

# Good Practices

## in Financing Recovery and Building Back Better



30 cases of good practices from 18 countries

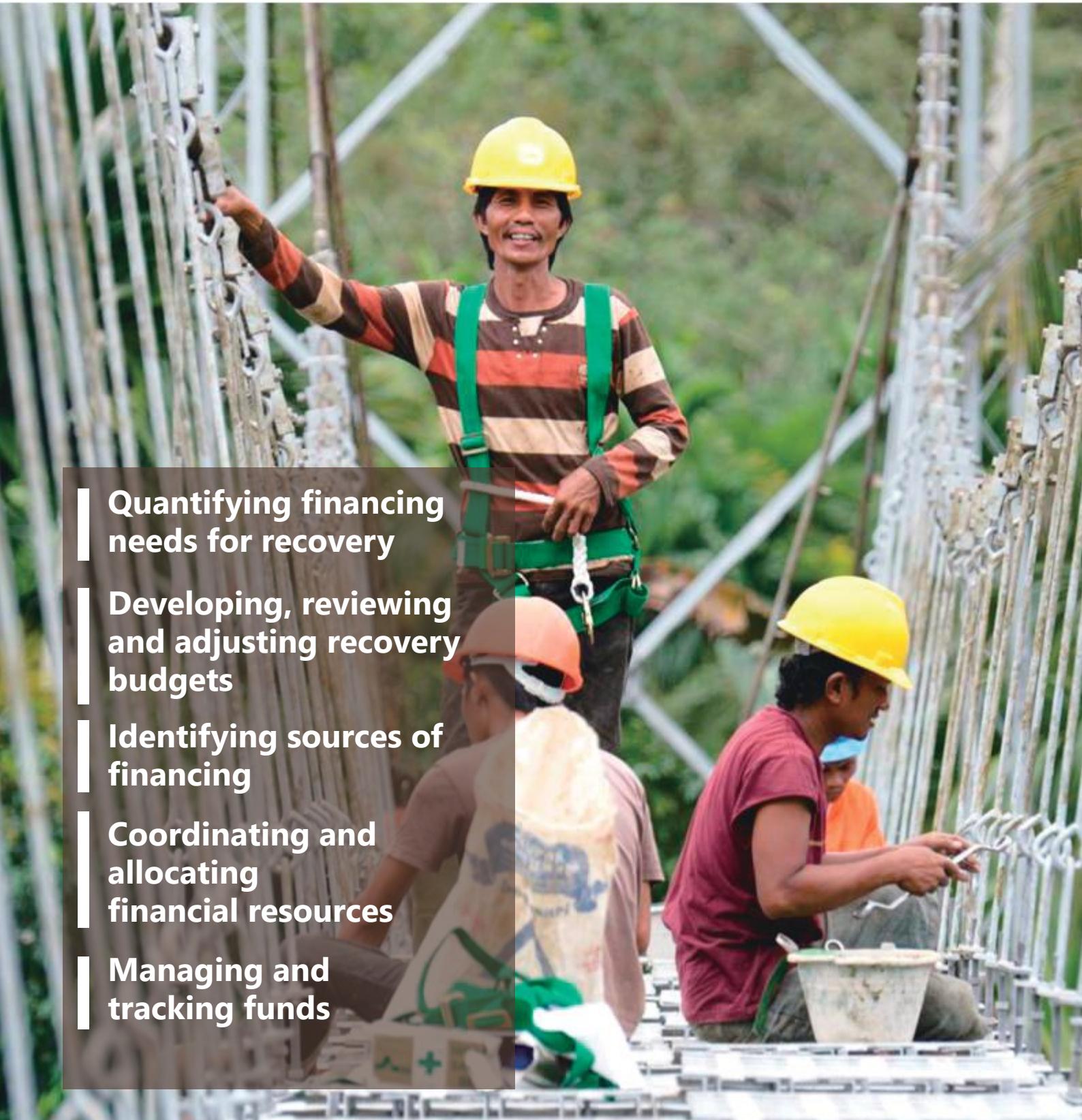
**Quantifying financing needs for recovery**

**Developing, reviewing and adjusting recovery budgets**

**Identifying sources of financing**

**Coordinating and allocating financial resources**

**Managing and tracking funds**



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The International Recovery Platform is a joint initiative of United Nations organizations, international financial institutions, national and local governments, and intergovernmental and non-governmental organizations engaged in disaster recovery, and seeking to transform disasters into opportunities for sustainable development. IRP supports progress against Priority 4 of the Sendai Framework for Disaster Risk Reduction 2015-2030, enhancing disaster preparedness for effective response and to build back better in recovery, rehabilitation and reconstruction.

The Group of Twenty (G20) is the premier forum for international economic cooperation. As part of the G20 decision-making process, Working Groups, comprised of experts and officials from relevant ministries, lead in-depth analysis and discussions on a range of internationally relevant issues in respective areas of focus. A new working group has been established on Disaster Risk Reduction under India's Presidency to encourage collective work by the G20, undertake multi-disciplinary research and exchange best practices on disaster risk reduction.

To provide substantive input to the Working Group on Disaster Risk Reduction, this consultative version of Good Practices in Financing Recovery and Building Back Better was prepared by independent expert Josef Leitmann and the IRP Secretariat Team, Yuki Matsuoka, Paul Rosenberg, Fumihiko Matsushita, and Kyoko Sonoda. The IRP Secretariat also wishes to thank independent expert Laurie Johnson for her contributions. Design and layout were developed by Kyoko Sonoda and independent expert Keisuke Taketani. The IRP Secretariat would like to thank the IRP Steering Committee for their contributions to this publication, in particular the Asian Development Bank, United Nations Development Programme, United Nations Office for Disaster Risk Reduction, the World Bank, the Hyogo Prefectural Government, and the Cabinet Office of Japan.

The consultative version will be further refined by reflecting on feedback to be received and will be finalized as a knowledge product to be published by the International Recovery Platform.

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# Good Practices

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A photograph of a woman in a purple shirt and orange pants holding a baby, with a young girl standing behind her, all in front of a destroyed building with a corrugated metal roof and a stone wall. The woman is looking at the camera.

I.

# Introduction

## Background

**Inadequate recovery finance exacerbates risks and costs.** A review of recovery financing for disasters between 2014 and 2016 indicated that only 25% of needed financing was mobilized to recover from disasters that occurred in 2014, 20% in 2015 and 28% in 2016 (Source: Post Disaster Needs Assessments: Lessons from a Decade of Experience, Annex 4). When countries lack the financial capacity to respond immediately and effectively to a disaster, human and economic costs increase rapidly. People and firms that cannot get financial support for recovery can be harmed, for example, by not being able to rebuild their homes, access basic services or restart their businesses and livelihoods. In the long term, development prospects can suffer when governments have to divert public funding from social and economic development programs to fill the recovery gaps. Reconstruction may be delayed or not take place at all due to a lack of financial resources.

**Governments struggle with recovery financing for a variety of reasons.** One of the primary causes of inadequate recovery finance is a lack of preparedness: financing mechanisms have not been developed in advance of a disaster; resources have not been set aside for adverse events; procedures have not been established for rapid reallocation and disbursement of funds; and policies have not been established for sharing funds between different levels of government and/or for eligibility to receive financial support. Other factors that contribute to gaps in recovery financing may include: a) incomplete or inaccurate information about recovery financing needs for affected sectors and communities; b) an ineffective effort to mobilize additional resources from public resources, the private sector, charitable organizations, and/or the international community; c) perceived or actual problems with corruption and financial management; and d) institutional or political barriers to mobilizing, allocating and/or disbursing recovery finance.

### Building back faster will reduce disaster impacts by accelerating reconstruction

through measures such as contingent reconstruction plans, pre-approved contracts, and financial arrangements. A recent study shows that if the average reconstruction speed is reduced by two thirds (without compromising the quality of reconstruction), global well-being losses could be reduced by 14% percent—equivalent to increasing global consumption by over US\$75 billion per year. These gains are especially pronounced in countries with frequent events, such as small island countries or Sub-Saharan countries (Building Back Better, IBRD, 2018).



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**BBB and building back faster require financial preparedness.** It is important that governments prepare before a disaster strikes, as recovery financing can be complex to set up. For example, governments need to explore practical ways to access funds for disaster recovery in their fiscal strategies to reduce the budget shock of disasters. Additionally, it is necessary to have a rapid disbursement system adapted to post-disaster recovery needs that has been tested before a disaster, to avoid the risks of corruption and fraud that can be linked to rapid disbursement. Thus, pre-disaster preparedness for recovery financing is critical in order to successfully build back better (Disaster Recovery Framework Guide, GFDRR, 2020).

**Finance is a key pillar of a recovery framework.** By developing a disaster recovery framework, a country will be positioned to drive a process forward that unites all government, private sector, donors, development partners, and community efforts with a focus on building back better (stronger, faster and more inclusively) during the phases of recovery. The framework helps in articulating a vision for recovery; defining a strategy; prioritizing actions; fine-tuning planning; and providing guidance on financing, implementing, and monitoring the recovery.

#### **The key elements of a recovery framework, beyond financing**

- An informed institutional and policy-setting for recovery;
- Prioritization and programming based on an inclusive, transparent process that ensures participation of all stakeholders and uses national and international good practices;
- Effective coordination among partners during the recovery and reconstruction processes; and
- Improved implementation and monitoring and evaluation systems for recovery programs.

Without adequate and accountable financing for recovery, institutions cannot be established or supported, programming cannot be fully financed, coordination may be hampered, and implementation as well as monitoring and evaluation cannot fully proceed. Thus, recovery financing is essential for implementing an effective recovery framework (Disaster Recovery Framework Guide, GFDRR, 2020).

**There are five important dimensions of recovery financing.** In post-disaster recovery, the following elements are critical for successful recovery financing and recovery more broadly: 1) quantify the economic costs of the disaster and prepare recovery plans; 2) develop, review and adjust recovery budgets; 3) identify sources of financing as well as financing gaps; 4) coordinate and allocate financial resources; and 5) set up the mechanisms to manage and track funds. Most of the literature on recovery finance focuses on the financing instruments. However, successful recovery financing requires attention to all five elements. Accordingly this brief covers these critical elements, each with examples of good practice and lessons learned.

**The added value of this note.** This note aims to inspire countries to address recovery finance challenges through examples of good practice and the application of lessons learned throughout the financing process. Each of the reasons for inadequate recovery finance has a solution.

- Preparedness pays off and can be achieved for each of the five elements in the note.
- Complete and accurate information on sectoral and community recovery needs can be produced through a PDNA and checked through an effective monitoring and evaluation system.
- Good planning, political will and using a blend of financing instruments are integral to mobilizing adequate financing.
- Good practices for controlling corruption, boosting accountability and enhancing transparency can contribute to better financial management of recovery resources.
- Finally, the lessons in this note can be applied to overcome institutional or political barriers to mobilizing, allocating and/or disbursing recovery finance.



## II.

# Quantifying financing needs for recovery

## Background

The first key element is to understand how much and where recovery financing is needed. In a post-disaster needs assessment (PDNA), damages to physical assets are first valued in physical terms. Secondly, the damages incurred are assigned monetary values, expressed as replacement costs based on the market prices just prior to and following the disaster. These costs serve as the baseline. The baseline is then adjusted to account for post-disaster price changes and enhancements associated with risk reduction to build back better. Social and economic losses and the indirect social and economic costs of the disaster and its damage – or ripple effects are also calculated. These include social welfare needs and changes in economic flows arising from the disaster which can persist in some cases up to a decade. Some of the products of these analyses should be a characterization of the short-and long-term impacts on households, businesses, different economic sectors and populations groups and the overall economic outlook for the community. This information then gives the full financing needs for resilient recovery, including the marginal costs of BBB (see Case 1 from Mozambique).

Sometimes, countries opt to conduct a rapid assessment of damages, either in lieu of or in advance of a PDNA, in order to get an initial understanding of the magnitude of a disaster's impact (see Case 2 from Türkiye). The main advantages of a rapid assessment are the quick turnaround time for results and the relatively lower cost compared to a full PDNA. However, for recovery financing purposes, those results are less useful because rapid assessments usually do not provide adequate information on economic losses or recovery costs, both of which are essential for recovery planning and implementation.

The results of a PDNA are particularly useful for guiding recovery financing. They provide information on the magnitude of overall financing needs as well as the division of needs between economic and social sectors, geographic areas and public and private domains. PDNA results are used to identify financing gaps, reallocate government budgets, inform non-governmental sources of finance about needs, and mobilize additional financing. PDNA-generated information is used to inform donor pledging conferences following major disasters.

### GOOD PRACTICES IN THIS CHAPTER

Case 1:  
PDNA for Mozambique Cyclone Idai (2019)

Case 2:  
Türkiye Earthquakes rapid damage assessment (2023)



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## Key lessons

<b>1</b> <p>Be prepared by building domestic capacity to undertake post-disaster assessments and quantify recovery financing needs by having baseline data available before the next disaster.</p>	<b>2</b> <p>Institute policies and systems to undertake a nationally-led process for estimating recovery needs.</p>	<b>3</b> <p>Quantify recovery financing needs through a comprehensive assessment using well established and globally accepted methodologies such as the PDNA.</p>
<b>4</b> <p>Conduct faster assessment through preparedness, application of assessments for disasters of different scales and training.</p>	<b>5</b> <p>The quality of PDNAs is enhanced with the timely availability of technical experts, crosscutting specialists, and up-to-date rosters of expertise. Damage, loss, and recovery data need to be appropriate and current, but are usually reliant on existing institutional capacities.</p>	<b>6</b> <p>Comprehensive and validated PDNA or rapid assessment information is a critical input for mobilizing domestic and external resources for recovery.</p>

SOURCE: PDNAs: Lessons from a Decade of Experience (EU, UN and World Bank/GFDRR 2018)

## Resources

Post-Disaster Needs Assessment (EU, UNDP and World Bank/GFDRR 2013)  
Global rapid post disaster damage estimation (GRADE) approach (World Bank/GFDRR 2018)  
Guidance on other rapid assessment approaches (ESCAP 2017)

## PDNA for Mozambique Cyclone Idai (2019)

Tropical Cyclone Idai made landfall in March 2019, killing over 1,000 people across Mozambique, Malawi and Zimbabwe and leaving 2.6 million people in desperate need of humanitarian assistance. The cyclone brought strong winds (180 – 220 km per hour) and heavy rain (more than 200 mm in 24 hours) across the provinces of Sofala, Manica, Zambezia, Tete and Inhambane in Mozambique, causing rivers to overflow with flood waters reportedly rising above 10 meters. Idai also brought a large storm surge in the coastal city of Beira and surrounding areas of Sofala province. On 25 April, Mozambique experienced a second tropical cyclone, Kenneth, which made landfall in between the districts of Macomia and Mocimboa da Praia in Cabo Delgado province.

The PDNA prepared by the Government of Mozambique estimated that Cyclone Idai caused about US\$1.4 billion in total damage, and US\$1.39 billion in losses. The total cost of recovery and reconstruction was estimated at US\$2.9 billion for the four provinces of Sofala, Manica, Tete and Zambezia. The additional needs in Inhambane and in Cabo Delgado and Nampula, which were both affected by Cyclone Kenneth, raised the total recovery needs to US\$3.2 billion.

The PDNA report summarized the damage, loss and recovery needs across 16 socio-economic sectors in the affected provinces and discussed a recovery strategy. This information helped the newly-established Cabinet for the Reconstruction of Post-Cyclone Idai to begin mobilizing domestic and international resources for recovery financing as well as to plan a recovery framework. For example, PDNA results were used by a UNDP-led Recovery Facility for Resilient Recovery to fill gaps for livelihoods and women's economic empowerment (including income-generating activities, emergency temporary employment, promotion of local savings and micro-finance mechanisms), housing and community infrastructure (emergency debris removal and emergency waste management, safe housing and community infrastructure) and institutional strengthening of the reconstruction secretariat (strategic guidance and coordination to the national reconstruction and recovery efforts).

SOURCES: <https://www.preventionweb.net/publication/mozambique-cyclone-idai-post-disaster-needs-assessment-pdna>; Global Compendium of Good-Practices for Post-disaster Recovery (UNDP 2020), p. 8

## Türkiye Earthquakes rapid damage assessment (2023)

The two very large earthquakes on February 6, 2023 resulted in 59,259 confirmed deaths: 50,783 in Türkiye and 8,476 in Syria. The Global Rapid Post-Disaster Damage Estimation (GRADE) Report prepared by the World Bank, focuses on the direct physical damages in Türkiye and estimates that 1.25 million people had been rendered temporarily homeless due to moderate to severe damage or complete building collapse. The report also highlights that 81% of the estimated damages occurred in Hatay, Kahramanmaraş, Gaziantep, Malatya and Adiyaman provinces, which are home to around 6.45 million people (around 7.4% of the total population of Türkiye).

The rapid damage assessment reported that the earthquakes caused an estimated US\$34.2 billion in direct physical damages, the equivalent of 4% of the country's 2021 GDP. Direct damages to residential buildings accounted for 53% (US\$18 billion) of the total damage, with 28% of damage (US\$9.7 billion) in non-residential buildings (e.g., health facilities, schools, government buildings, and private sector buildings), and 19% of damage (US\$6.4 billion) related to infrastructure (e.g., roads, power, water supply).

The damage estimates in the report do not include the broader economic impacts and losses for the Turkish economy, or the cost of recovery and reconstruction which could be significantly more than the direct damages and requires a more in-depth assessment.

The rapid assessment was a useful input to the more complete Türkiye Earthquakes Recovery and Reconstruction Assessment, a preliminary PDNA supported by the EU, UNDP and World Bank, which indicated a much larger disaster of US\$103.6 billion USD, or equivalent to 9 percent of Türkiye's forecast GDP for 2023.

SOURCE: <https://www.worldbank.org/en/news/press-release/2023/02/27/earthquake-damage-in-turkey-estimated-to-exceed-34-billion-world-bank-disaster-assessment-report>

### III.

# Developing, reviewing and adjusting recovery budgets



## Background

When reviewing their post-disaster budget, governments should consider that disasters force the reallocation of constrained government budgets and require a search for supplementary revenue. At the same time, disasters can also reduce government revenue by disrupting economic activity.

There are two main challenges to post-disaster budgeting. The first challenge is addressing the overlap between public and private financing; this requires determining how to allocate public resources for key private goods. Reconstruction of public goods can be financed by public or private funds and the inverse is true as well (see Case 3 from Nepal on the housing sector). Private assets are usually reconstructed by private finance. However, disaster-affected people may not have the resources necessary to rebuild their private assets, which is critical for restoring normalcy, and there may be a gap in private funds. Transportation (e.g., railways, ports, airports, public transportation), medical facilities, housing, and tourism facilities (e.g., hotels, restaurants, tourist attractions) are common examples of public and private financing overlaps.

The second challenge is to transparently plan and manage the budgeting process (see Case 4 from Japan). Thus, budgets need to consider the costs of communication, planning and monitoring. Collecting data, information management, public involvement and regular communication with stakeholders, and implementing participatory planning processes also require considerable financial resources. This can make a critical difference in recovery outcomes, especially when resources are included for building resilience (see Case 5 for Superstorm Sandy). Budgets also need to be reviewed and adjusted during the recovery period to address sectoral and geographic gaps as well as ensure that adequate resources are available to reach beneficiaries. Governments need procedures to continue to identify, catalog, analyze, and address additional recovery needs that unfold over time, such as populations shifts, business closings and consequent unemployment (see section V). It is also important to set realistic expectations of elected officials and policymakers that budgets will likely change with time as the full costs of reconstruction and building back better are better understood. This requires a good capacity for monitoring and evaluation (see section VI).

## GOOD PRACTICES IN THIS CHAPTER

CASE 3:  
Public finance for resilient housing in Nepal  
(2015)

CASE 4:  
Supplementary budgeting and investing in planning after the Kobe Earthquake (1995)

CASE 5:  
Federal financing and local implementation to Build Back Better after Superstorm Sandy (2012)

## Key lessons

<b>1</b> <p>Be prepared by establishing the rules, procedures and policies for reallocating budgets, sharing the recovery financing burden between the public and private sectors as well as different levels of government and prioritizing funding for vulnerable groups before the next disaster.</p>	<b>2</b> <p>Ex ante budgetary policies can increase net benefits by providing fiscal incentives and legislative opportunities to increase national savings, reduce exposure to risk, and promote mitigation, before the loss event.</p>	<b>3</b> <p>Effective ex ante budgeting for disasters requires trade-offs of current consumption for savings and mitigation, and procedural safeguards against opportunistic efforts to divert disaster savings to other uses.</p>
<b>4</b> <p>Stakeholder participation and consultation are prerequisites for planning and implementing successful recovery finance.</p>	<b>5</b> <p>Cost-sharing can increase the amount of funding available and better focus the recovery efforts of affected local and regional governments.</p>	<b>6</b> <p>Cost-sharing mechanisms will require greater consensus for the affected populations which will bear some of the brunt of reconstruction costs in the form of taxes and/or changes in government services to generate those costs.</p>

## Resources

Budgeting for Disasters: Focusing on the Good Times (OECD 2010)  
Global Compendium of Good Practices for Post-disaster Recovery (UNDP 2020)



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European Union | Source:  
Flickr ([https://www.flickr.com/photos/eu\\_echo/42324269504/in/album-72157668530194957/](https://www.flickr.com/photos/eu_echo/42324269504/in/album-72157668530194957/)) |  
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### CASE 3 Nepal

## Public finance for resilient housing in Nepal (2015)

Major earthquakes rocked Nepal in April and May 2015, with devastating consequences: the Government of Nepal reported the death toll at approximately 8,700 and those injured at 25,000. In an early post-disaster needs assessments (PDNA), total recovery needs were estimated at US\$6.7 billion, or about a third of Nepal's economy. The single largest need identified in the PDNA (US\$3.27 billion) was for "housing and human settlements": 490,000 houses were destroyed and another 265,000 damaged to an extent that they were at least temporarily inhabitable.

The Government of Nepal, in partnership with a number of development partners, launched the Rural Housing Reconstruction Program which is now the world's largest owner-built housing recovery initiative. Building back stronger is at the heart of this housing reconstruction program. It aims to ensure that houses destroyed in the most affected districts of the country will be rebuilt using earthquake-safer building techniques through training, grants, and technical support to eligible households. Specifically, the program was designed to provide training to local artisans, facilitate the development of material markets, and disseminate information on earthquake-resilient construction techniques, all in coordination with partner organizations to assist the reconstruction process. Beneficiary households may choose to rebuild houses themselves and/or hire labor such as masons and carpenters according to their needs. There was also no restriction in the use of materials as long as it complied with the earthquake-resilient construction techniques defined by the program.

According to the Nepal Disaster Risk Reduction and Management Authority, as of 2022 the programme had rebuilt nearly 800,000 private homes to the resilience standards. The programme paid dividends across other dimensions of recovery including upgraded livelihoods (77,000 masons trained in resilient construction methods), gender (about 15,000 of the masons trained were female), and equity (14,000 landless families settled into resilient homes). Many thousands of financially excluded people were brought into the banking system to make the housing reconstruction payments. The World Bank's "databank" indicates the pre-earthquake banked population was 33.8%. By 2021, it was 54%.

SOURCES: Hallegate, Stephane et al. 2018. Building Back Better: Achieving resilience through stronger, faster, and more inclusive post-disaster reconstruction. World Bank; Washington, DC, pp. 18-19 and Pokhrel, Anil 2022. Nepal: Assessing six years of challenges in implementing of Sendai Framework Priority 4. Panel presentation at IRP Forum 2022, <https://www.youtube.com/watch?v=IPqBqqRiFJI>

## Supplementary budgeting and investing in planning after the Kobe Earthquake (1995)

The Great Hanshin-Awaji Earthquake, also known as the Kobe Earthquake, was a magnitude 6.9 earthquake that struck the southern part of Hyōgo Prefecture, Japan, on January 17, 1995. The earthquake caused widespread damage and devastation, with over 6,400 people killed and over 40,000 injured. The earthquake caused billions of dollars in damage, making it the costliest disaster in Japanese history at the time.

Both houses of the Diet passed a supplementary budget of ¥1.022 trillion (US\$ 10.2 billion) on February 28, 1995, that mainly funded disaster-related rescue services of the national government and initial restoration work on roads and the Port of Kobe. The majority of recovery funding came in two supplementary budgets adopted in the 1995 fiscal year. Additional allocations over the next two years brought the national government's funding total to more than ¥5.8 trillion (US\$58 billion) to reconstruct basic infrastructure, housing, and other physical facilities.

This financing covered the costs of three sets of planning efforts. At the national level, the Prime Minister's Cabinet established the Committee for Hanshin-Awaji Reconstruction which issued a report on reconstruction priorities, prepared subsequent guidance on recovery budgeting and reviewed prefectoral and city recovery plans. At the regional level, the Hyogo Prefecture established the Hanshin-Awaji Earthquake Reconstruction Planning Policy Study Committee which prepared the Hyogo Phoenix Plan. At the local level, the City of Kobe engaged in a two-step participatory process: development of the Kobe City Restoration Plan Guidelines, followed by preparation of the Kobe City Restoration Plan itself. During the second phase, the City of Kobe and Hyogo Prefecture worked to expand local input on planning and helped establish neighborhood planning committees through a one-stop shop and provision of expert consultants.

SOURCE: "National Land Use Regulations Drive Recovery" in Johnson, Laurie and Robert Olshansky 2017. After Great Disasters. Lincoln Institute for Land Policy; Washington, DC (pp. 108-134)  
<https://www.lincolinst.edu/sites/default/files/pubfiles/after-great-disasters-book-full.pdf>

## Federal financing and local implementation to Build Back Better after Superstorm Sandy (2012)

In late October 2012, Hurricane Sandy devastated portions of the Mid-Atlantic and northeastern United States. As a result, more than 650,000 homes were damaged or destroyed, and hundreds of thousands of businesses were damaged or forced to close at least temporarily, resulting in an estimated US\$70 billion in damages. Three months later, the President signed the Disaster Relief Appropriations Act which authorized about US\$50 billion in funding to support recovery across 19 federal agencies. Most of this funding flowed through and was implemented by state and local authorities.

During the Hurricane Sandy Recovery, five federal programs—the Federal Emergency Management Agency's (FEMA) Public Assistance (PA), Hazard Mitigation Grant Program (HMGP), the Federal Transit Administration's Public Transportation Emergency Relief Program, the Department of Housing and Urban Development's Community Development Block Grant-Disaster Recovery, and the U.S. Army Corps of Engineers' Hurricane Sandy program—helped enhance disaster resilience—the ability to prepare and plan for, absorb, recover from, and more successfully adapt to disasters. These programs funded a number of disaster-resilience measures, for example, acquiring and demolishing at-risk properties, elevating flood-prone structures, and erecting physical flood barriers.

A close-up photograph of a construction worker from the side and slightly from behind. The worker is wearing a blue baseball cap with a small logo on the side, a yellow and blue striped headband, and a bright orange high-visibility vest over a grey long-sleeved shirt. They are standing next to several large, light-colored concrete pipes. One pipe has some handwritten text on it, including '1000' and '100'. The worker's hands are visible; one is resting on a pipe, wearing a yellow and blue striped wristband, and the other is partially visible.

## IV. Identifying sources of financing

## Background

Depending on the scale of the disaster and the capacity of a national economy, governments may either rely largely on national resources, or appeal to external sources for additional funding. The latter option is useful particularly when the government already has cooperation agreements with donors and/or multilateral agencies. Government should ensure that all funds are allocated in accordance with national recovery priorities, whether or not the funds are channelled on or off the national budgetary system. The imperative is to mobilize additional resources to fill gaps and continue to finance normal, ongoing development processes. The eleven financing instruments covered in this section (seven domestic and four external) are:

- ① Existing budget
- ② Contingency funds
- ③ Surcharges/taxes
- ④ Other sources of public finance
- ⑤ Risk transfer
- ⑥ Domestic NGOs, charities and foundations
- ⑦ Public-private partnerships (PPPs)
- ⑧ Development finance
- ⑨ Multi-Donor Trust Funds
- ⑩ International NGOs, charities and foundations
- ⑪ Remittances

## GOOD PRACTICES IN THIS CHAPTER

- Case 6: Flexible budget approaches to finance recovery after the Canterbury Earthquakes (2010-2011)
- Case 7: National Disaster Risk Management Funds in India and Pakistan
- Case 8 : The Fund for Natural Disasters (FONDEN) in Mexico
- Case 9: Earthquake surcharges and taxes in Ecuador
- Case 10: Catastrophe bonds in Mexico and Chile
- Case 11: Early access to pension funds in Fiji after Cyclone Winston (2016)
- Case 12: Tapping multiple financing sources in Chile for post-earthquake housing reconstruction
- Case 13: Public disaster insurance in Sri Lanka
- Case 14: Regional risk insurance facilities
- Case 15: Self-Employed Women's Association in India
- CASE 16: IKEA/UNICEF partnership for Wenchuan Earthquake in China
- CASE 17: Post-Katrina Gulf Opportunity Zone tax-exempt bonds
- CASE 18: Fukushima Business Relocation Grant Program
- Case 19: Contingency financing in the Philippines
- Case 20: Multi-Donor Fund for Aceh and Nias in Indonesia
- Case 21: International NGOs (INGOs) Code of Conduct for Disaster Relief
- Case 22: Using a blend of financial instruments in Indonesia
- Case 23: Diaspora bonds in Haiti

## Key lessons

<b>1</b> <p>Be prepared by identifying and prioritizing sources of public and private recovery finance for different magnitudes of impact before the next disaster.</p>	<b>2</b> <p>Facilitate access to external resources by having cooperation agreements with donors, INGOs and/or multilateral agencies in place before the next disaster.</p>	<b>3</b> <p>Ensure that all funds are allocated in accordance with national recovery priorities, whether or not the funds are channelled on or off the national budgetary system.</p>
<b>4</b> <p>With sufficient political will, innovative financial services can be developed to reduce the vulnerability of some of the poorest and most marginalized populations.</p>	<b>5</b> <p>Micro-insurance is only useful if an individual has had insurance prior to the onset of a disaster. Thus, this service is aimed at mitigating damage and loss due to future disasters. Coupling micro-insurance with loans and other services is one way of dealing with the immediate impacts of a disaster while preparing for the future.</p>	<b>6</b> <p>Draw on a blend of financing instruments to meet recovery needs, depending on the magnitude of the disaster, availability of government resources and the state of the economy (see Case 22 for Indonesia).</p>

## Resources

- Disaster Recovery Framework Guide (GFDRR 2020)
- IRP Guidance for Disaster Recovery
- Global Compendium of Good Practices for Post-disaster Recovery (UNDP 2020)

## 1. Existing budget

A supplemental or reallocation process is used to increase or reprogram the budget to cover the costs of disaster response and longer-term reconstruction. This can be done for the national, regional and/or local budget.

### CASE 6 New Zealand

## Flexible budget approaches to finance recovery after the Canterbury Earthquakes (2010-2011)

The 2010-2011 Canterbury earthquake sequence has been New Zealand's costliest disaster caused by natural hazards to date and provides a good example of the use of flexible sources of funding to finance the recovery. The total cost of the Canterbury rebuild was estimated at NZD 40 billion across public and private sectors. While this figure represents around 2% of New Zealand's annual gross domestic product, the macro-economic effects of the earthquake sequence were significant but not crippling. The Treasury estimated that nationwide GDP was around 1.5% lower in 2011 than it would have been without the earthquakes. In addition to the Earthquake Commission-led Canterbury Home Repair Program, which focused on residential repair and rebuilding, was funded by the EQC National Disaster Fund, the Government established funding mechanisms to support response and recovery operations across greater Christchurch.

Soon after the second major earthquake on 22 February 2011 earthquake the Treasury established a NZ\$5 billion funding pool – the Canterbury Earthquake Recovery Fund (CERF) – which was a combination of reprioritization from existing departmental budgets and new government funding. The purpose of the CERF was to enable the newly-formed Canterbury Earthquake Recovery Authority (CERA) and other central government departments involved in recovery to quickly and transparently access departmental and non-departmental funds outside the normal budget process. The Treasury monitored and managed the CERF, and individual agencies such as CERA were accountable for outcomes tied to funding allocation. The CERF proved useful in a context where recovery decisions with large financial implications needed to be made quickly so that recovery could get underway. Under the Public Finance Act of 1989, the Minister of Finance provided an indemnity to territorial authorities to begin repairing critical infrastructure. This indemnity, which drew on CERF funding, acted as an administratively convenient conduit for central government funds to be quickly disbursed to local councils without the need for standard budget processes.

SOURCE: <http://www.eqrecoverylearning.org/assets/downloads/RES0004-funding-the-recovery-the-cera-perspective-final.pdf>

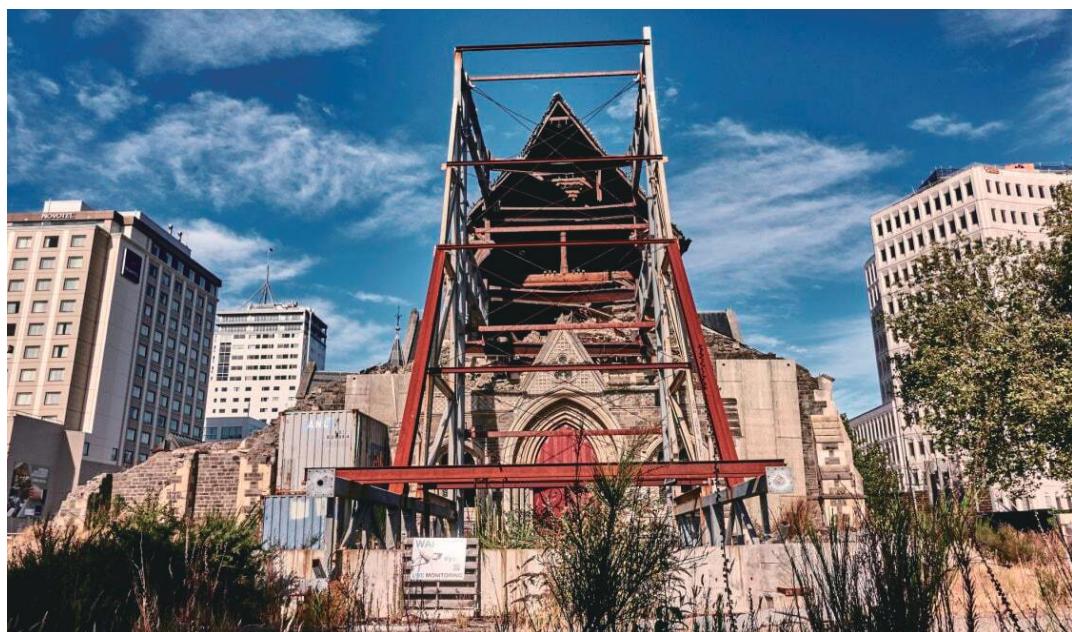


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## 2. Contingency funds

These are resources that are set aside in a special account so that government revenues are saved to respond to and recover from future disasters. These resources usually have predetermined triggers that allow them to be used.

### CASE 7 India and Pakistan

## National Disaster Risk Management Funds in India and Pakistan

The Government of India now allocates national budget resources for recovery through its National Disaster Risk Management Fund (NDMRF) and state-level equivalent funds. Within the National Disaster Risk Management Fund, 80% of the budget is allocated to a National Disaster Response Fund (NDRF) with the remaining 20% for disaster mitigation. In the NDRF, there are three windows for: preparedness and capacity building (10% of available resources), response and relief (40%) and recovery and reconstruction (30%). The NDRF has currently accumulated US\$6.7 billion while the mitigation fund has about US\$1.7 billion available.

In Pakistan, an NDRMF has been established as a government-owned non-bank financial intermediary with a corporate structure. The NDRMF seeks to reduce the socio-economic and fiscal vulnerability of the country and its population to natural hazards by prioritizing and financing investments in disaster risk reduction and preparedness that have high economic benefits, accounting for climate change, as well as disaster risks and their impacts. The government will pass on ADB loan funds to the NDRMF as a grant, for on-granting by NDRMF to eligible implementing partners. The NDRMF will finance up to 70% of the cost of eligible subprojects that will enhance Pakistan's resilience to extreme weather events and other natural hazards. The NDRMF will also enter into insurance arrangements to develop markets for the transfer of residual risks that cannot be mitigated.

SOURCES: Satyarthi, Kunal 2023. Financing long-term recovery outcomes: Experiences from India. Panel presentation at IRP Forum 2023; <https://www.youtube.com/watch?v=Y-IUErqlapc> ; Pakistan: National Disaster Risk Management Fund (ADB)



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## The Fund for Natural Disasters (FONDEN) in Mexico

More than 20 years ago, the Mexican government created The Fund for Natural Disasters (FONDEN) which was designed to take a proactive approach to support disaster relief and reconstruction and to act as a buffer against the multiple losses that occurred in the 1990s. Mexican law mandated that FONDEN and associated accounts must receive a minimum of 0.4% of the country's annual federal budget. Though this amount has varied year-to-year, it averaged US\$800 million, with 87% of it going toward FONDEN and the remaining amount distributed among other associated accounts. Mexican law required additional financial resources be transferred from other programs and sources of funding, such as oil revenue surplus, to meet funding needs if the appropriation proved insufficient. Following a disaster, FONDEN financed 100% of the reconstruction of federal assets, and half of the reconstruction for local assets. An important caveat is that financing for local assets was only required for the first occurrence of a disaster. If disaster were to strike again and these reconstructed local assets were uninsured at the time of a subsequent disaster, the percentage of reimbursement from FONDEN would decrease accordingly.

FONDEN's reconstruction program has leveraged traditional reinsurance to provide up to US\$250 million of coverage for public assets and eligible low-income housing after disasters. Over the life of the FONDEN program, Mexico's government has received roughly US\$280 million from its traditional reinsurance program and an additional US\$485 million from its catastrophe bonds, for a total recovery of almost half a billion dollars. NB: FONDEN was eliminated by the Mexican Congress in 2020 over concerns about fiscal austerity and corruption; it has been replaced by a system of direct disaster relief payments to households.

### 3. Surcharges/taxes

Special fees or taxes can be levied, usually over a fixed period of time, to generate revenues for financing recovery.

## Earthquake surcharges and taxes in Ecuador

On 16 April 2016, a 7.8 magnitude earthquake hit the northern coastal provinces of Ecuador, affecting nearly 90,000 persons, including 663 casualties and 80,000 displaced. Widespread damage was caused throughout two provinces, including the urban areas of several small to intermediate cities.

The Government of Ecuador formulated its capacity to finance the recovery via four instruments: 1) contingent loans with the World Bank, the Inter-American Development Bank and the Andean Development Bank (US\$660 million); 2) a contribution from the IMF (US\$400 million); 3) general budget (US\$193 million); and 4) a "Solidarity Act" that would seek direct contribution of the population at large.

The Solidarity Act contributions were applied in different contexts to the general income, revenue and capital of individuals and enterprises. Ten key initiatives included several options, for example a contribution of the equivalent of a one-day salary for six months from public servants, tax benefits and exemptions to attract new investments in the affected provinces, and a 3% contribution of the total amount of the revenues declared by firms in 2015. In particular, an increase of the Value-Added Tax from 12% to 14% implemented nationwide (excluding the two directly impacted provinces) within a year made a significant contribution to the overall fund. By May 2017, which was the last month of collection of this tax, a total of US\$1.5 billion had been raised. This type of mechanism was well-received by the population as it offered all an opportunity to directly contribute to the recovery fund, thus enhancing the sense of unity and solidarity of the people. In addition, the broad base of contributors allowed for a small increment to yield significant revenues.

#### 4. Other sources of public finance

Other public finance instruments can be used to pay for recovery including bonds, sovereign wealth funds and pension funds.

CASE 10  Mexico and Chile

### Catastrophe bonds in Mexico and Chile

In 2006, Mexico placed the first catastrophe bond by a sovereign government. In 2009, Mexico once again broke boundaries by becoming the first country to issue a multi-peril catastrophe bond, covering earthquake and hurricane risk, through the World Bank's MultiCat program. More recently, FONDEN (see Case 8) placed its fourth catastrophe bond in 2017 via the Global Debt Issuance Facility of the World Bank Group's International Bank for Reconstruction and Development. The country can now draw on a total of US\$485 million in bond resources.

In March 2023, the World Bank issued a joint catastrophe bond and swap transaction that provides a total of US\$630 million of earthquake insurance coverage to the Government of Chile, which consists of US\$350 million of catastrophe bonds and US\$280 million of catastrophe swaps. The transaction provides Chile with financial protection to mitigate the potentially disruptive economic impacts of earthquakes and resulting tsunamis. It makes funds readily available in the case of disaster, protects Chile's fiscal budget, and reduces the potential need to mobilize debt in an event's aftermath. It provides coverage for three years with payouts triggered if an earthquake meets the pre-defined parametric criteria for location and severity.

SOURCES: <https://www.guycarp.com/insights/2020/05/catastrophe-bonds-disaster-risk-insurance-facilities-and-natural-disaster-funds-protecting-our-planet-and-the-public-purse.html>; <https://reliefweb.int/report/chile/world-bank-executes-its-largest-single-country-catastrophe-bond-and-swap-transaction-provide-chile-630-million-financial-protection-against-earthquakes>



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## Early access to pension funds in Fiji after Cyclone Winston (2016)

Tropical Cyclone Winston (TC Winston) struck Fiji on 20 February 2016, caused widespread damage and destruction: 44 fatalities, impacts felt by 60% of the total population, and damages and losses equivalent to 20% of GDP. In the wake of TC Winston, Fiji became a pioneer in the provision of disaster responsive social protection in the Pacific. With a relatively strong social protection system already in place, Fiji decided to use its existing social protection schemes to provide additional assistance to poor and vulnerable households, as part of its disaster response. As a result, the social protection system of Fiji has been rigorously tested in the face of TC Winston and has come out strong in terms of its ability to both rapidly respond and disburse cash assistance to affected families and use its existing systems for channeling other humanitarian relief efforts.

SOURCE: Mansur, Aisha et al. 2017. Social Protection and Humanitarian Assistance Nexus for Disaster Response: Lessons Learnt from Fiji's Tropical Cyclone Winston. Social Protection & Labor Discussion Paper No. 1701. World Bank; Washington, DC. <https://documents1.worldbank.org/curated/en/143591490296944528/pdf/113710-NWP-PUBLIC-P159592-1701.pdf>

The Fiji National Provident Fund (FNPF) disbursed about US\$116.4 million to its members in the first two months following TC Winston. The FNPF, the largest social insurance program of Fiji, allowed affected members to withdraw cash nine days after TC Winston, resulting in a significant injection of cash into the economy. Active members were allowed to withdraw up to F\$1,000 (US\$465), plus an additional F\$5,000 (US\$2325) if they could present proof (property title) of having a house in the cyclone affected area. Within the first two months of the disaster, the FNPF processed and approved 170,000 withdrawal applications, including 35,000 in the second (F\$5,000) category. These one-time withdrawals resulted in a massive injection of cash, equivalent to about 3% of GDP, into the economy. However, this withdrawal may have a long-term impact on members as they will receive reduced pensions in the future, and many will likely not be able to access any further funds in case of future emergencies. Additionally, since the FNPF only covers workers in the formal sector, this support may not have reached some of the most vulnerable households.

## Tapping multiple financing sources in Chile for post-earthquake housing reconstruction

The 2010 earthquake in Chile damaged 370,000 housing units. The Chilean government committed to rebuilding or repairing 222,000 units (60%) for low- and middle-income families, with the remainders financed through insurance and private funds. Owners needing full reconstruction could select models from pre-certified contractors, do their own construction or buy an existing house. The typical subsidy for each house was about US\$18,000 to US\$20,000.

SOURCE: Comerio, Mary 2013. Housing Recovery in Chile: A Qualitative Mid-program Review. Pacific Earthquake Engineering Center; Berkeley, CA. [https://peer.berkeley.edu/sites/default/files/webpeer-2013-01-mary\\_c\\_comerio.pdf](https://peer.berkeley.edu/sites/default/files/webpeer-2013-01-mary_c_comerio.pdf)

Funding by the national government for the repair and replacement of housing was timely and adequate. The government was able to fund the recovery in part because of a robust economy and in part because the earthquake impacted a large portion of the population, so that new taxes and targeted programs were acceptable across the political spectrum. The budgetary sources for the recovery included a ten-year bond issue, taxes on copper mining, tobacco, and non-affected high value properties, international donations, and reallocation among various government budgets, including the country's sovereign wealth fund (the Economic and Social Stabilization Fund).

## 5. Risk transfer (public and private insurance)

Insurance schemes can be used to transfer disaster risk, including financing recovery, from the public and/or private sectors to third parties (insurance or reinsurance companies). See also Case 15 on microinsurance in India

CASE 13  Sri Lanka

### Public disaster insurance in Sri Lanka

Given the recurrence of disasters in Sri Lanka, the government decided to put in place financing instruments for risk sharing and risk transfer to minimize overall economic losses due to disasters. The National Natural Disaster Insurance Policy (NNDI) under the National Insurance Trust Fund (NITF) was first used in the floods and landslides 2016 and then in 2017. It was operationalized in 2016 by the Ministry of Finance in collaboration with the National Disaster Relief Services Centre, which is a department under the Ministry of Disaster Management. This state-backed National Natural Disaster Insurance Policy covers all "natural" disasters except drought since damage from drought is expected to be offset under the Crop Insurance scheme. The NNDI is an entirely state-funded insurance scheme where the total costs of the annual premium are borne by the state. The insurance covers all households irrespective of their income status. The Government pays the annual premium payable under the NNDI policy which was about US\$2 million in 2016 and around US\$3.3 million in 2017. The policy coverage totals up to US\$65 million per annum. Up to US\$10 million of this amount is allocated for emergency relief while the balance is for the structural damages and assets replacement in the affected households and small and medium sized enterprises. In 2017, total insurance payments amounted to US\$96.7 million out of which US\$16.5 million was for immediate relief.

SOURCE: Disaster Recovery Framework Guide (GFDRR 2020) and World Bank/GFDRR 2016. Fiscal Disaster Risk Assessment and Risk Financing Options: Sri Lanka. <https://documents1.worldbank.org/curated/en/430141467229470955/pdf/106715-WP-P147454-OUO-9-SRI-LANKA-D4web.pdf>

CASE 14  Caribbean and Central America

### Regional risk insurance facilities

In 2007, the Caribbean Catastrophe Risk Insurance Facility (CCRIF) was formed as the first multi-country risk pool in the world and was the first insurance instrument to successfully develop parametric policies backed by both traditional and capital markets. CCRIF limits the financial impact of natural hazard events to Caribbean and Central American governments by quickly providing short-term liquidity when a policy is triggered. CCRIF offers parametric insurance policies for tropical cyclones, earthquakes, excess rainfall, the fisheries sector and the public utilities sector.

In 2014, the Facility was restructured into a segregated portfolio company (SPC) to facilitate offering new products and expansion into new geographic areas (three Central American governments are members) and is now named CCRIF SPC. It is owned, operated and registered in the Caribbean. It has been activated 58 times and made US\$260 million in payouts. Similar regional risk insurance facilities have been established for Southeast Asian countries (<https://seadrif.org/>) and Pacific Island nations (<https://pcric.org/>).

SOURCE: [https://www.ccrif.org/?language\\_content\\_entity=en](https://www.ccrif.org/?language_content_entity=en)

## 6. Domestic NGOs, charities and foundations

Local and national non-governmental organisations, charities and non-profit foundations can help finance recovery from existing funds, crowdfunding and/or special fundraising campaigns.

CASE 15  India

### Self-Employed Women's Association in India

A major Indian NGO, the Self-Employed Women's Association (SEWA) took on an innovative approach to providing insurance following the Gujarat Earthquake of 2001. Through its large network of members, SEWA set up village development committees. One of SEWA's goals was to provide small loans to the poorest village women to enable them to diversify their livelihood base, gain regular income and enhance their ability to manage risk. To reduce their vulnerability to future shocks, SEWA provides an integrated microfinance package that includes microinsurance. Realizing both the need for insurance and for an effective intermediary between insurance companies and the poor, SEWA established SEWA Insurance, an intermediary for formal insurance companies. This innovative product offers life, health and asset insurance within one policy.

SEWA promotes this product through an integrated approach that combines savings, credit and insurance. The poorest often even have difficulty paying the minimal 100 Rs. premium for an individual policy in a lump sum; therefore, members can save for their insurance premium through small monthly installments. At the end of the year, when the policy is due for renewal or when new policies are to be purchased, the full premium amount is withdrawn from the account and members who were not able to contribute the full amount are still insured with the balance of their premium treated as a loan.

By linking insurance with savings, these women are provided insurance for the first time. As the microfinance package is managed by the village development committees, information and enforcement problems are reduced as members enter into multiple and repeated relationships with each other and SEWA. The experience of SEWA has shown that microfinance can significantly reduce the vulnerability of the poor in hazard-prone areas particularly when coupled with institution building and training.

SOURCE: The Experiences of SEWA accessed at [http://www.unisdr.org/eng/public\\_aware/world\\_camp/2005/docs/case-study-4-Microfinance-and-Disaster-Mitigation-sewa.pdf](http://www.unisdr.org/eng/public_aware/world_camp/2005/docs/case-study-4-Microfinance-and-Disaster-Mitigation-sewa.pdf)

Photo by Photo by European Union via UN Women | Source: Flickr ([https://www.flickr.com/photos/unwomensiapacific/13055882804/in/photolist-cEt1es-cEs\[...\]Et1Sj-cEsXTG-kTG4Wn-eqJalm-eqJdl-ep-MW46-eqj5AQ-epMNKv-e2VSem](https://www.flickr.com/photos/unwomensiapacific/13055882804/in/photolist-cEt1es-cEs[...]Et1Sj-cEsXTG-kTG4Wn-eqJalm-eqJdl-ep-MW46-eqj5AQ-epMNKv-e2VSem)) | Licensed under Creative Commons CC BY-NC-ND 2.0



## 7. Public-private partnerships (PPPs)

PPPs can be a form of financial burden sharing for disaster response and recovery.

CASE 16  China

### IKEA/UNICEF partnership for Wenchuan Earthquake in China

Following the devastating 2008 Wenchuan earthquake in China, UNICEF China, with support from its partners, provided about US\$20 million in assistance in line with the Chinese Government's three-year reconstruction plan. In August 2008, the IKEA Social Initiative joined UNICEF's relief efforts and made an in-kind donation to meet the urgent shelter needs of affected children, and to support interventions in education, water and sanitation to 39 schools affected by the quake in Xihe County, Gansu province. As a result of these joint efforts, some 10,000 students from poor rural areas have been able to return to school in the area. In Gansu, 6,000 school buildings were damaged beyond use, and there were too few resources to deal with the impact. The IKEA/Unicef partnership provided temporary classroom buildings, installed by UNICEF, that included access to water and sanitation facilities supported by the IKEA Social Initiative. The prefabricated classrooms – which are equipped with quality education supplies, books and furniture – were designed to be used for at least three years, until more permanent government school buildings are constructed. Children using them benefited from safe drinking water, sanitary latrines, washing facilities and waste disposal systems that they didn't have before the earthquake. In addition, teachers and principals were trained in child-friendly approaches to learning.

SOURCES: Source: Unicef China. 2009. IKEA and Unicef aid China Earthquake Recovery. Real Lives. July 7. [http://www.unicef.org/infobycountry/china\\_50181.html](http://www.unicef.org/infobycountry/china_50181.html);

CASE 17  USA

### Post-Katrina Gulf Opportunity Zone tax-exempt bonds

In December 2005, just four months after Hurricane Katrina devastated the United States Gulf Coast, the U.S. Congress passed the GO Zone Act of 2005 which authorized the use of economic incentives to support business recovery and to attract business investment in the disaster area. Louisiana was one of several states where assistance was targeted. The law required the Louisiana government to issue US\$7.9 billion in tax-exempt private activity bonds during the period spanning from 2006 to 2011. Projects supported by GO Zone program receiving tax incentives were financed with bonds that had to be repaid or with equity provided by private investors, developers, insurers, among other sources. These bonds represented a new category of tax exempt bonds that, unlike the type traditionally issued by state and local government boards to fund development, were not payable from taxes or other public funds. Instead, the private developers to whom the bonds were issued were responsible. The risk to government was in the lost tax revenue.

SOURCES: Gotham, K. F. (2013). Dilemmas of disaster zones: Tax incentives and business reinvestment in the Gulf Coast after Hurricanes Katrina and Rita. *City & Community*, 12(4), 483-508. doi:10.1111/cico.12048

## Fukushima Business Relocation Grant Program

Source: Fukushima Industrial Promotion Center (presentation at a public forum at the Third UN World Conference on Disaster Risk Reduction March 2015)

Damage to the Fukushima Daiichi Nuclear Power Plant caused by the 2011 Great East Japan Earthquake resulted in a release of radioactive materials and prompted the evacuation of an area of 20km radius surrounding the plant. Many businesses were impacted, and most faced long-term displacement from their facilities. To address the hardships associated with relocation (which were above and beyond what any SME would have reasonably been expected to prepare for), and to support economic recovery in the region, the Fukushima prefectural government instituted a 20 billion JPY business relocation subsidy program. In total, 548 loans were provided to businesses that relocated and 289 were provided to businesses in the zone where evacuation was lifted. Tax incentives were also provided in addition to the grant subsidies.

### 8. Development finance

Multilateral and bilateral financing institutions can help fund the costs of recovery through reprogramming existing financing, new lending and standby credit and other contingent financing arrangements. This can be technically supported with expertise from UN agencies, multilateral and bilateral assistance.

## Contingency financing in the Philippines

SOURCE: Source: World Bank 2017. Project Performance Assessment Report: The Philippines—Disaster Risk Management Development Policy Loan with a Catastrophe Deferred Drawdown Option. World Bank; Washington, DC.

The first Philippines Disaster Risk Management Development Policy Loan with a Catastrophe Deferred Drawdown Option or CAT DDO (US\$500 million) was approved in September 2011 and fully drawn down in December 2011 when the disbursement trigger was met after Typhoon Washi. The full loan amount was disbursed to the Government within 48 hours. The first CAT DDO aimed to enhance the capacity of the Government of the Philippines to manage the impacts of disasters. To this end, the program supported: (i) strengthening the institutional capacity for disaster risk management (DRM) efforts; (ii) mainstreaming DRM into development planning; and (iii) better managing the government's fiscal exposure to natural hazard impacts. The CAT DDO proved to be a useful instrument in the Philippines for achieving the dual objectives of supporting fundamental disaster risk management reforms and providing quick-release financing for disaster recovery and reconstruction. Based on the Government's positive experience from both the policy and financing perspectives, a second CAT DDO (US\$500 million) was provided in 2015 with the aim to strengthen risk reduction investment planning and regulations and enhance the financial capacity to manage disaster risk. On September 25, 2018, the President of the Philippines declared a State of Calamity after typhoon Mangkhut, and the 2nd CAT DDO was fully drawn down. From these experiences, in-depth analytical work and well-targeted technical assistance were critical for achieving results. This type of contingency financing is also offered by the Asian Development Bank. It is being used by countries in all regions, including for socio-economic recovery from COVID-19.

## 9. Multi-Donor Trust Funds

For large disasters, donors can pool their resources in a trust fund that typically helps to address gaps in recovery financing.

CASE 20  Indonesia

### Multi-Donor Fund for Aceh and Nias in Indonesia

The recovery of Aceh and Nias in northern Indonesia following the Indian Ocean tsunami in 2004 and an earthquake in 2005 was one of the largest humanitarian operations in history. Over 600 funding agencies and 500 implementing agencies were involved. The total funding requirement was around \$7 billion. One of the successful contributors to this historic effort was the Multi Donor Fund for Aceh and Nias (MDF), established in April 2005 and closed in November 2012 to support the post-disaster reconstruction of Aceh and Nias.

This fund, initiated following government requests for coordinated donor support, is widely considered to be one of the most successful of its kind. The core factors for success were the leadership of the Government of Indonesia and the close partnership of the World Bank, the UN and other stakeholders that supported the government's agenda. The 23 projects carried out in every district of Aceh and Nias under the fund addressed priority reconstruction needs identified by the government. 99% of MDF funds were used to implement recovery projects. The government had framed a Master Plan for Rehabilitation and Reconstruction that relied on the country's institutions, systems and procedures, ensuring that the government had a clear say in the choice of investments and instruments used that would respond to local needs. The MDF – which represented 10% of the total funds for reconstruction (nearly US\$700 million) – supported this government master plan, based on assurances of accountability for funds, visibility for their contributions and effective results. Over 70% of the MDF was channeled through the national budget, utilizing the country's public financial management system.

The mix of collaborating partner agencies and implementing agencies under the MDF provided the opportunity to use individual organizations' comparative advantages during the recovery effort. Major multilateral organizations, such as the World Bank, UN agencies and the Asian Development Bank served as partner agencies. Implementing agencies included government line ministries and international NGOs.

SOURCE: Extracted from United Nations Development Programme 2016. National Post-Disaster Recovery Planning and Coordination, A Guidance Note, UNDP; New York, p. 42



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## 10. International NGOs, charities and foundations

External NGOs, charities and foundations can mobilize resources to help with recovery finance.

### CASE 21

## International NGOs (INGOs) Code of Conduct for Disaster Relief

There are countless examples of effective and generous international non-governmental financing for disaster relief and reconstruction. Good practice is embodied in the ten Principles of Conduct for the International Red Cross and Red Crescent Movement and NGOs in Disaster Response Programmes:

- 1) The humanitarian imperative comes first.
- 2) Aid is given regardless of the race, creed or nationality of the recipients and without adverse distinction of any kind.
- 3) Aid will not be used to further a particular political or religious standpoint.
- 4) We shall endeavour not to act as instruments of government foreign policy.
- 5) We shall respect culture and custom.
- 6) We shall attempt to build disaster response on local capacities.
- 7) Ways shall be found to involve programme beneficiaries in the management of relief aid.
- 8) Relief aid must strive to reduce future vulnerabilities to disaster as well as meeting basic needs.
- 9) We hold ourselves accountable to both those we seek to assist and those from whom we accept resources.
- 10) In our information, publicity and advertising activities, we shall recognise disaster victims as dignified humans, not hopeless objects.

SOURCE: INGO Code of Conduct for Disaster Relief

## 11. Remittances

Transfers from overseas residents, typically to relatives in affected households, is a mechanism that is used to support the rebuilding of private assets while diaspora bonds can be used to finance reconstruction of public assets.

### CASE 22 Indonesia

## Using a blend of financial instruments in Indonesia

The Government of Indonesia's 2020-2024 national plan underscores disaster management as one of its seven strategic priorities ("to improve disaster resilience through the convergence of DRR and CCA by strengthening information systems (data), regulation and governance of disaster, especially through the integration of the Action Plan for Disaster Reduction with the Action Plan on Climate Change Adaptation at the national and regional level.")

A critical dimension of preparedness for recovery finance is the increased development and innovation of alternative financing measures for disaster management. Indonesia has been using integrated strategies like blended financing, multi-donor funding and its own national disaster reserve fund to finance recovery. Moving forward, with support from the World Bank, Indonesia is developing disaster risk financing and insurance mechanisms that could ease the burden on the state budget, create reserves for future disasters and play a critical role to protect public assets and accelerate recovery.

SOURCE: Global Compendium of Good Practices for Post-disaster Recovery (UNDP 2020), p. 57

## Diaspora bonds in Haiti

Following the earthquake in Haiti, remittances were expected to surge 20%. Prior to the quake, remittances already constituted between 25 and 50% of national income. While a rise in remittances is common after disasters, Haiti represented the first time the restoration of remittances services was seen as a critical part of disaster relief and response. The World Bank explored the role that a wealthy national diaspora living in the United States, Canada, France and other countries continues to play in Haiti's recovery. The expected 20% increase amounts to an additional US\$360 million above normal levels, according to World Bank's Outlook for Remittance Flows 2010-11. The diaspora officially sent US\$1.4 billion in remittances to Haiti in 2008, and unofficially may have sent as much as US\$2 billion. Much of the 2010 increase is likely to be from 200,000 undocumented workers granted "temporary protective status" to live and work legally in the United States for 18 months. If the temporary protective status is extended another 18 months, additional flows to Haiti could exceed US\$1 billion over three years.

In order to capitalize on this support, the World Bank proposed Haiti issue reconstruction diaspora bonds to tap the wealth of the diaspora. This group is typically more willing than other foreign investors to lend money to the affected national government at a cheap rate, thereby making socially relevant projects that offer a lower rate of return more affordable. In the past, diaspora bonds have been used by Israel and India to raise over US\$35 billion in development financing. Several countries—including Ethiopia, Nepal, the Philippines, Rwanda, and Sri Lanka—are considering (or have issued) diaspora bonds recently to bridge financing gaps. By offering a reasonable interest rate (e.g., a 5% tax-free dollar interest rate), this option can attract a large number of investors. The bonds must, however, be implemented by a credible organization overseen by international agencies or observers. It was estimated that a diaspora bond sale could raise US\$200 million if 200,000 Haitians in the United States, Canada and France were to invest US\$1,000 each, and much higher amounts could be raised if bonds were open to friends of Haiti and guaranteed by multilateral or bilateral donors.

SOURCE: World Bank Group 2010. Haiti Remittances Key to Earthquake Recovery. <http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMD-K:22582923~pagePK:64257043~piPK:437376~theSitePK:4607,00.htm>



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## V. Coordinating and allocating financial resources

## Background

Experience has shown that if governments do not establish an extensive financial framework for recovery in the short, medium and long terms, only short-term interventions tend to have enough funding for implementation. Yet, medium- and long-term recovery programs are equally important for sustainable recovery. This is why governments should ensure that they establish a complete financial framework with predictable and multiannual funding that is aligned with the sectoral recovery programs. This will also facilitate coordination across different sources of finance. Allocation should occur through a transparent and accountable system of public financial management (see Case 24).

Managing the inflows of resources and spending them effectively are challenging in a post-disaster environment. The actual allocation of resources occurs through a budgetary process. The table at the bottom highlights the different timeframes for resource allocation. Typically, reconstruction expenditures will be heavy in the medium to long terms as destroyed or damaged infrastructure is replaced.

Funds from the private sector and nongovernmental organizations outside the government budget are critical to recovery. In many instances, government funding is not sufficient. The programmatic approach can help coordinate funding sources, ensure communication among different sources of funds, and ensure that monies spent do not duplicate efforts. For example, private sector funds may be allocated to a specific economic sector or geographic area. Funds coming from nongovernmental organizations could be allocated to social needs.

An important step toward fulfilling recovery objectives is setting up financial systems that allocate and disburse funds from one level of government to another (see Case 25); and/or communities or systems that manage external resources. In large-scale disasters, external resource flows are usually significant. Therefore, recovery financing will likely be managed through both the government's budget (on-budget) and off budget funding. The financing systems should be set up to respect transparency, accountability and integrity, in particular to control the risks of corruption (see Case 26). And disbursement can be accelerated by using existing mechanisms (see Case 27).

## GOOD PRACTICES IN THIS CHAPTER

### CASE 24

Public financial management for recovery in Mozambique

### CASE 25

Intergovernmental financing arrangements for recovery in Canada

### CASE 26

Promoting recovery transparency and accountability in Indonesia

### CASE 27

Rapid disbursement through existing mechanisms in the Philippines

Timeframe for Use of Allocated Resources

Post-Disaster Financing	Short-term			Medium-term		Long-term	
Contingency budget							
Donor assistance (relief)							
Reallocation of annual budget							
External loans							
Capital budget realignment							
Donor assistance (recovery)							
Tax increase							

Source: Adapted from ASEAN 2012. "Advancing Disaster Risk Financing and Insurance in ASEAN Member States: Framework and Options for Implementation." Association of Southeast Asian Nations; Jakarta.

## Key lessons

<b>1</b> <p>Be prepared by enabling a framework of multiannual recovery financing and sound public financial management before the next disaster.</p>	<b>2</b> <p>Put in place a disaster risk financing framework to address different layers of risk.</p>	<b>3</b> <p>Public and private sources of finance need to be coordinated, aligned and monitored in accordance with a recovery plan and programs to ensure that resources are used effectively and duplication or gaps are avoided.</p>
<b>4</b> <p>Special dispensations or accelerated processes should be in place to disburse the funds available for recovery as quickly (yet transparently) as possible.</p>	<b>5</b> <p>Financing systems should be set up to respect transparency, accountability and integrity, in particular to control the risks of corruption.</p>	<b>6</b> <p>Use existing programs and institutions to accelerate disbursement of recovery financing. This expansion of effort usually requires additional investment in the capacity of both communities and program staff.</p>

## Resources

Disaster Recovery Framework Guide (GFDRR 2020)

## Public financial management for recovery in Mozambique

Following floods and cyclones in Mozambique in 2000 and 2009, the public sector financial management system successfully handled donor funds with due accountability and transparency without establishing a donor trust fund. To manage recovery from the floods and cyclones of 2000 and 2001, the government set in motion a post-flood recovery program with the support of external donors which was managed largely through the national budget system. This program avoided multiple complex arrangements while strengthening national accountability and transparency mechanisms. Funds were channelled through government budgets rather than trust funds, giving the government full responsibility for accountability and supervision. Having funds directed through the national system meant that the recovery program would be fully integrated with the public sector financial management system. Strong government ownership and commitment to the goals of the recovery programme seem to have provided incentives for donors to agree to work largely through the national system. By 2013, the Government of Mozambique had opted to work with donor partners through existing programs of cooperation, and without appealing to donors specifically for disaster recovery needs through donor round tables, for example.

SOURCE: Source: Country Case Study Series, Mozambique, Disaster Recovery Framework Guide

## Intergovernmental financing arrangements for recovery in Canada

When response and recovery costs exceed what individual provinces or territories could reasonably be expected to bear on their own, the Disaster Financial Assistance Arrangements (DFAA) provide the Government of Canada with a fair and equitable means of assisting provincial and territorial governments. Since the inception of the program in 1970, the Government of Canada has paid out more than C\$1.6 billion in post-disaster assistance to help provinces and territories offset the costs of response and of returning infrastructure (and personal property) to pre-disaster condition. Through the DFAA, assistance is paid directly to the province or territory—not directly to the individuals or communities. The percentage of eligible costs reimbursed under the DFAA is determined by the cost-sharing formula outlined in the arrangements (a factor of the extent of damage and the population of the affected area).

The provincial or territorial governments design, develop and deliver disaster financial assistance, deciding the amounts and types of assistance that will be provided to those that have experienced losses. The Government of Canada places no restrictions on provincial or territorial governments in this regard—they are free to put in place the disaster financial assistance appropriate to the particular disaster and circumstances. Public Safety and Emergency Preparedness Canada works closely with the province or territory to assess damage and review claims for reimbursement of eligible response and recovery costs. Other federal departments and agencies are sometimes asked to assist in determining what constitutes reasonable costs for recovery and restoration.

SOURCE: Government of Canada. <http://www.publicsafety.gc.ca/prg/em/dfaa/index-eng.aspx>.

## Promoting recovery transparency and accountability in Indonesia

At the time of the Indian Ocean Tsunami (2004), corruption was considered endemic in Indonesia. Transparency International ranked Indonesia 133 out of 145 countries in the 2004 Corruption Perception Index. Therefore, it was important that the national recovery authority (BRR), as the agency managing large donor resources and procuring materials for reconstruction, establish a reputation for honesty and integrity. BRR took a zero-tolerance policy against corruption and put in place internal monitoring systems and third-party scrutiny of its accounts. It established an anti-corruption unit. BRR selected leaders with impeccable track records who were required to publicly declare individually owned assets and wealth. All employees were required to sign and abide by an Integrity Pact as part of the terms of their employment. The Integrity Pact included clear statements that staff were not to receive gifts and should declare any gift of greater value than US\$20. The Pact also established standards for not using the office for personal gain and stated consequences for abuse of power. The Integrity Pact was among one of the many instruments used by BRR to establish accountability through its staff. Members of BRR's Anti-Corruption Unit agreed to a code of ethics, above and beyond the Integrity Pact signed by all employees. Punitive action was taken against staff that violated the Integrity Pact e.g., recommendation for dismissal, cancellation of contract and in some cases referral to legal authorities for further action.

SOURCE: Agency for Rehabilitation and Reconstruction of Aceh–Nias (BRR) 2009. 10 Management Lessons for Host Governments Coordinating Post-Disaster Reconstruction. BRR; Jakarta.

The Integrity Pact and other mechanisms established by BRR were very effective. 99% of the US\$7.2 billion funds managed by BRR was fully accounted for and utilized for the purpose for which it was intended and in accordance with the regulations. BRR's use of the Integrity Pact as a measure of its accountability to its stakeholders was adopted by two of Indonesia's largest state-owned companies - Pertamina and Telkom.



Photo by Frans Delian/  
Shutterstock.

## Rapid disbursement through existing mechanisms in the Philippines

Typhoon Haiyan, known locally as "Yolanda", hit the central Philippines on 8 November 2013. The final damage report indicated a death toll of more than 7,000, 28,000 injuries and about 4.1 million people, displaced. The government estimated the damage at US\$2.2 billion. ADB estimated that an additional 1.5 million persons may have fallen into poverty immediately after the typhoon.

The Philippines used its existing community-drive development programme (KALAHICIDSS) to support recovery and rehabilitation. Its objectives are to improve service delivery, local governance, and community empowerment in accessing services. KALAHICIDSS was present in about 90% of the Yolanda-affected areas. It had a well-established operating system to channel funds and provide technical support on community projects and social services to poor communities.

Capitalizing on a well-established management system and delivery mechanism strengthened the relevance of the project; however, two adjustments were required. First, to address the post-disaster needs of communities, the project initially employed a shortened planning and implementation cycle to accelerate fund transfer and delivery of services to typhoon-affected areas. This allowed greater flexibility in responding to the emergency through existing resources and systems, including the network of trained facilitators, community committees, and volunteers, and sped up community response during early recovery and rehabilitation. Second, the effort required intensive involvement of service providers and technical agencies for community mobilization, technical assistance and training. Over 300,000 volunteers were trained (nearly 200,000 of which were women) on situational analysis and needs identification, preparing project proposals, financial management and procurement, and subproject implementation.

Of the 15,541 funded subprojects, 10,010 (64%) adopted the Disaster Response Operations Modality to repair and rehabilitate structures damaged by the typhoon and build resilient facilities. Sub-projects comprised building and repairing roads and footpaths, classrooms, water and sanitation systems. A major contribution of the project was increasing poor communities' awareness of climate and disaster risks. Consequently, communities increasingly prioritized subproject technical design in "climate-proofing".

SOURCE: Draft ADB Build Back Better Guide, Chapter 3 Cross-Cutting Measures, Philippines: KALAHICIDSS National Community-Driven Development Project (46420-002)



Photo by Minette Rimando/ILO | Source: Flickr (<https://www.flickr.com/photos/iloasiapacific/8184560559/in/photolist-CM2o2u-f0-RUYV-2odSYJi-jdDc4C-jdBTc-cHPXZE-Dp483B-2odRzpM-2odNFrZ-2g9y9GK-dtdf3f-dtf1H6>) | Licensed under Creative Commons CC BY-NC-ND 2.0



## VI.

# Managing and tracking funds

## Background

The monitoring system that is most appropriate depends on the magnitude of the disaster, number of actors engaged in recovery spending, quality of their reporting, and existing capacity of the national agency responsible for it. An important aspect of fund tracking is to identify where there are surpluses and deficits of financing. These gaps or excesses can be sectoral as well as geographical. Auditing and monitoring oversight are also critical to combat corruption and ensure that financing is used for its intended purpose (see Case 28).

Key benchmarks for the financial monitoring and evaluation system are the production of timely and comprehensive estimates of:

- Funds allocated and spent covering all sources: domestic, international, public, and private;
- Recovery progress; and
- Economic and social impacts.

Before a disaster strikes, it is recommended that governments design and test different monitoring and evaluation systems that can be mobilized quickly by the relevant institutions and stakeholders in charge of implementing the post-disaster recovery. This will allow governments to decide on the best monitoring system to use once the disaster strikes (see Case 30 for examples of sophisticated and simple systems).

Auditing and monitoring oversight is designed at three levels. At the highest level is the overall recovery program monitoring. Program-level monitoring builds on sector-level monitoring, which consolidates the reporting of each sector. At the lowest level is the individual projects monitoring (see Case 29). The auditing and monitoring system should be designed to integrate oversight at all three levels. Special additional systems may be required to monitor inflows, use, and impact of recovery financing.

## GOOD PRACTICES IN THIS CHAPTER

CASE 28:  
The Haitian Platform for Public Investment

CASE 29:  
Tracking finances at the project level for recovery in Nepal

CASE 30:  
Two approaches to tracking recovery finance in Indonesia



Photo: UNDP/Brenda Hada

Photo by UNDP Mozambique | Source: Flickr (<https://www.flickr.com/photos/192600283@N07/51132245452/in/photolist-2oGhgz1-h9Zm7t-2gebqj2-2kUx-8LG-2kUo89Q-2kUo6yF-2kUvuUr-2dW-jwEH-2dWjwAe-2fkGDz-2fkCGsa-2dW-jwmX-2fkGzg-2fk-Gj6-2dWjvYc-2fk-GqZ-2fkGnH-2fk-G6a-2fkGdD/>) | Licensed under Creative Commons CC BY-NC-ND 2.0

## Key lessons

<p><b>1</b></p> <p>Be prepared by developing systems for monitoring public and private financing, identifying gaps and auditing/monitoring oversight before the next disaster.</p>	<p><b>2</b></p> <p>Strict quality control and a proactive data-gathering approach are vital in ensuring the sustainability of the database system. Quality can be best maintained by establishing a close working relationship between the database team and the sources of finance during the process of collecting, updating, and verifying data and discussing any issues and problems related to data.</p>	<p><b>3</b></p> <p>A financial tracking system works best if financing sources are obliged to submit all their project details. Establishing a system in which such an obligation exists can help to support the process of data collection and input. One way of achieving this can be through a policy whereby donors and NGOs are required to submit their project concept notes to the government. These project concept notes should then include all the funding information for the project. In that way integrated initial information on funding commitments and allocations from all sources can be collected.</p>
<p><b>4</b></p> <p>The monitoring system should be kept simple. Highly sophisticated systems have often failed, particularly in poorer countries with weak infrastructure. It is necessary to focus on the specific objectives of the database system when collecting data and avoid being overambitious by trying to capture all the available information. Being selective in precisely which data can feasibly be used in the database helps to maintain data quality.</p>	<p><b>5</b></p> <p>Links between data collection, analysis, and reporting need to be established. Good data alone are insufficient because the database requires the participation of stakeholders to update and validate them. Through this interaction, real information in the field can be verified and further processed. Finally, the analysis results need to be packaged and communicated in a simple, yet comprehensive manner.</p>	<p><b>6</b></p> <p>Solid reporting can play a crucial role in decision-making. Providing an accurate picture of projects and their performance can have a major impact on the planning and budgeting processes of the government, donors, and NGOs. Reports based on reliable data can become the basis for reconstruction players to allocate funds most effectively. Clear mapping of sectoral and geographical funding can provide information on sectoral and geographic financing gaps and where additional funding may be needed, while also avoiding duplicative use of resources.</p>

SOURCE: IRP Guidance for Disaster Recovery

## Resources

- Disaster Recovery Framework Guide (GFDRR 2020)
- Global Compendium of Good Practices for Post-disaster Recovery (UNDP 2020)
- Post-tsunami Aid Effectiveness in Aceh: Proliferation and Coordination in Reconstruction (Brookings Institution 2008)

## The Haitian Platform for Public Investment

The Haitian Government, in partnership with UNDP, launched an online portal to promote the efficient use of the more than US\$9 billion pledged by donors to help the country recover from devastating earthquake in January 2010. This database, called "The Haitian Platform for Public Investment", was intended to help the Haitian government to:

1. Track funds pledged by over 60 donors;
2. Hold donors to their promised pledges; and
3. Ensure the transparency and accountability of the use of the funds.

The system was tailored to the context specific needs of the Haitian government while addressing the conditions of the many donors. The online portal was developed by the same authors responsible for the Development Assistance Database (DAD – see Case 29) and has incorporated changes based on lessons learned from use in over 25 countries.

The system tracked the money from pledge to impact, showing how funds are planned and actually spent, by whom and for what. It also includes contributions and support from non-governmental organizations (NGOs) as well as the private sector.

The system, which incorporates data from the Post Disaster Needs Assessment and the Reconstruction Plan, assisted decision-makers to match pledges with needs based on empirical data and using advanced analytics. The system provided details on past and current projects as well as any gaps that might exist in areas of development and humanitarian assistance. Publicly accessible, the portal allowed people of Haiti, as well as the national and international media, to monitor the use of the funds, report on the progress, and hold their elected representatives and other recovery actors accountable for how those funds are spent.

SOURCE: <http://content.undp.org/go/newsroom/2010/april/new-online-portal-to-promote-efficient-use-of-aid-in-haitian-earthquake-recovery.en;jsessionid=a0RZO-5p59eca>

## Tracking finances at the project level for recovery in Nepal

A unique aspect of Nepal Housing Reconstruction Program (NHRP) following the 2016 Gorkha earthquake is the use of the Reconstruction Information Management System (RIMS), developed with support from UNDP, for real-time tracking of the status of construction, tranche release, facilitation provided, and support required to accelerate the reconstruction process. Mobile based and web-based data collection systems in both Nepali and English have been developed to capture the facilitation provided to each house-owner, along with automated geo-tagging that helps gather spatial information. Customized mobile-based modules are developed specifically for ANSs, CFs and Engineers. Data from mobile and web-based applications are uploaded in the database accessed by the project team remotely at all levels for monitoring and quality assurance of the activities. Data analytics help to generate dashboards to display data of reconstruction status and of each beneficiary. This easy to navigate technology makes it convenient to access up to date data for more efficiency and transparency of project execution and planning.

SOURCE: Global Compendium of Good Practices for Post-disaster Recovery, pp. 72-3 (UNDP 2020)



Photo by UNDP Nepal

## Two approaches to tracking recovery finance in Indonesia

With the huge influx of support from a vast number of actors, it was evident soon after the tsunami that the central collection and reporting of funding was required in order to enable all actors to allocate appropriate funds with minimal duplication and provide support where it most needed. The combination of large amounts of funding and the need for rapid action created an environment in which reliable analysis and information concerning reconstruction progress were vital. The Government of Indonesia opted to implement, with support from UNDP, the Development Assistance Database (DAD), which had already proved successful in tracking donor funds in Afghanistan since 2003.

**Sophisticated system.** The DAD system was a sophisticated IT application that allowed the capturing and reporting of financial commitments and disbursements, but that could also be customized by host governments. The system allowed users to filter, group, and sort various indicators. With an on-demand query and searching capability, the system could provide users with a wide range of analytical functions, including querying, reporting, charts and geographic information system functions. The system was inaugurated in November 2005 and renamed the Recovery Aceh Nias (RAN) database. The system was customized by BRR and went through substantial system development whilst live in the field. The development transformed the RAN, giving it extra functionality that was unavailable in the other tsunami-affected countries also using the DAD. The key development was the ability to enter project information in relation to planned and actual outputs ("key performance indicators", or KPIs). This provided BRR with the ability to monitor physical progress, in addition to improving transparency around funding flows.

This additional functionality created problems in practice, mainly due to the complex funding arrangements between the large number of actors present in the field. On one hand, the system was attempting to track the financial inputs (commitments, disbursements and expenditures) between the original provider of funds and subsequent recipient agencies. On the other hand, implementing agencies were required to enter very specific project details. In practice, there was often a disconnect between these two goals of tracking the funds and monitoring the physical outputs. This led to some duplication of funding and project data, together with some data inconsistencies. Project implementers were requested to enter detailed data on their project outputs at both a sector level and a geographical level. The level of detail required by the system was challenging for many agencies and in order to satisfy the arduous monthly reporting requirements, the credibility of project data began to suffer. Also, shortly after the launch of the database, partners who were working in the districts/fields realized that it was impossible to access the database due to weak, or almost no, internet infrastructure. This created major delays in data collection and as a result affected the decision-making process at the upstream level. RAN was cumbersome in its early days but enabled BRR to capture a broad picture—albeit not an entirely accurate one—of the reconstruction landscape.

**Simple system.** At the request of the Government, the World Bank set about designing a simple financial tracking system to provide a snapshot at regular intervals of where these pledges were being committed and allocated, and how the money was being spent on post-tsunami reconstruction. The resulting system was developed after a stock-take of available information. Although the system was based on the manual collection of data, making it relatively labor-intensive and time-consuming, it nonetheless proved effective in providing a broad overview of reconstruction financing at regular intervals. The manual nature of the system revealed that a simple process—one with a clear scope and methodology, and maintained by a small but dedicated team of analysts for collecting and analyzing data—can produce much needed output at low cost in a post-disaster environment. Building relationships with the key players created an environment in which proactive management of the data was possible, in contrast to more complex IT systems.

SOURCE: Masyrafah, Harry & J. McKeon 2008. Post-tsunami Aid Effectiveness in Aceh: Proliferation and Coordination in Reconstruction, Brookings Institution; Washington, DC, pp. 35-6. [https://www.brookings.edu/wp-content/uploads/2016/06/11\\_aceh\\_aid\\_masyrafah.pdf](https://www.brookings.edu/wp-content/uploads/2016/06/11_aceh_aid_masyrafah.pdf)

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