climate change. The only projections available seem to be held at the national level, with disaggregation to the district level, but not at more localised levels. So, while climate impacts are being observed (e.g., unpredictable rainfall patterns, increases in temperature), local actors reported a need for improved awareness about how or if the weather changes they see relate to climate change, improved knowledge about climate projections for the future, and improved information regarding what the options are to adapt to climate changes (PERC research).**

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Additionally, risk assessments also do not always use the best possible historic data and recent extreme events are often omitted on the justification that they are ‘unprecedented’ and therefore unlikely to happen again (Szönyi et al., 2022; Szönyi et al., 2023). To omit either of these data sources, however, is to underestimate risk and exposure.



**FIGURE 6:** Designing climate-smart interventions, a framework by the IFRC and Red Cross Climate Centre (2023).



Given the limits to the different individual datasets and information sources, climate-smart recovery relies on the combination of weather and seasonal forecasts, longer term climate projections, as well as local, traditional, and indigenous knowledge (IFRC & Red Cross Climate Centre, 2023), see Figure 6.

### Frameworks need to be multi-hazard

If a pre-planned recovery framework is to be forward-looking, in addition to incorporating risk assessment and climate change, it needs to consider the full range of hazards that could occur and that should be considered during reconstruction, in particular to respond to cascading and compounding risks.

In the absence of overarching, multi-hazard frameworks, many available recovery plans are developed in response to a specific disaster – for example following the impacts of large cyclones (e.g., in Mozambique), tsunamis and floods (e.g., in Indonesia), or earthquakes (e.g., in Nepal). While these plans are highly valuable, particularly for regularly experienced disasters, they should be complemented by general, multi-hazard recovery frameworks and should integrate multi-hazard risks into the recovery phase. Lacking a multi-hazard perspective, the focus on a single

disaster can make it difficult to build broad-brush future resilience and avoid maladaptation. This is evident in the ways in which some recovery efforts have manifested.

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**Following the 2011 Great East Japan Earthquake and Tsunami, the Japanese government devoted significant resources to providing safe land and housing for resettlement. However, this resulted in rapid urban sprawl, an increased risk of and exposure to landslides in mountainous areas, and increased social fragmentation (Kondo and Lizarralde, 2021).**

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Multi-hazard recovery frameworks are important for multiple reasons (UNDP, 2016). The focus on one hazard only will not provide a comprehensive picture of a community's risks and vulnerabilities and could even transfer risks from one hazard to another or one community to another. For example, flood protection infrastructure is often built to address riverine flooding but can worsen pluvial flooding (e.g., when pumps behind levees fail); often flood protection activities protect one community but redirect flood waters into another community (MacClune et al., 2014; Cuevas et al., 2022a). Moreover, a multi-hazard approach can optimise resources, ensuring that resources are distributed based on the overall risk profile in certain areas and for certain communities and/or that co-benefits are delivered in addition to the primary purpose.

Pre-planning, particularly for the complexity of multiple hazards, can also help identify sensitive policy coherence issues in advance. Considering these issues and trade-offs before a disaster strikes, rather than in its chaotic aftermath, can pre-empt problems and speed recovery, such as issues over land ownership, which arose in the aftermath of the 2018 tsunami in Indonesia.

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**Following the 2018 tsunami in Palu, the Indonesian government had a clear intention to build back better; 10,000 permanent housing units were planned, built with future disasters in mind, while spatial planners were also rethinking ways to avoid rebuilding in areas of high flood risk. However, finding land to rebuild and resettle proved challenging as “the biggest obstacle to building the permanent shelters is finding land that won’t trigger problems over land claims”. —Morse, 2019**

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### **Frameworks need to consider disasters of all scales**

Finally, recovery frameworks should allow for effective recovery from disasters of various scales. While recovery frameworks often focus on large-scale events, communities are more regularly impacted by small events, and the accumulation of repeated small-scale events can have erosive, long-term impacts on the resilience of affected households (Dupraz-Dobias, 2022; GFDRR, 2019). Typically,

national authorities and frameworks are primarily concerned with large-scale disasters and smaller-scale disasters are left to local authorities to address. However, in the absence of an effective framework, local authorities face significant challenges to implement a resilient recovery, leaving it to households to implement it themselves.

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**In Mexico, Senegal, and Nepal, the responsibility for conducting recovery processes for small-scale disasters has been devolved to local authorities. The expectation is that they will use their existing funds to conduct recovery; what this looks like in practice varies by country. In Senegal, the only DRM plan to date is actually a response-focused plan, which provides limited guidance on how recovery should be managed (PERC research), mainly at the local level. According to one interviewee, the involvement of sub-national local authorities in recovery has diminished due to the combination of limited resources and a lack of recovery frameworks. On the other hand, in Nepal and Mexico, sub-national and local authorities are actually required to allocate a portion of their budgets to DRM (PERC research). In Nepal, however, local municipalities interviewed reported that though they could allocate some of this money towards recovery, they tended to prioritize it for response. One municipality stated that they provided NPR 20,000 (\$151) to households for recovery after the 2021 flood, but noted that this support was inadequate in light of the impacts of the flood (PERC research).**

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### **3.2.2 Resilient recovery frameworks need to be multi-dimensional**

#### **Frameworks must go beyond the reconstruction of physical infrastructure to drive multi-sector recovery outcomes**

Where recovery plans and institutional arrangements exist at the national level, they are typically ad hoc, narrowly focused, often developed in the aftermath of large-scale disasters, and/or focused on a single disaster (International Recovery Platform, 2022). There is an opportunity to build recovery frameworks on the basis of developing and delivering multi-sectoral outcomes, across government departments in coordination with local authorities and municipalities to deliver the best outcomes for people, communities, businesses, and society for recovery to move beyond just physical infrastructure, but more holistically at enhancing through recovery wider social determinants such as health outcomes and livelihoods. As a result, social recovery needs that emerge both post-disaster and over the long-term often go unaddressed (Venkateswaran and MacClune, 2020; IFRC, 2023).

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In the aftermath of the 2014 Karnali floods, the Nepalese government prioritized the reconstruction of infrastructure, and Nepal’s monetary compensation policy for disaster-affected households disbursed funding for emergency food, injury and death, and rebuilding homes (MacClune et al, 2015). However, there was no compensation for loss of livelihoods or land; farmers who lost their lands in Geruwa rural municipality did not receive any compensation after the floods. In fact, they continue to pay taxes for their lands even though the floods turned those lands into riverbeds (PERC research).

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While non-governmental recovery initiatives have been able to fill some gaps in government recovery efforts, lacking an overarching and, critically, multi-dimensional recovery or DRM framework, these initiatives also tend to be ad hoc, uncoordinated, and small in scope (Venkateswaran and MacClune, 2020).

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The post-event review of the 2017 El Niño Costero in Peru found that the three-year Reconstruction Plan allocated 2.5 billion PEN in recovery funds as follows: 77 per cent to the recovery of grey infrastructure, including repairs for drainage systems, roads, protection infrastructure; 21 per cent for prevention works; and 2 per cent to strengthen institutional capacity. None of that money was allocated for social recovery. This led to household and community recovery stagnating in marginalised communities, despite NGOs implementing ‘cash for work’ and ‘food for work’ programs to enable flood-affected communities to leverage reconstruction projects for income generation. In Cuatro de Mayo, an informal settlement heavily impacted by floods and mainly comprising of women-headed households, households were focused on their daily survival and could not engage in longer-term recovery; such communities require significant institutional engagement and financial support to recover (Venkateswaran & MacClune, 2020; Venkateswaran et al., 2017).

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*Lofted storage space in a flood prone community in Nepal, 2014. © Avash Pandey*

## Frameworks require multi-stakeholder coordination

The large number of sectors and ministries involved in designing and implementing multi-dimensional recovery frameworks requires coordination with a complex array of stakeholders, making effective recovery efforts particularly challenging.

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**‘Recovery is the most complex of the disaster management functions, involving the greatest number and variety of stakeholders and affecting the greatest long-term impact on a community’s social and economic success. There are numerous relationships that must be formed and dependencies that must be fostered, many of which are wholly unfamiliar to the recovery stakeholders that typically operate outside of the post-disaster context.’ —UNDRR, 2017**

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The body of PERCs and the IFRC Disaster Recovery Report (2023) point to the immense coordination challenges that are experienced by governments in conducting recovery, challenges that are both a result of and perpetuate:

- A lack of policy coherence such that recovery is disconnected from sectors critical for planning and operationalising recovery. *For example, in Mexico, the ‘General Law on Civil Protection’ — the main law pertaining to disasters — establishes recovery as a process of returning to normality. However, the law contains ‘minimal provisions’<sup>8</sup> related to recovery from disasters and does not link recovery with shelter, land-use and rights, development plan linkages, livelihoods, or education.*
- Siloisation and competition over resources between sectors and between scales of government, often resulting from the lack of policy coherence and insufficient coordination mechanisms. *For example, after the 2014 floods, a lack of cross-sectoral coordination in Nepal led to the breakdown of the cluster system and hindered social recovery. Though the cluster system was in place, inter- and intra-cluster relationships had not been sufficiently maintained between disasters.*

To mitigate these challenges, a robust framework that supports recovery is needed to clearly outline roles, responsibilities, and coordination mechanisms (IFRC, 2023). The scope of a framework that supports *resilient* recovery is even bigger. In addition to drawing from across national, sub-national, and local level scales of government, a resilient recovery also requires action by, and coordination between, stakeholders from across the DRR, humanitarian, development, private, and climate sectors. Developing a disaster recovery framework that clearly delineates the roles and responsibilities of all these stakeholders, as well as defined coordination mechanisms to unite them around a

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<sup>8</sup> See [https://disasterlaw.ifrc.org/dmi/dmi\\_country/52](https://disasterlaw.ifrc.org/dmi/dmi_country/52)

shared vision and common strategy, requires a clear plan, coupled with guidance on financing, implementing, and monitoring its application (GFDRR, 2020b, p. 7). Done well, however, such a framework can guide stakeholders in how to best implement a resilient recovery – i.e., with a focus on ‘building back stronger, faster, and more inclusively over the short, medium, to long term timeframes of recovery’ (GFDRR, 2020b, p. 7).

### **Multi-dimensional frameworks require multi-sectoral data**

The creation and implementation of multi-dimensional frameworks requires the harmonisation of multi-sectoral data. The lack of pre-established baseline data is often an impediment to undertaking PDNAs and implementing disaster risk and recovery frameworks. Data needs to be built for each sector or line ministry that could be affected by a disaster and should be shared between institutions. A list of pre-disaster baseline data is available in GFDRR’s Disaster Recovery Framework guide (GFDRR, 2020b, p. 12).

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**‘A major data gap is that impact data for a given disaster is usually only collected in the immediate aftermath of a shock, which limits understanding of secondary and long-term impacts and the efficacy of disaster recovery activities’. – (UNDRR, 2022a, p. 163)**

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Fortunately, there are an increasing number of good examples of data from various sectors being used to advance social and economic recovery. For example:

- The Mexican National Risk Atlas<sup>9</sup> is an online platform consisting of a set of maps showing vulnerability based on a variety of physical (i.e., exposure), social, and economic indicators. These maps are intended to be used by local-to-national decision-makers to inform disaster risk management, adaptation, mitigation, and development planning. Data is currently being used at scale across the country. The vision laid out in the 2019 Law of Integrated Risk Management and Civil Protection, particularly for Mexico City, is of a future where, utilising the Risk Atlas, all development decisions are risk-informed, so as to minimise exposure and avoid the creation of new risk (García et al., 2022).
- In Senegal, the Saint Louis Emergency Recovery and Resilience Project (SERRP) is a \$933 million project largely funded by the World Bank focused on the relocation of populations affected by coastal erosion. The ACP-EU NDRR project ‘Strengthening Urban and Coastal Resilience in Saint Louis,’ also funded by the World Bank, is focused on facilitating evidence-based decision-making for strengthening coastal zone management and urban planning in the city of Saint Louis. The Saint Louis project has been leveraged by the SERRP project for technical support on spatial planning and participatory planning to ensure that the

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<sup>9</sup> [www.atlasnacionalderiesgos.gob.mx](http://www.atlasnacionalderiesgos.gob.mx).

needs of and impacts to affected populations are considered in resettlement. As of publication of this report, livelihood restoration plans have been created for the SERRP resettlement in Senegal, suggesting a shift to considering the social aspects of resettlement in recovery planning (PERC research).

### 3.2.3 Resilient recovery frameworks need to be inclusive

Resilient recovery should be not only risk-informed and multi-dimensional, but also inclusive. While many countries have disaster laws, policies, and plans that recognise the special needs of vulnerable population groups, they are often not translated into specific policy and planning provisions, and they do not always cover all marginalised groups (IFRC, 2023). Furthermore, while multi-sectoral government coordination mechanisms are common, they rarely include non-government actors (IFRC, 2023). A framework can only be truly inclusive if all groups are represented or have a say in its creation. The inclusion of marginalised and at-risk groups can be promoted by mandating representation in key coordination and decision-making bodies, as well as actively recruiting members of these groups to work for disaster management institutions (IFRC, 2023).



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

One important area of inclusion is gender. Although gender-responsive frameworks do exist at the global level (e.g., in the SDGs, the 2030 Agenda, and the Sendai Framework), they are not always properly operationalised (Zaidi & Fordham, 2021), in part due to the absence of disaster-affected women in decision-making processes. Women should be recognised as agents of change (Erman et al., 2021; Fordham, 1999; Robles & Benavidez, 2020; Tanaka and Ishiwatari, 2019) and actively engaged in DRM and disaster recovery planning.

Operationalising an inclusive and gender-responsive recovery requires disaggregated data about the vulnerabilities in affected populations and the needs of diverse groups within a community. However, finding and/or collecting this data can be challenging; reliable, up-to-date data about vulnerability, exposure, and resilience is often missing (UNDP, UNDRR & GFDRR, 2022). For example, census data at the national or local level is often incomplete, especially given that 'out of sight' groups are, as the characterisation suggests, hard to find and often even harder to engage. Access to large-scale data sets and/or the capacity to analyse them is often limited (IFRC, 2018b). While there are efforts to standardise and systematise data (IFRC, 2018b) this varies by country and across contexts. And, vulnerability-specific indicators about excluded populations are often missing. For example, while the Sendai Framework has two gender-sensitive indicators, related to mortality and the number of affected people, these are generally considered insufficient to truly generate a gender perspective in DRR and resilient recovery (Zaidi & Fordham, 2021).

### **3.2.4 Effective implementation of resilient recovery frameworks requires capacity building and learning**

Resilient recovery frameworks need to be paired with mechanisms for building the technical capacity of decision-makers and practitioners for framework implementation. Yet, the Midterm review of the Sendai Framework highlighted there is a lack of technical capacity for resilient recovery.

Capacity is often a particular challenge at lower levels of governance (Venkateswaran et al., 2017). Given that local governments are often the ones responsible for the implementation of particular elements of recovery, this can be a significant hurdle to effective recovery. A clear, strong framework alone will be insufficient; it needs to be accompanied by sufficient resourcing for both the required capacity building and to enable implementation. For example, most countries have legally enforceable building codes, and some countries have integrated DRR into these codes (IFRC, 2023). However, the local governments that are usually responsible for code implementation and enforcement often lack the capacity and resources (ibid). One way to enhance the capacity to implement a resilient recovery framework is to integrate technical expertise directly at the local level.



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**In Nepal, local governments reported lacking technical and financial capacity to support community-level rebuilding and mainstream climate change projections and resilience more broadly into recovery and reconstruction. In Nanjapur municipality, for example, there have not been many changes in regards to climate change mainstreaming. People are still rebuilding in flood-prone areas, and they are forced to rebuild in the same way as they can't afford raised structures. However, municipalities are able to move the needle on integrating resilience considerations into DRM where they are provided technical support. In the aftermath of the Gorkha Earthquake, central government-based engineers and evaluators were placed within local government units and at the ward-level to support reconstruction. Similarly, where municipalities have received technical support and co-financing from external organizations, they have been able to integrate resilience into their plans and investments (e.g., on NbS interventions, new drainage canals, raised granaries and nurseries). Though these decisions are more in the realm of DRR than recovery, they do indicate that technical support to local governments is a key input for mainstreaming resilience across DRM (PERC research).**

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Learning and adapting recovery arrangements is crucial to the recovery process, as most of the Alliance PERCs have identified. Many of the challenges associated with recovery can be attributed to a lack of learning and institutionalisation of the following types of learning:

- Learning of what worked and did not work in past recovery processes;
- Identification of good recovery and resilient recovery practices that can be scaled; and
- Integrating new risk information, including emergent and/or intensifying climate hazards.

Box 3 describes how the Senegalese government is learning from disasters to improve recovery processes, yet there is a need for a framework that ties these efforts together into a coherent resilient recovery approach. Given that learning continuously emerges in today's changing climate, and as we build our experience in facilitating recovery, it is important that guidelines and instruments be dynamic. Recovery frameworks need to be living documents that are regularly reviewed and adapted based on learning and according to changing risk and governance conditions, as well as the results of ongoing monitoring and evaluation (IFRC, 2023). This means developing frameworks that identify, institutionalise, and scale good practice, and can be adapted based on learning, including learning from M&E.

### **BOX 3: Tying learning to scaling in Senegal**

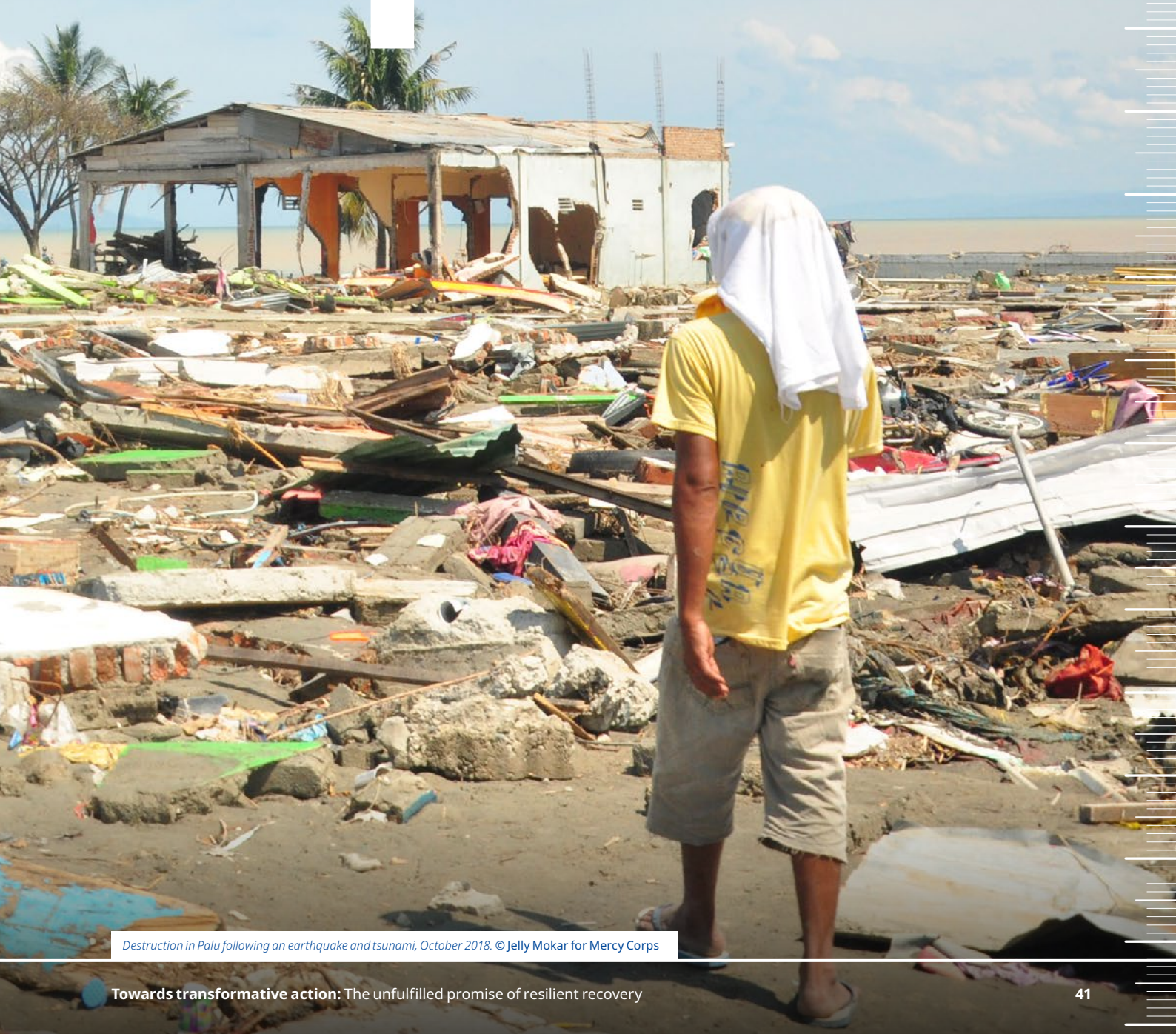
Senegal's recovery approach evolved along with decentralisation in Senegal. Prior to the 2009 floods, response largely consisted of neighbourhood-level emergency water pumping and temporary resettlement in buildings such as schools. This strategy was expensive, especially given the frequency of urban flooding.

Major, extensive urban flooding in Senegal in 2009 and 2012 prompted the government to shift their approach towards recovery and flood management. This shift was underpinned by learning that informed strategic plans for recovery and reconstruction projects. For example, the Ten-Year Programme Décennal de Gestion des Inondations (PDGI 2012-2022) was implemented following the 2012 floods. This programme was part of the Hyogo Declaration and the Hyogo Framework for Action 2005-2015, the aim of which is to strengthen the resilience of nations and communities to disasters through focusing on four key areas: improving knowledge of flood zones, relocating and rehousing disaster victims, planning and developing cities to prevent the risk of flooding, and strengthening the resilience of cities. While not specific to recovery, and not a framework in and of itself, the ten-year plan has enabled a gradual shift from crisis management to risk management (including a focus on risk awareness, prevention, resettlement, etc.). Major government projects such as the Senegal Storm Water Management and Climate Change Adaptation Project (PROGEP) and Integrated Flood Management Project (PGISS) are part of this plan. The PROGEP project focused on developing an urban stormwater drainage plan and improving urban plans based on flood risk mapping. Another series of projects such the SERRP project, launched in 2018, and Jaxaay project, launched in 2006, focused, in part, on resettlement of flood prone populations; yet while much has been learned about the social considerations of resettlement through these projects, these projects have remained restricted to their target geographies due to, amongst other factors, securing land and building permanent housing.

All three of these and other similar projects show promise, but to more broadly implement resilient recovery there is a need to institutionalise a national recovery process based on learning from these programs so that each of them is interlinked and connected through a 'recovery regime', including a framework enabling coherent financing flows. Lacking such a framework, these projects remain project- and place-specific and an opportunity is missed for implementing an overarching national strategy for resilient recovery.

*Source: PERC research*

# 4



*Destruction in Palu following an earthquake and tsunami, October 2018. © Jelly Mokar for Mercy Corps*

# 4. Findings

## Key messages

- 1. Integration of resilience into recovery efforts has been limited:** While ‘building back better’ was adopted as one of the priorities of the Sendai Framework, its application has been inconsistent and missed opportunities to enhance resilience.
- 2. Recovery falls in a gap between humanitarian and development approaches:** While early recovery is a part of the emergency response phase (albeit limited and underfunded), the transition to longer term recovery is not always coherent (in relation to funding and approaches). There is an opportunity to enhance coherence across the climate, humanitarian, and development nexus.
- 3. Resilient recovery has been peripheral in global climate frameworks:** Operationalisation of resilient recovery has not been supported through global climate policy to date, although there are emerging opportunities to integrate recovery into loss and damage arrangements and funding.
- 4. Coherence and integration with adaptation for resilient recovery:** Recovery should leverage the expertise of the adaptation sector and seek to build coherence across the adaptation, recovery, and loss and damage continuum.

In the aftermath of a disaster, as well as in the preparation of recovery plans and frameworks prior to a disaster, smooth coordination between local authorities, national governments, and international actors is paramount. While the previous chapter focused on the importance of frameworks at the national level, this chapter focuses on the support available in various international policy domains (DRR, humanitarian, development, and climate) that can help facilitate a resilient recovery.

The interplay between national and international actors involved in disaster recovery is usually managed through National Disaster Management Authorities (NDMAs), which foster collaboration between various stakeholders, including government agencies, non-governmental organizations, and international agencies, thereby helping to prevent the reinforcement of silos between sectors and stakeholders. Ideally, this interplay should promote a holistic response that

addresses immediate humanitarian needs while also considering long-term development and climate resilience objectives.

The role of NDMAs in ensuring coherence is important, especially as, at the global level, policy frameworks on recovery are still highly siloed. Resilient recovery is addressed to varying degrees within the Sendai Framework for DRR, humanitarian aid, and development, and within processes such as the G20 DRR working group and the International Recovery Platform. There is fragmented action across the climate, humanitarian and development nexus, while there is no global-level framework or initiative that harmonises approaches and funding streams and identifies gaps.

## 4.1. Resilient recovery and disaster risk reduction

The 2015 Sendai Framework explicitly incorporated build back better in its fourth priority for action to reduce risk, entitled ‘Enhancing disaster preparedness for effective response and to ‘Build Back Better’ in recovery, rehabilitation and reconstruction’. For each Priority, the framework includes actions to be taken at regional-to-global levels and local-to-national levels. A critical enabler for action under priority 4 is continual learning within and between countries to improve recovery pre-planning and efforts to ensure that development pathways do not continue to perpetuate or exacerbate risk. This is being further facilitated by the International Recovery Platform<sup>10</sup> – a global partnership of UN agencies, international financial institutions, governments, and other organizations created to strengthen knowledge and share experiences and lessons on building back better in recovery, rehabilitation, and reconstruction – which has aligned its work with the Sendai Framework.

The Sendai Framework, the International Recovery Platform, and the work of particular actors such as GFDRR and UNDP, have led to greater awareness of building back better, and there are examples of good practice, but this has been insufficient to move the needle on resilient recovery. The Mid-term Review of the Sendai Framework in May 2023 concluded that Priority 4 has seen the least amount of progress: build back better principles are being applied inconsistently, DRR practices remain largely reactive rather than proactive, countries are missing opportunities to build resilience in recovery because of a lack of pre-disaster preparedness for recovery, and there is still urgent need to enhance inclusivity and participation in disaster recovery (UNDRR, 2023; UNDRR, 2015). In fact, the UN General Assembly political declaration on the Midterm Review in May 2023

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<sup>10</sup> See <https://recovery.preventionweb.net/>



sounded an alarming call: ‘we are deeply concerned that build back better principles have not been applied systematically’ and ‘most countries still lack effective pre-disaster preparedness to effectively respond and build back better in recovery, rehabilitation and reconstruction, which has led to missed opportunities to build resilience, reduce disaster risk and make progress towards sustainable development through risk informed recovery and reconstruction’.

The G20 working group on DRR – a new and welcome initiative of the Indian government – echoed this concern, noting in its communique in July 2023 ‘practices and policies to strengthen recovery, rehabilitation, and reconstruction following disasters do not always follow Sendai Framework principles of Build Back Better, thereby missing opportunities to build resilience, reduce risk, and make progress towards sustainable development through disaster recovery, rehabilitation and reconstruction’ (G20, 2023, p.6). The communique further calls for a strengthening of national and global systems to ‘capitalize on the transformative potential of disaster resilient recovery’ (ibid, p.6). The G20 working group will promote the creation and strengthening of policies and systems that promote resilient recovery, and develop knowledge products in cooperation with the International Recovery Platform (IRP). While this is welcome, it does not refer to the much-needed bridges that need to be made with the humanitarian, development, and climate sectors, which need to be capitalised on for recovery to be truly transformative.

## 4.2. Resilient recovery and the humanitarian-development nexus

Recovery is addressed to a certain degree by both the humanitarian and development sectors, and sits between the two. Humanitarian and development sectors work in different ways, but both have a role in delivering resilient recovery.

The UN-led international humanitarian system works through clusters – a system that clarifies the division of labour, leadership, and accountability in the 11 main areas of humanitarian response. Early recovery used to be one of these clusters, combining humanitarian actions with development principles to address recovery needs during emergency situations (UNDP, n.d.). Contrary to the belief in a linear progression from crisis to recovery and then development, early recovery emphasises the importance of laying the groundwork for recovery and development right from the start of the emergency response phase (PHAP, n.d.).

Given its multi-disciplinary and forward-looking character, early recovery work has the potential to be an important part of resilient recovery. Yet, a 2018 evaluation of the global cluster found that ‘the concept of early recovery and legitimacy of a dedicated Early Recovery Cluster have not taken hold’ and that country-level Early Recovery Clusters are ‘chronically underfunded’ (Murray et al., 2018). According to the evaluation, the concept of early recovery was not clear and accepted by humanitarian stakeholders, and there was a particular disconnect between the global and country levels. Key country-level stakeholders were not aware of the role of the cluster and often did not receive or access available guidance. In addition, due to its cross-cutting nature, there were ‘boundary concerns’ with other clusters, and cluster coordinators often found themselves side-lined by the Humanitarian Country Team (ibid). Finally, in particular among humanitarian donors, there is an expectation that other actors, particularly development financing, are covering or should cover recovery-related activities (Obrecht and Swithern, 2022), moving from humanitarian action into the development realm.

Currently, and following the recommendations of the evaluation, the cluster seems to have been dissolved, and the sector has been mainstreamed as a sector across the work of the other humanitarian clusters. Although early recovery is difficult to distinguish from other relief efforts, in particular with the dissolution of the cluster, funding levels for early recovery remain low. In 2022, the amount of humanitarian funding tagged by the UN as ‘early recovery’ was \$344 million (out of almost \$41 billion in humanitarian funding), representing less than 14 per cent of what was requested (OCHA, 2022)<sup>11</sup>.

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<sup>11</sup> Note that some early recovery work is likely mainstreamed through other humanitarian clusters (such as livelihoods; shelter; or water, sanitation and hygiene) but as this is not harmonised by the Early Recovery Cluster, it is difficult to get a coherent picture.

Key to early recovery is laying the foundations for the longer-term recovery that would follow, and the assumption that it will be picked up by development actors. The coordination between the humanitarian and development sectors, generally referred to as the 'nexus', emerged with the realisation that protracted crises and recurring disasters demand more integrated approaches. However, the implementation of the nexus continues to be challenged by fragmented funding streams, overlapping mandates of different agencies, and the balancing of short- and long-term perspectives.

Within development action, interest in and grant funding for resilient recovery within global frameworks remains limited, with most of the finance for resilient recovery coming from international financial institutions in the form of loans, which risk eroding resilience by adding debt burdens to national budgets. That said, some of these institutions, and in particular the World Bank, have provided technical assistance, shared expertise, and support the development of institutional capacity, in particular the World Bank's Global Facility for Disaster Reduction and Recovery (GFDRR). Yet, challenges remain to provide development funding and expertise as quickly as it is needed to allow for a smooth transition between humanitarian and development activities, and pledges for medium-to-longer term recovery support can take significant time to be activated, leaving communities dependent for long periods of time on emergency assistance (see Chapter 5 on resilient recovery financing).

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**'Recovery often continues at the local level away from the media spotlight, over months and years; long after the humanitarian relief effort has finished. The transition from relief to longer-term development can be challenging, often with less funding available for resilient recovery.'** — GFDRR, 2019

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While the 2030 Agenda for Sustainable Development does refer to the Sendai Framework and recognises the importance of DRR, it does not explicitly include 'recovery' or 'building back better'. Resilient recovery could be considered to be implicitly present throughout<sup>12</sup>, but because it is not explicit, it is easily overlooked. This highlights the need for more proactively linking development goals with humanitarian and DRR objectives.

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<sup>12</sup> From the protection of livelihoods to help people recover (SDG1), promoting resilient health systems for disaster recovery (SDG3), creating resilient schools that can also serve as centres to coordinate response and recovery efforts (SDG4), building resilient infrastructure (SDG9), enhancing waste management in the recovery phase (SDG12) (see UNDRR, 2015b).



## 4.3. Resilient recovery and global climate policy

The requirement for resilient recovery is clearly very strongly driven by the threats of climate change. However, so far, resilient recovery has been peripheral in global climate policy, despite its transformational potential.

The Warsaw International Mechanism (WIM) on Loss and Damage has a Technical Expert Working Group on Comprehensive Risk Management. Comprehensive risk management approaches include risk assessment, risk reduction, risk transfer, and risk retention. Such approaches aim at building long-term resilience of countries, vulnerable populations, and communities through emergency preparedness, measures to enhance recovery, rehabilitation and build back/forward better, social protection instruments including social safety nets, and transformational approaches. The discussions within the WIM have remained at a technical level, without funding available to operationalise guidance.

There are now new opportunities, with the decision made at COP27, to strengthen existing funding arrangements for loss and damage and create a loss and damage fund. The decision text explicitly refers to recovery in the context of loss and damage funding and identifies the 'need for climate-resilient reconstruction and recovery' as a gap in the current landscape (UNFCCC, 2022). Indeed, throughout the work of the Loss and Damage Transitional Committee<sup>13</sup> in 2023, recovery has been mentioned as a key element in the loss and damage 'continuum', from preparedness to recovery, rehabilitation, and reconstruction (UNFCCC, 2023). While loss and damage negotiations have generally not included concepts of resilient recovery, the integration of recovery in climate policy negotiations is a welcome step towards greater coherence and action.

While recovery falls logically within the Loss and Damage policy realm, we cannot take a siloed approach. Its intersection with adaptation is critical. Many communities face repeated disasters and are in a cycle of continuous recovery; for these communities, resilient recovery can and should be an avenue to adapting and building resilience to climate impacts. This should also entail leveraging the experience and capacity of the adaptation community and considering adaptation and adaptation funding as core to recovery, building coherence across the adaptation and loss and damage continuum.

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<sup>13</sup> COP27 established a transitional committee on the operationalisation of the new funding arrangements and fund, to make recommendations for COP28. More on the work of the Transitional Committee is available here: <https://unfccc.int/topics/adaptation-and-resilience/groups-committees/transitional-committee>.

# 5



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

# 5. Resilient recovery financing

## Key messages

- 1. Countries face significant challenges in mobilising and disbursing funding for resilient recovery:** Climate-induced disasters require urgent financing for recovery, but countries have access to only a patchwork of funding sources. Funds are often prioritized to address critical needs in emergency response rather than medium to longer-term recovery. Emergency response funding, while still underfunded, is 30 times greater than finance allocated to recovery. Limited pre-planned finance arrangements hamper the timely and effective disbursement of the funds that are available.
- 2. There is a lack of international grant funding for recovery:** The majority of recovery is funded through loans, with limited international grant support for resilient recovery. Official development finance for reconstruction and rehabilitation is negligible compared to funding for emergency response, leaving countries to bear the costs of disaster impacts and recovery themselves.
- 3. Reliance on loans causes increasing debt burdens:** With limited national and grant resources, countries rely heavily on loans to finance recovery, leading to high debt burdens and diminished economic prospects. Over 50 per cent of the debt increase in climate vulnerable countries is related to funding disaster recovery. Small Island Developing States (SIDS) and developing countries in particular face a negative feedback loop as heavy indebtedness hampers their ability to recover from future disasters and governments are forced to service loans rather than allocate funds to emergency response and resilient recovery needs. During crises, agreements to pause debt repayments across instruments are vital to resilient recovery. Measures also need to be taken to address and ease the debt burden acutely felt at household level as a result of taking on debt to rebuild homes and recover lost crops and livelihoods from small business.
- 4. Global and national solutions are urgently needed to ensure swift, adequate funding for resilient recovery:** International grant funding that promotes resilient recovery is required, and debt burdens must be reduced including with more effective use of innovative approaches and blended financing tools, such as debt relief and pause clauses. At the national level, the effective mobilisation of finance for resilient recovery requires better pre-planning, anchoring recovery finance into disaster risk finance mechanisms.

## 5.1. Limited recovery finance options at country-level

Recovery requires significant resources – some estimates suggest the annual costs are \$200 billion – year recovery is critically underfunded. In the aftermath of disasters, countries rely on a patchwork of funding sources, made up primarily of public budget allocations, loans, bilateral and multilateral grant funding, and risk transfer mechanisms, and that patchwork typically falls well short of the need.

As our PERC research illustrates, this looks quite different in different countries. Senegal, for example, currently does not have a consistent source of domestic recovery funding. While the country may allocate funds to recovery after disasters, the country is highly dependent on international donors and lenders for recovery financing; international donors often provide project-based funds for recovery (e.g., PROGEP, SERRP, etc.), limiting the scalability of recovery action.

Nepal, on the other hand, relies on both international and domestic sources of financing for disaster recovery and reconstruction. For large disasters, the government mobilises foreign loans, their national Prime Ministers' Relief and Recovery Fund and Central Management Support Fund and provincial and local government disaster funds. Nepal is currently developing a disaster risk financing strategy, but this is in the early stages. Plans include a \$50 million contingency financing agreement (CAT DDO) with the World Bank, and the national provision of insurance, including agricultural, livestock, and business insurance. These are expected to cover recovery needs beyond reconstruction. In comparison, Mexico has a tiered and diversified financing approach that is a combination of threshold-



Landslide mitigation efforts in Nepal. © Tom van Cakenberghe, Mercy Corps

based catastrophe bonds, insurance, sector-specific insurance schemes, and national budget allocations. To recover from smaller scale disasters that do not receive a national disaster declaration, sub-national and local governments allocate recovery funds out of their own budgets; what sub-national and local governments are able to allocate is highly variable and context dependent.

At the local level, authorities generally rely on limited municipal budgets as the primary source of funding for local-level recovery efforts, supplemented by emergency funds from the national government or the international community as the size of events and funds available escalate (IMC Worldwide, Ltd, 2019). However, amidst the many priorities following a disaster event, and especially if pre-established recovery frameworks are not in place before a disaster, financial resources are often prioritized for search and rescue and emergency response (GFDRR, 2019). While this is clearly vital, funding also needs to be made available for longer-term recovery, reconstruction, and rehabilitation.

Funds that are clearly earmarked for recovery, such as catastrophe bonds and public and private insurance, as in Mexico, could help bridge this gap, but in too much of the world, such mechanisms are unavailable. As a result, households, businesses, and communities who are keen to rebuild their lives and livelihoods as swiftly as possible are left to fund their own recovery. This generally means building back to the pre-disaster state or worse. In Mozambique, for example, the government has adopted Build Back Better standards, but the people of Mozambique, faced with delays in longer-term recovery funding are, in practice, just building back (Kleinfeld, 2019).

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**In Rajapur municipality in western Nepal, wealthier households have built raised platforms before reconstructing their concrete houses, but poorer households are rebuilding in the same ways. The main driver of resilient reconstruction is financial affordability, not a lack of awareness (PERC research).**

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Whether financed by budget allocations, reallocations, or through risk transfer mechanisms, in most developing countries financial resources that can be mobilised within the country are not nearly enough to meet all recovery needs and build resilience. This is not only due to the enormous burden of post-disaster recovery needs, but also because economic activity is often disrupted after a disaster.

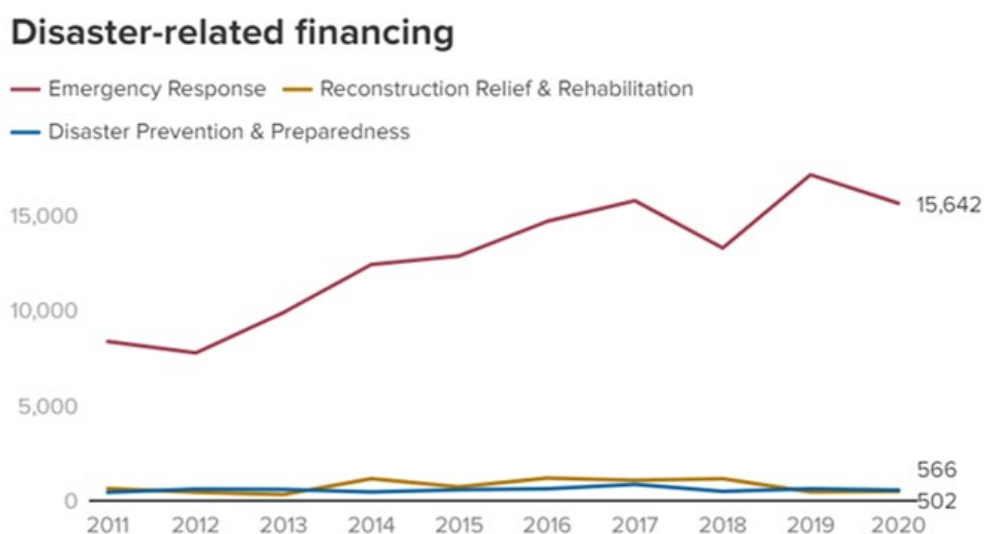
## 5.2. Lack of international grant funding for recovery

When countries are unable to mobilise sufficient resources to meet post-disaster recovery needs, their national governments often seek support from international sources. However, there is very little international grant funding to help countries recover and rebuild, and even less that is specifically earmarked for supporting a resilient recovery. What grant financing does exist for recovery is often mobilised for large-scale, high-profile disasters, failing to take into account the financially debilitating effect of repeated small disasters (Dupraz-Dobias, 2022).

Looking at figures of official development finance, only about \$500 million was allocated to reconstruction, relief, and rehabilitation in 2020 (Dupraz-Dobias, 2022), which is about 400 times less than what is needed according to some estimates (Songwe et al., 2022). Furthermore, funding for reconstruction and rehabilitation is negligible compared to funding for emergency response in the wake of a disaster — emergency response funding is approximately 30 times greater than funding for recovery (Dupraz-Dobias, 2022; see Figure 6).

It is clear that funding recovery – resilient or otherwise – is not prioritized by donors. While providing funds to respond to disasters is seen as an act of humanity and solidarity, funding recovery is primarily perceived as a matter for the national government. And according to GFDRR, ‘in most cases, the biggest contribution to recovery financing comes from the citizens within the country and abroad’ (2020, p. 61).

**FIGURE 7:** Disaster-related finance in million USD (Dupraz-Dobias, 2022)



Source: OECD.Stat

The New Humanitarian



*Destruction in Palu following an earthquake and tsunami, October 2018. © Jelly Mokar for Mercy Corps*

The lack of international grant funding is also a symptom of a fragmented global disaster financing landscape where responsibility for funding recovery falls through the gaps between humanitarian, DRR, development, and climate finance (Swithern, 2022):

- Humanitarian actors prioritize limited resources on essential life-saving and first phase response, while implementing early recovery efforts within and alongside the emergency response. Yet, the Early Recovery sector is small, deprioritized, and chronically underfunded.
- DRR finance is hard to track, operates in a piecemeal way (Development Initiatives, cited in Swithern, 2022; Peters, 2023), and tends to focus on ex-ante action. In addition, following a steady increase in DRR funding between 2018 and 2020, the total volume of ODA for the purpose of DRR decreased by 5 per cent in 2021, of which 43 per cent was provided in loans – a 10 per cent increase since 2019 (Development Initiatives, 2023). Moreover, due to inconsistent allocation of funding, according to donor priorities, one third of all DRR finance is concentrated in just a handful of countries in the Far East Asia region (ibid).
- Adaptation faces its own major financing gap; estimated adaptation finance needs are 5-10 times higher than current international adaptation finance flows, and this gap continues to widen as a result of the increasing needs resulting from climate change (UNEP, 2022). In addition, adaptation finance is currently not oriented to enhance resilience in the post-disaster recovery phase (Watkiss et. al in UNEP, 2022).
- Resilient recovery falls squarely under loss and damage. UNFCCC agreed to establish a dedicated fund for loss and damage, and strengthen related funding arrangements, but it is not yet clear what it will fund and how coherence will be built to respond to loss and damage.

### 5.3. Without funding for recovery, countries are forced to take on debt

With limited national-level resources and international grants available, countries rely heavily on loans to finance recovery. In addition, countries are often forced to continue servicing existing loans in the aftermath of disasters instead of allocating funds to the recovery phase. This has dramatic impacts on their debt levels; 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) and repeated disasters compound the problem. Pakistan, for example, has a heavy debt burden and had to take on an estimated \$20-40 billion in borrowing to recover from the major floods of 2010 and 2011 (DI, 2022). In 2021, this contributed to annual debt servicing of \$11.9 billion, accounting for 32 per cent of government revenue and significantly limiting the government's fiscal space to respond to the 2022 floods. Pakistan took on more debt to respond to these floods; indeed, the country took on more debt than it received in humanitarian support in 2022 (Loy, 2023).

The heavy reliance on loans is pushing SIDS and many developing countries into a negative macroeconomic spiral. The decline in both physical and economic conditions post-disaster in heavily indebted countries not only hampers their ability to meet existing debt obligations immediately after the crisis but also risks lowering their credit rating and diminishes their future economic prospects for generating sufficient revenue to achieve long-term debt sustainability. This challenge is intensifying with the increasing frequency and intensity of sudden onset events and the additional, substantial finance needs those disasters generate. Relying on additional loans to finance recovery exacerbates the problem; 'when the reconstruction and recovery is financed with more loans, it can be like throwing fuel onto the fire' (Eurodad, 2020 p.1).

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. Action is needed on provision of grant-based financing available for locally-led resilient recovery accessible at household and community level, effective use of shock responsive social protection systems pre- and post-disaster, provision and accessibility of micro-finance schemes/options, and where appropriate insurance to alleviate the debt burden experienced at the household level.





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

## 5.4. How to finance resilient recovery

With little grant funding available to countries, and little fiscal space within countries to fund recovery within existing funding streams, solutions at both global and national levels need to be found to ensure that funding is swift, adequate, and supports resilient recovery.

### Global level resilient recovery finance needs to step up

At the global level, there are a number of considerations that, if used to inform and revise current disaster financing, could help unlock a more resilient recovery.

**New grant funding:** The vast majority of recovery is funded by vulnerable governments and communities – often through acquiring national and household debt. This means that countries who were least responsible for causing the climate crisis are paying to recover from its impacts. There are real questions of equity which cannot be overlooked; the lack of international grant support to such countries, whose long-term development is being severely constrained, should be a cause of concern. The creation of a loss and damage fund presents a key opportunity to develop a specific finance stream for recovery, which should explicitly integrate ‘resilient recovery’ principles aligned with Sendai Priority 4.

**Avoidance of debt burden:** where international loans continue to be used, there needs to be a fundamental shift in how they are designed, including climate resilient

debt clauses and debt relief to free up finance for recovery and prevent spiralling debt burdens. Some progress has been seen on this, through the Bridgetown agenda and the July 2023 summit for New Global Financing Pact. One outcome of the summit was a call for bilateral, multilateral, and private sector creditors to offer climate-resilient debt clauses by the end of 2025, allowing borrowing nations to pause servicing debts to respond to disaster impacts. The summit also promoted various options for debt relief, including debt swaps that could allow low-income countries to preserve nature and decarbonise economies rather than servicing debt. While the momentum from this is positive, much more is needed to provide developing countries with a toolkit of financing options and prevent unsustainable debt burdens. The COP28 Global Expert Review on Debt, Nature, and Climate offers an opportunity to further this important policy development to relieve debt burdens.

**Incentives and technical assistance:** Donors and International Financial Institutions (IFIs) need to support countries to preplan finance and explicitly hardwire in resilience. There are already examples and precedents which show how a resilient recovery can be incentivised and/or built into financing requirements. These include mandates or incentives that are integrated into assessment tools, loans, and financing strategies. For example:

- World Bank provision of loans to Nepal for housing reconstruction which mandated seismic code compliance (although there remain challenges in adherence to these codes (UNDRR 2023b));
- Credit offered by the World Bank (through Catastrophe Deferred Drawdown Options, Cat DDO) and Asian Development Bank (through Contingency Disaster Financing) which is contingent on having a satisfactory DRM plan and/or taking specific pre-agreed measures to strengthen DRM (World Bank, 2018; Asian Development Bank, 2019);
- The recovery duration adjuster—an upgraded measure of vulnerability—developed by the Caribbean Development Bank to better reflect the changing economic, environmental, and resilience conditions of SIDS in the Caribbean region (Caribbean Development Bank, n.d.) and to better account for the longer duration of recovery often experienced by SIDS. The recovery duration adjuster is designed to adjust financial eligibility for SIDS, where using the GNI alone can fail to account for underlying vulnerabilities, capacities, and debt that limit recovery capacity.

## National level recovery finance needs to be pre-planned and incentivised

National recovery finance should be pre-arranged, with explicit criteria for supporting resilience, to ensure that there are no delays in the reconstruction and recovery process in the aftermath of a disaster. Preparing financial mechanisms pre-disaster is critical; they can be complex to set up, need to be carefully designed, and should enable a rapid disbursement, which can be difficult to deliver in the post disaster turmoil (GFDRR, 2020). Yet only 1.3 per cent of official crisis financing flows – including all expenditures related to preventing, preparing for, responding to, and recovering from disasters – were pre-arranged in 2021, and just over half of that was World Bank Cat DDOs<sup>14</sup>.

More and more countries are developing disaster risk financing strategies, supported by the World Bank and others, which set out how a range of different financial tools – contingency budgets, contingency loans, insurance and risk financing measures, and where required international aid – can be utilised to respond to a range of different disasters, large and small. Different financial tools are used for risks of varying severity and frequency, in a ‘risk layering’ approach. Thus, national budget allocations are used for relatively small and frequent disasters, and risk transfer for much larger disasters (as is the case in Mexico, for example). Assessing financial gaps across disaster risks is the objective of the ‘Global Shield Against Climate Risks’; formally a G7-V20 Initiative and a global funding arrangement outside the UNFCCC structure to finance activities that enhance financial protection in the face of losses and damages. One of the key components of this initiative is organising an in-country-process in which key stakeholders take stock of existing climate and disaster risk financing instruments and define protection gaps. This initiative should be seen as a major opportunity to highlight the critical need for more finance for resilient recovery and help identify appropriate financial instruments to support longer-term recovery, and not just in the immediate aftermath of a disaster.

As highlighted in the IFRC Disaster Recovery Report, these ex-ante financing mechanisms can also be structured to provide a reliable and predictable stream of funding for long-term recovery (2023). For example, domestic laws establishing national disaster funds can include provisions which earmark funds for recovery, permit regular disbursements over a multi-year period (e.g., 3, 4, or 5 years) after a disaster, and enable funds earmarked for DRR to be disbursed for resilient recovery activities (IFRC, 2023).

Pre-planning these financial mechanisms also provides an opportunity for incorporating resilience. Mexico has led the way on this; Box 4 below describes FONDEN, a scheme that has now closed but which provides a model that other countries could follow. Mexico’s most recent catastrophe bond was issued as ‘sustainable’ as it will be applied to programs that meet ESG criteria (Evans, 2020).

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<sup>14</sup> [Unveiling the state of pre-arranged financing for crises — Centre for Disaster Protection.](#)

#### **BOX 4: FONDEN and Cat Bonds: An example of an effective financing scheme for resilient recovery**

Mexico's sophisticated approach to disaster risk management and financing has evolved over the past three decades. Mexico's Fund for Natural Disasters (Fondo de Desastres Naturales) or FONDEN as it was commonly referred to, was established in 1996 to support infrastructure reconstruction at the federal, state, and municipal levels. While FONDEN was officially dissolved in 2021, it provides a powerful example of how pre-arranged financing can be structured and implemented.

There were two linked programmes – FONDEN, the primary programme targeted to support reconstruction and FOPREDEN, with a much smaller budget targeted towards prevention. FONDEN's funds could be used to implement resilient recovery – rebuilding public infrastructure either to better standards or in safer areas (World Bank, 2012). Further, FONDEN incentivised the uptake of protection of public assets by making recovery support dependent on local insurance. For an initial disaster, FONDEN financed 100% of the reconstruction of federal assets and 50% of the reconstruction of local assets. However, for subsequent disasters, if local assets were uninsured, the percentage of reimbursement from FONDEN decreased.

FONDEN financing relied on a combination of a federal budget allocation (0.4%) and market-based risk transfer measures – specifically CAT (catastrophe) bonds and insurance. This combination of funding sources provided the federal and state levels with a consistent ex-ante funding base where smaller events were covered by the federal budget allocation, and larger scale events that might drain the allocated budget were covered by the CAT bond.

While FONDEN has been closed, Mexico is still using CAT bonds to fund recovery from major disasters. The most recent CAT bond issued by the World Bank provides \$485 million in coverage from 2020-2024 for four categories of hazards: low-frequency earthquakes, high-frequency earthquakes, Atlantic Ocean hurricanes, and Pacific Ocean hurricanes. Each of these hazards needs to meet certain criteria in terms of intensity or scale (but not impact) to trigger a payout; for example, a low-level earthquake with high damages might not meet the criteria. Payments are predefined based on qualifying criteria. For other hazards that fall outside of these criteria, other financial instruments and plans should be defined.



Road embankment in the Karnali River Basin, Nepal, 2015. © Karen MacClune

## Leveraging the private sector

Businesses play a vital role in supporting community recovery following a disaster. One of the most critical aspects is that businesses maintain operations during and after an extreme event. Preserving livelihoods is fundamental to community resilience; businesses that stay open or re-open quickly provide much needed services and employment, without which communities cannot recover. However, disasters can have profound impacts on businesses, especially small businesses which are more susceptible to business interruptions, failure due to damages, and have less access to financial capital for recovery (Sharif, 2021). This impacts not just the business owners, but also employees and the communities within which these businesses are located. With this in mind, actions taken by businesses themselves to plan and prepare for disasters, and by the government to support that planning and preparing, can minimise business disruptions, contribute to a shorter recovery time, and protect local economies and livelihoods (Norton et al., 2018).

Private sector and local businesses also often provide financial and technical support as well as a range of critical support in the disaster response phase – such as telecommunications, cash transfers, logistics, and data and analysis services. There is room to more systematically leverage these private sector resources, expertise, technology, and capacity to deliver a resilient recovery. However, unlocking this potential, beyond a philanthropic or corporate social responsibility perspective, typically requires the private sector to see a business benefit for their involvement. Greater use of pre-established Private Public Partnerships could benefit the post disaster reconstruction phase and could provide an opportunity to harness long-term expertise and resources (GFDRR and the World Bank, 2020b).

Private sector support for resilient recovery through effective investment is a further route<sup>15</sup>. For example, the Bridgetown Initiative notes the potential of the

<sup>15</sup> See <http://nouveau-pacte-financier.org>

private sector, with \$5 trillion in private financing that could be leveraged through 'setting up a Climate Mitigation Trust backed by \$500 billion worth of Special Drawing Rights' (Chan, 2022). However, though this and other ways to mobilise private-sector capital to finance sustainable and resilient infrastructure in developing countries have been suggested, a challenge for this type of investment is a lack of data on its returns (Henry, 2021).

Overall, there is clear potential to better leverage the private sector in resilient recovery, and there is interest on the part of many businesses. But cultural differences between the public sector, humanitarian and DRM communities, and the private sector, coupled with the complexity of the recovery landscape, mean this potential remains nascent. One of the clearest entry points, however, is to establish relationships and partnerships before a disaster linked to clear recovery frameworks (GFDRR and the World Bank, 2020b, pgs. 4, 20, 34).

## Financing gender-responsive recovery

Broadening the thinking about what gender-responsive recovery finance should support has the potential to solve long-term, underlying issues, thereby significantly building resilience for women in particular (Erman et al., 2021; Hallegatte et al., 2016; Zaidi & Fordham, 2021) and communities more broadly.

There is increasing recognition that a gender-responsive lens in climate financing is necessary to address discrimination. This translates into the inclusion of Gender Action Plans in large-scale, international climate funding mechanisms, such as the Green Climate Fund and the Clean Investment Funds. These mechanisms are designed to incorporate gender-considerations early in the process rather than adding gender as an afterthought (Habtezion, 2016). However, despite the recognition of gender-responsive finance in these global frameworks, 'gender differences in access to the economic and financial means for recovery are telling' (UNDRR, 2022b, p.24).

Gender-responsive finance can be enabled by providing direct finance via small grants, local-level financing, and innovative financial products (Habtezion, 2016; Huang et al., 2022). Direct finance can target those that fall outside of international aid or national funding structures (Enarson, 2012; Robles & Bernavidez, 2020), particularly women who typically rely on informal financial infrastructures (e.g., remittances, informal borrowing) that are not consistently available in the post disaster context (Erman et al., 2021). However, gender responsive financing should go beyond the traditional focus on physical loss and damage to also address socio-economic resilience factors such as diversification of income and health (Huang et al., 2022). Where livelihoods are supported as part of recovery efforts, programmes should recognise the particularities of women's livelihoods, which are more often in the informal sector (Habtezion, 2016).

# 6



*Villagers in shattered Ulujadi, Donggala, Indonesia, 2018. © Mercy Corps*

## 6. Conclusion

For too long, the recovery phase of the DRM Cycle has been neglected, with limited commitment to enhancing resilience after disasters, leaving vulnerable households caught in spirals of disasters. Yet, with the increasing intensity of the climate crisis and the growing climate impacts on communities, urgent support is needed to enable a more resilient recovery process. The limited post disaster window of opportunity for transformational change must be seized putting people and communities at the heart of approaches. It is senseless to rebuild systems – physical, natural, and social – that are not climate-smart, risk-informed, and capable of functioning in our changing climate.

Leveraging this opportunity cannot happen without pre-planning. 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.



Stagnant water at a flooded primary school in Thiès, Senegal. © Lydia Darby

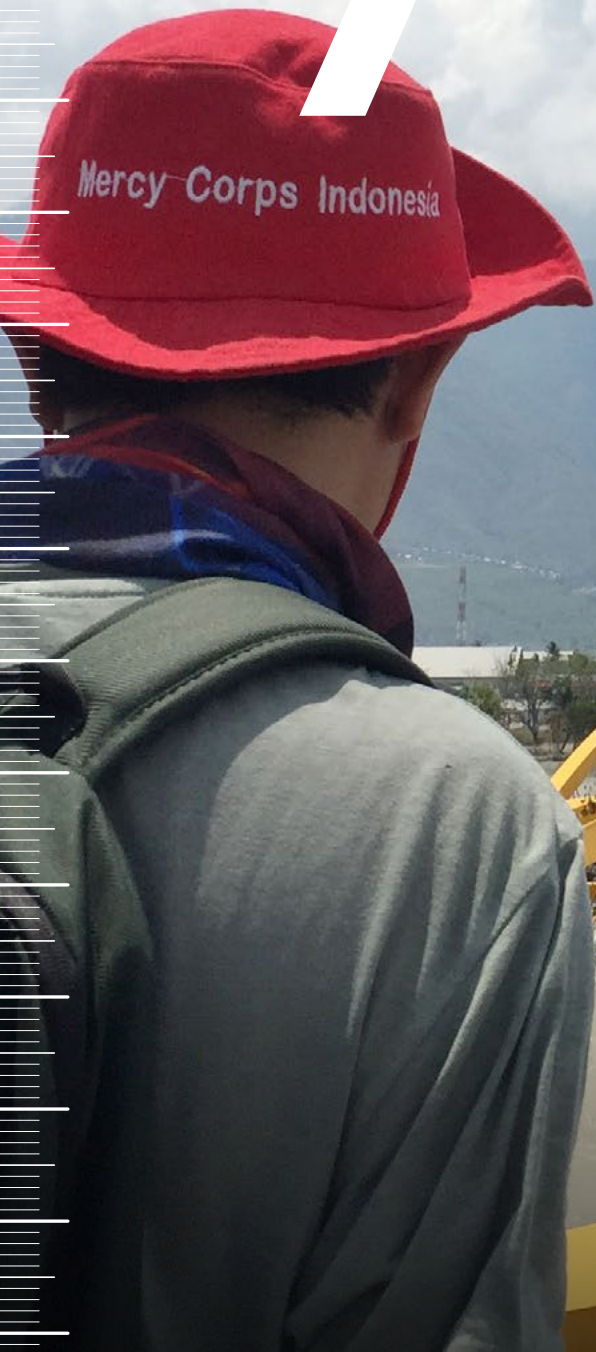


The concept of preparedness for response is now well understood and accepted; preparedness for recovery needs to be equally prioritized. Readiness for recovery can be promoted by introducing legal provisions which require pre-event recovery planning, clearly allocate responsibility for this task to relevant government actors, and prescribe the minimum contents of pre-event recovery plans (IFRC, 2023).

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 DRR, climate adaptation, emergency response, and development action. This demands forward thinking and pre-planning: focussing on future risks and their multi-dimensional impacts and developing actionable, coherent and adaptable frameworks before the next disaster hits, which deliver and are operationalised when a crisis strikes. It also means mobilising financing that enhances the capacity to face the future rather than drive countries into debt, and critically for people and communities to get the support they need to recover well and build resilience to future risks.

Resilient recovery has the potential to be truly transformational. Recovering resiliently can effectively address underlying risk factors, reducing vulnerability and exposure. Financially, resilient recovery limits future economic and non-economic losses and damages for households, communities, governments, and donors. At the heart of resilient recovery is enabling transformational change of communities that are currently bearing the brunt of climate change, allowing them to build their resilience through the recovery process.

# 7



*Destruction in Palu following an earthquake and tsunami, October 2018. © Jelly Mokar for Mercy Corps*

# 7. 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

### **1. 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) which establish institutional arrangements, coordination mechanisms, and clear roles and responsibilities across sectors that are truly outcome driven and support an outcomes-based approach.
- 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 that 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.

## 2. Establish multi-sectoral, inclusive coordination mechanisms

- Design multisectoral recovery efforts to not only focus on the reconstruction of physical infrastructure but also strengthen economic, social, and environmental resilience and facilitate 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 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.

## 3. 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, 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 local authority and municipality access to 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 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.

## **4. 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 in resilient recovery planning and implementation.

## **Recommendations for the international community**

### **1. 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 include, 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.

### **2. 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.

### 3. 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.

### 4. 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.



*Destruction in Palu following an earthquake and tsunami, October 2018. © Jelly Mokar for Mercy Corps*

# 8



*Villagers in shattered Ulujadi, Donggala, Indonesia, 2018. © Mercy Corps*

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# ANNEXES



*Destruction in Palu following an earthquake and tsunami, October 2018. © Jelly Mokar for Mercy Corps*

# Annex I: PERCs conducted to date

Since 2013, the Zurich Flood Resilience Alliance has been conducting post-event reviews (PERCs) of disasters, primarily floods, in various countries around the world. PERC is an independent review that seeks to answer questions related to disaster resilience, disaster risk management, and disaster risk reduction. It looks at what went well, as well as opportunities for improvements, and provides a set of recommendations which can be operationalised in the recovery phase to enable resilient recovery.

The individual PERC reports and three PERC medleys<sup>1,2</sup>, summaries of lessons learned and recommendations across the over 20 post-event reviews conducted, highlight several themes that are relevant to a discussion on resilient recovery:

- Resilient recovery is rarely planned in advance, it's often neglected in the rush to recover. As a result, the majority of money spent on recovery is generally backward-looking, assuming the same underlying risks, rather than forward-looking.
- Rebuilding efforts have design limits; they do not account for the flexibility needed to cope with climate uncertainty.
- There is an overreliance on grey-infrastructure, and social and community-level recovery tend to be neglected or very slow. Much of social recovery is supported by NGOs and CSOs, but their scope and coverage are limited.
- There are examples of resilient recovery at the local or community-level, but these tend to remain at the project-level and are not scaled out widely due to financial constraints from the household to national levels.
- Coordination challenges within the recovery/DRM sector means that recovery is siloed and slow.
- There is an operationalisation gap; so even if there are plans, there are capacity and funding gaps that hamper recovery and reconstruction efforts.

These trends highlight ongoing challenges with implementing recovery at the national level when either framework and/or financing are lacking or insufficient and when capacity and operationalisation of frameworks and plans needs to be strengthened.

In addition to the recovery trends highlighted by PERC research, the PERCs highlight the challenges with the uncertainty inherent to climate change. Though we have an increasingly sophisticated understanding of (and tools for understanding) climate risk, climate change is happening faster than the projections suggest and extreme climate events – the low probability events that are much harder to effectively model – are manifesting in ways that we have not and perhaps cannot predict. Current recovery gaps, coupled with the increasing impacts of climate hazards driven by climate change underscore that we need to move past focusing on effective recovery to enabling and implementing a resilient recovery – a recovery that addresses currently escalating risk, anticipates future risk, and builds in the flexibility to deal with the unexpected while addressing the multi-hazard, multi-dimensional nature of disasters, and delivering this inclusively. This requires a much more holistic approach to recovery where we prioritize flexibility, safe failure, and learning, based on both data and the tools we have while also recognising what we don't know regarding the frequency, intensity, and variability with which climate extremes may manifest.

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1 <https://floodresilience.net/resources/item/perc-medley-2023-cross-learning-to-improve-disaster-resilience-globally/>

2 <https://floodresilience.net/resources/item/events-are-natural-disasters-are-not-how-lessons-learned-from-previous-events-can-help-businesses-to-become-more-resilient>

**TABLE 1:** Overview of post-event reviews conducted to date (September 2023), including the geographies addressed in each study and the date of the hazard event

1 – Central European floods 2013: a retrospective	Germany (focus), Austria, Czech Republic, Switzerland	June 2013
2 – Floods in Boulder: A Study of Resilience	United States	September 2013
3 – After the storm: how the UK’s flood defences performed during the surge following Xaver	United Kingdom	December 2013
4 – Balkan floods of May 2014: challenges facing flood resilience in a former war zone	Bosnia and Herzegovina, Serbia, Croatia	May 2014
5 – Emmental, Switzerland floods of July 2014: On a hot, sunny day, a flood alert!	Switzerland	July 2014
6 – Urgent case for recovery: what we can learn from the August 2014 Karnali River floods in Nepal	Nepal	August 2014
7 – Morocco floods of 2014: what we can learn from Guelmim and Sidi Ifni	Morocco	November 2014
8 – What can be learned from the Columbia and Charleston floods 2015	United States	October 2015
9 – Flooding after Storm Desmond	United Kingdom	December 2015
10 – Southern Germany Flash Floods	Germany	May/June 2016
11 – Managing El Niño risks under uncertainty in Peru	Peru	2016
12 – Learning from El Niño Costero 2017: Opportunities for building resilience in Peru	Peru	2017
13 – Houston and Hurricane Harvey: A call to action	USA	August 2017
14 – Hurricane Florence: Building resilience for the new normal	USA	September 2018
15 – Fort McMurray Wildfire - Learning from Canada's costliest disaster	Canada	2016 – 2017
16 – California fires: Building resilience from the ashes	USA	2017 – 2018

**TABLE 1:** Overview of post-event reviews conducted to date (September 2023), including the geographies addressed in each study and the date of the hazard event

17 – When the unprecedented becomes precedented: Learning from Cyclones Idai and Kenneth	Malawi, Mozambique, Zimbabwe	March – April 2019
18 – The Southwest Tasmania Fires of Summer 2018-2019	Australia	December 2018 – March 2019
19 – Learning from the 2020 Floods in Faridpur District, Bangladesh to build resilience	Bangladesh	
20 – 2020 Tabasco floods: Learning from the past to prepare for the future	Mexico	October/November 2020
21 – Strengthening community flood resilience in Senegal: Learning from the 2020 floods in Thiès	Senegal	September 2020
22 – Vietnam - Using new disaster patterns to highlight resilience opportunities: Lessons from the 2020 Floods in Central Vietnam	Vietnam	October/November 2020
23 – PERC Flood event review ‘Bernd’	Germany, Belgium, Netherlands, others	July 2021

# Annex II: Available guidance for national recovery frameworks

The past years have seen the publication of several guidelines to support countries in creating recovery frameworks. To varying degrees, these also address resilient recovery or building back better. General guidelines for national-level frameworks include:

- IFRC's Disaster Recovery Report (2023);
- GFDRR's *Disaster Recovery Framework Guide* (originally issued in 2015 and updated in 2020);
- UNDP's guidance note on *National Post-Disaster Recovery Planning and Coordination* (2016);
- UNDP's *Handbook on Recovery Institutions* (2021b);
- Guidance from the UNDRR developed in 2018; and
- A note on the process of developing recovery frameworks published by the GFDRR, the European Commission, and UNDP (2017).

More detailed guidance is also available as part of the disaster recovery guidance series, for different sectors, as well as for the inclusion of various stakeholder groups. For example, guidance documents are available for:

- Agriculture (UNDP, 2021a);
- Employment and livelihoods (ILO & UNDP, 2021);
- Social protection (GFDRR & The World Bank, 2020a);
- Health (Pan American Health Organization, (WHO, IRP & GFDRR, 2017);
- Education (GFDRR & The World Bank, 2019);
- Energy (UNDP, 2021c);
- Environment (UNDP, 2023); and
- WASH (UNICEF & UNDP, 2022).

On the inclusion of stakeholder groups, documents are available related to:

- The involvement of the private sector (GFDRR & the World Bank, 2020b);
- Disability inclusive recovery (GFDRR, DiDKSB, World Bank Group, 2020);
- Gender equality (GFDRR and the World Bank, 2018); and
- The integration of local actors (IMC Worldwide Ltd, 2019).

Finally, a number of documents with good practices and case studies are available to consult, including:

- UNDP's *Global Compendium of Good Practices on Post Disaster Recovery* (UNDP, 2020a) and
- A specific compendium of good practices in Latin America and the Caribbean (UNDP, 2020b).



For more information  
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