

# GFDRR

**BRINGING RESILIENCE TO SCALE**



A satellite image of Earth showing a large, well-defined hurricane over the ocean. The hurricane has a distinct eye and a dense, swirling cloud structure. The surrounding ocean is dark blue, and the landmasses are visible in green and brown. The text "Bringing resilience to scale" is overlaid in white, bold font across the center of the image.

**Bringing resilience to scale**

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Notes: Fiscal year (FY) runs from July 1 to June 30; the financial contributions and expenditures reported are reflected up to June 30, 2017; all dollar amounts are in US dollars (\$) unless otherwise indicated.

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UNITED NATIONS OFFICE FOR  
DISASTER RISK REDUCTION



WORLD BANK GROUP

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ORGANIZATION  
OF ISLAMIC  
COOPERATION



UNITED NATIONS  
DEVELOPMENT  
PROGRAMME



WORLD  
METEOROLOGICAL  
ORGANIZATION

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# Foreword

**T**he need for action has never been clearer. At the time of writing this report, the world is reeling from the impact of an unprecedented string of disasters. Hurricanes Harvey, Irma, Katia, and Maria have battered the Caribbean, devastating communities and wiping out critical infrastructure on a country-wide scale, while Hurricane Ophelia has unleashed its winds in Ireland and the United Kingdom. Fears of volcanic eruptions in Indonesia and Vanuatu have triggered mass evacuations. While flooding in Bangladesh, India, Nepal, Pakistan, and Sri Lanka, have claimed more than 2,500 lives, Sierra Leone has experienced destructive landslides, and Ethiopia, Kenya, Malawi, Nigeria, Somalia, South Sudan, and Yemen are recovering from a crippling prolonged drought. Last but not the least, we cannot forget the violent 8.2 and 7.1 magnitude earthquakes that struck South and Central Mexico, killing hundreds and injuring thousands more.

Tragically, impacts like these are fast becoming the new normal around the globe, especially for the most vulnerable populations. Climate change may push up to 100 million people into poverty by 2030, while rapid urbanization is putting millions more at risk from seismic events and extreme weather. And while human losses from disasters have decreased, damage to assets is on the rise globally, imperiling sustainable development efforts.

To address these growing challenges, the Global Facility for Disaster Reduction and Recovery (GFDRR) is working with a wide range of partners to scale up investments in climate and disaster risk in developing countries. Through its grants, technical assistance, and knowledge sharing, GFDRR leveraged more than \$4 billion for resilience over fiscal year 2017 (FY17).





John Roome  
CG Chair  
World Bank

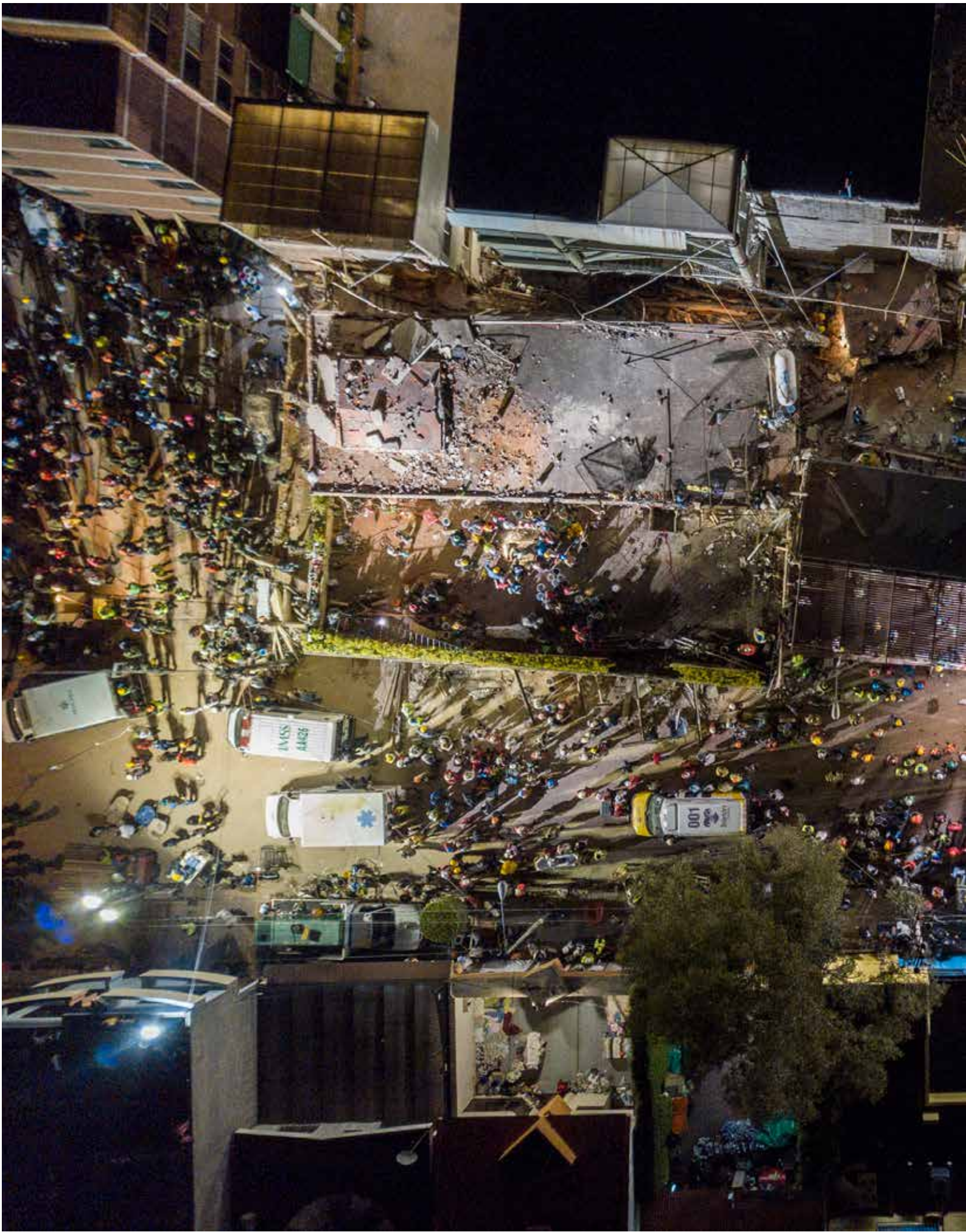


Luis Felipe Puente Espinosa  
CG Co-Chair  
Government of Mexico

GFDRR also made important contributions to discussions on disaster risk reduction on the international stage. At the Twenty Second Conference of Parties (COP22) in Morocco, GFDRR worked with its growing network to organize more than a dozen events on topics ranging from protecting small island states to deepening financial protection strategies. In Mexico, GFDRR also influenced discussion at the Global Platform for Disaster Risk Reduction 2017, bringing in the voice of indigenous women leaders and pushing key agendas forward like improving hydromet services and scaling up urban resilience.

This Annual Report highlights these and many other efforts that show how GFDRR is catalyzing the implementation of key international frameworks. Through its work in more than 80 countries in the last year alone, GFDRR has positioned itself to be a strong leader in resilience building, and especially for strengthening urban resilience, quality infrastructure, inclusive community resilience, and other important areas.

From the Sendai Framework for Disaster Risk Reduction, to the Sustainable Development Goals and the Paris Agreement, incredible efforts have been made to inform and empower decision makers to help make the world more resilient. As the international community pivots from agreements to action, GFDRR's role of empowering communities and building strategic partnerships will be more important than ever. We are confident that GFDRR can build on its strong momentum in recent years to help shape a more resilient future for those most in need—ensuring that interventions to manage risk are scalable and sustainable.





# EXECUTIVE SUMMARY

This report highlights the results achieved during fiscal year 2017. It provides an overview of GFDRR's grant-making activities as implemented in countries in its eight areas of engagement.

The report also outlines GFDRR's contribution to the global resilience agenda and its efforts to develop innovative solutions, tools, and analytical products for strengthening the global knowledge base for disaster risk management.

# Executive Summary

## A year of learning and change

Fiscal year 2017 (FY17) was a milestone year for the Global Facility for Disaster Reduction and Recovery (GFDRR). The year was marked by reflection and learning, a process that led to the development of a new Strategy for the period of 2018-2021. This new Strategy reflects an evolution of the Facility from a mechanism that financed short-lived pilots to one that enables large operations that integrate climate and disaster risk into development programs. Indeed, last year alone, GFDRR supported resilience investments of close to \$5 billion. In drafting the new Strategy, GFDRR outlined targets for the next three years that will focus on eight areas of engagement with clear operating principles.

Over the past few years, GFDRR's program gradually shifted to activities that either lead to larger development programs, or support policy changes that strengthen institutions for managing risk at the national and sub-national levels.

A few notable examples from FY17 include Indonesia's national urban upgradation project, which enabled \$1.3 billion in investments from the government, and where GFDRR provided support to train all project operators and over 4,000 facilitators who will ensure that disaster risk management (DRM) is mainstreamed into the project design and implementation. In Europe and Central Asia, with technical assistance from GFDRR, a \$160 million project approved by the European Union is helping Turkey's Ministry of National Education to build earthquake-resistant schools, ensuring safe access to education for 40,000 Syrian children. In Mali, GFDRR helped leverage over \$30 million in grants and concessional financing from the Green Climate Fund and the World Bank to improve the country's hydromet infrastructure, systems, and services.

GFDRR also increased its engagement in the climate agenda by providing support for integrating the climate change dimension into new and ongoing World Bank projects. In FY17 alone, GFDRR's assistance helped integrate climate-resilience measures into more than \$1 billion in investments in over 20 countries, including in Tajikistan, Burundi, India, and Mongolia. In India, for instance, assistance from GFDRR is integrating climate-resilience measures into a \$200 million project targeting flood risk management in the eastern part of the country, in Assam.

The new Strategy sets pre-established targets for its eight areas of engagement that reflect the Facility's ambition over the next three years. These include: (i) making disaster risk information openly accessible at the district level in all its countries of engagement; (ii) making 200,000 classrooms safer from disasters, benefitting up to 7 million students; (iii) leveraging at least \$1.5 billion in urban areas from public and private resources; (iv) providing access to climate early warning services to 100 million people in low-income countries and small island states; (v) training 500 government officials in financial protection

and enabling direct and indirect insurance programs that will eventually cover more than 100 million people; (vi) reaching at least 15 million people through community engagements and social protection; (vii) enabling at least \$3 billion in climate-resilience investments from development partners; and (viii) training at least 1,000 government officials on post-disaster assessment and recovery planning.

An important area of growth for GFDRR over the last year has been the way that it monitors its own progress. These efforts show that GFDRR is already well on its way to achieving the targets outlined above. In FY17, GFDRR's program helped generate 1,500 open risk datasets and hazard layers. Technical assistance supporting safer school activities has already made 78,300 classrooms safer, benefiting close to 2 million students. Engagements in hydromet and early warning systems are already reaching 40 million people, while GFDRR's dedicated support to community resilience engagement benefitted 4 million people.

GFDRR's analytical work has focused on methodologies to measure and track progress on resilience building at the country-level, to assess the impact of DRM investments, and to prioritize actions to build resilience at the country level. To achieve this, GFDRR supported the development of a national-level indicator to measure socioeconomic resilience to river and coastal floods, storms, earthquakes, and tsunamis in 117 countries. The results of this work were published in "Unbreakable: Building the Resilience of the Poor in the Face of Natural Disasters."

Over the last few years, GFDRR has seen a gradual increase in requests from cities and local governments to support large-scale investments. FY17 laid the foundation to scale up engagements in rapidly urbanizing areas with the successful launch of the City Resilience Program. This program, implemented jointly with the World Bank and other partners, has already started in 10 cities, and is expected to grow to 30 cities in the next three years.

Going forward, GFDRR will continue to strengthen action on the ground through the development of knowledge, tools, and methodologies for jointly addressing climate and disaster risk in development programs. Activities will increase in resilient infrastructure, with engagements in the transport, energy, and water sectors. GFDRR's action on financial protection and insurance should expand greatly. A strong push is also expected to promote disability and inclusion into the design of GFDRR's activities.

GFDRR's FY17 achievements, while significant, were only possible thanks to support from its donors and partners. We take this opportunity to express sincere gratitude to all those who have contributed to the Facility's growing program. GFDRR will continue to strengthen its partnerships to reach new heights in the years to come.



Francis Ghesquiere  
Head, GFDRR

**Over the last year, the GFDRR Secretariat developed its new Strategy for 2018–21, which outlines GFDRR’s vision, mission, and comparative advantage and organizes GFDRR’s country activities around eight areas of engagement that operate on seven principles.**

## How GFDRR Works

GFDRR’s comparative advantage builds on its unique position within the World Bank to finance engagements that leverage larger development operations and policies. GFDRR capitalizes on a combination of disaster risk management, climate change adaptation, and development expertise through in-house specialized experts, further strengthened by GFDRR’s strong partnership with the World Bank and its collaboration with extensive networks of partner institutions.

**FINANCING WINDOWS:** GFDRR finances demand-driven technical assistance through development partners. While all donors contribute to a common multi-donor trust fund, dedicated financing is received from Japan, the European Union, the Climate Risks and Early Warning Systems Initiative, and the Climate Risk Finance and Insurance Program.

**IN-COUNTRY ENGAGEMENTS:** To make progress in strategic areas of engagement, GFDRR channels financing to in-country engagements. The Facility awards grant resources based on established criteria aligned with its operating principles. Core to GFDRR’s vision is helping countries bring resilience to scale. As such, many of GFDRR activities target interventions that leverage larger development programs.

**AREAS OF ENGAGEMENT:** GFDRR implements its strategy through eight areas of engagement, that support the Sendai Framework priorities and that contribute to achieving the Sustainable Development Goals and the Paris Agreement. These include: (i) promoting open access to risk information; (ii) promoting resilient infrastructure; (iii) scaling up engagements for city resilience; (iv) strengthening hydromet services and early warning systems; (v) deepening financial protection through disaster risk financing and insurance; (vi) building resilience at the community level; (vii) deepening engagements in resilience to climate change; and (viii) enabling resilient recovery.

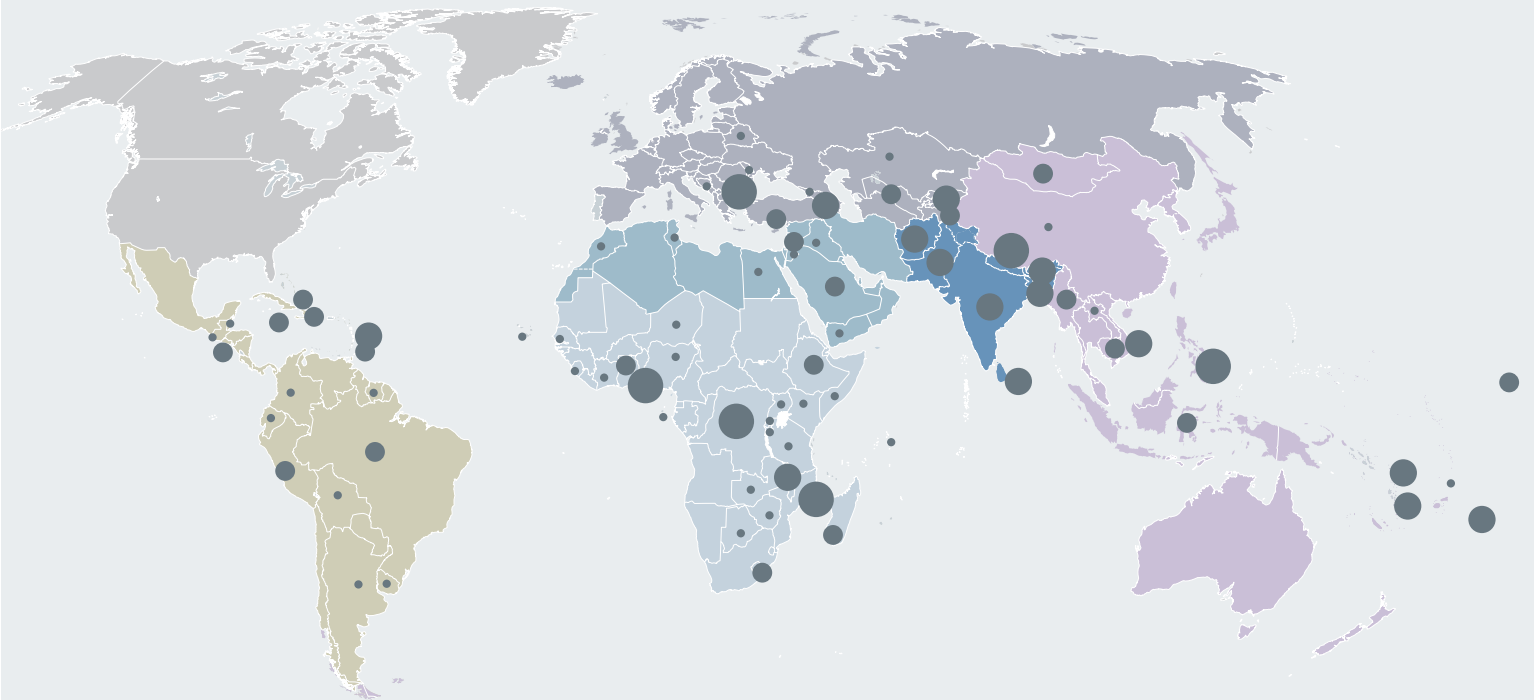
**VISION** A world where resilient societies manage and adapt to ever-changing disaster and climate risk, and where the human and economic impact of disasters is reduced.

**MISSION** To facilitate implementation of the Sendai Framework for disaster risk reduction and to contribute to the achievement of the Sustainable Development Goals and the Paris Agreement, by ensuring that all development policies, plans, and investments—including post-disaster reconstruction—are designed to minimize disaster risks and build the resilience of people and economies to climate change.

## **FINANCING WINDOWS**

**GFDRR finances its activities from different sources of funds, including the multi-donor trust fund,  
and dedicated programs financed by Japan and the European Union**

## **IN-COUNTRY ENGAGEMENTS**



## **AREAS OF ENGAGEMENT**

**Open Access to Risk Information | Resilient Infrastructure | Resilient Cities | Hydromet Services and Early Warning Systems  
Financial Protection | Community Resilience | Resilience to Climate Change | Resilient Recovery**

## **OPERATING PRINCIPLES**

**Demand-driven | Leveraging Finance and Development Policy | Inclusive Approach | Gender  
Addressing Disaster and Climate Risk | Knowledge | Results-oriented**

# 2017

## Year in Numbers

### Areas of Engagement

Promoting Open Access to Risk Information

**746** people trained in risk tools and 1,500 risk datasets accessed

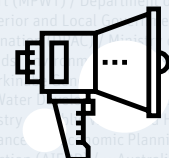


Promoting Resilient Infrastructure

**20** countries with safer school engagements

Scaling Up the Resilience of Cities

**10+** cities with deeper engagements



Strengthening Hydromet and Early Warning Systems

**40m** people benefiting from \$870 million in investments

### Gender



**70%** new grants gender informed

### Fragility, Conflict, Violence

**27** countries with active engagements

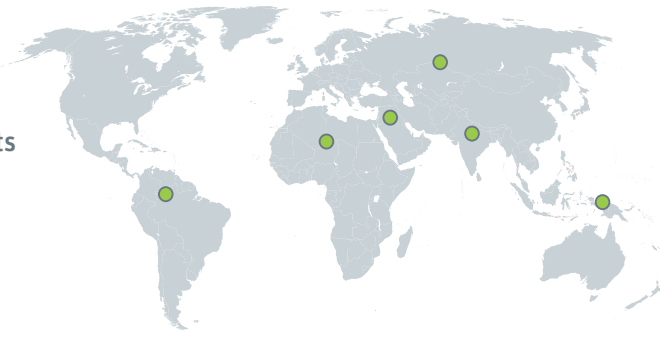
### Knowledge



**60+** Publications and knowledge notes



**80+**  
Countries  
with active  
engagements



**~\$260m**  
In financial  
commitments

**250+**  
government officials  
trained in 20+ countries



**~4m**  
people benefit from  
community engagements  
or access to adaptive  
social protection

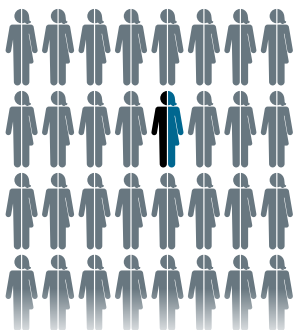
**77%**  
new grants integrate  
climate resilience



**490+**  
people trained in  
post-disaster assessment  
and recovery



**1,500+**  
people trained across  
areas of engagement



**\$4.6bn**  
Development  
Finance  
leveraged from partners

**2018**

New GFDRR  
Strategy  
2018–21  
approved by the  
Consultative  
Group

# GFDRR Leverages Development Finance

**Leveraging development investments is a core operating principle of GFDRR’s Strategy 2018–21. Therefore, GFDRR has tried to address limitations of its old methodology in order to more systematically capture its leveraging potential.**

Leveraging development investments is a core operating principle of GFDRR’s Strategy 2018–21. Therefore, GFDRR has tried to more systematically capture its leveraging potential.

Previously, GFDRR reported on leveraging under one category through a desktop-based approach. Over the last year, GFDRR developed a more robust way to define its leveraged investments and a more systematic way to capture these as well. As per the new methodology, GFDRR categorizes the way that it leverages investments in three ways, explaining exactly what GFDRR finances and when, to: (i) inform; (ii) enable; or (iii) co-finance investments. To capture these investments, GFDRR now adopts a methodology where the grant recipient themselves report on what has been leveraged by GFDRR’s support. Grant recipients also report on investments leveraged by governments and development partners beyond the World Bank, and categorize all investments as per the leveraging categories outlined below.

**INFORMING** mobilization of resources from national governments or development partners (for example, GFDRR funds the development of knowledge products, risk assessments, post-disaster assessments, and recovery plans, among others, that provide evidence for larger investments).

This happens where a GFDRR-funded product lays the ground work for conceiving of a larger investment. It occurs “before” the larger investment is conceived.

**ENABLING** development investment by directly supporting the design and/or implementation of a DRM investment from national governments or development partners (for example, financing staff time to work on designing DRM projects at the World Bank or to integrate DRM as a component in a development project).

This happens where a GFDRR grant funds technical advisory inputs for a project feasibility study and/or a project design. The larger investment is already conceived.

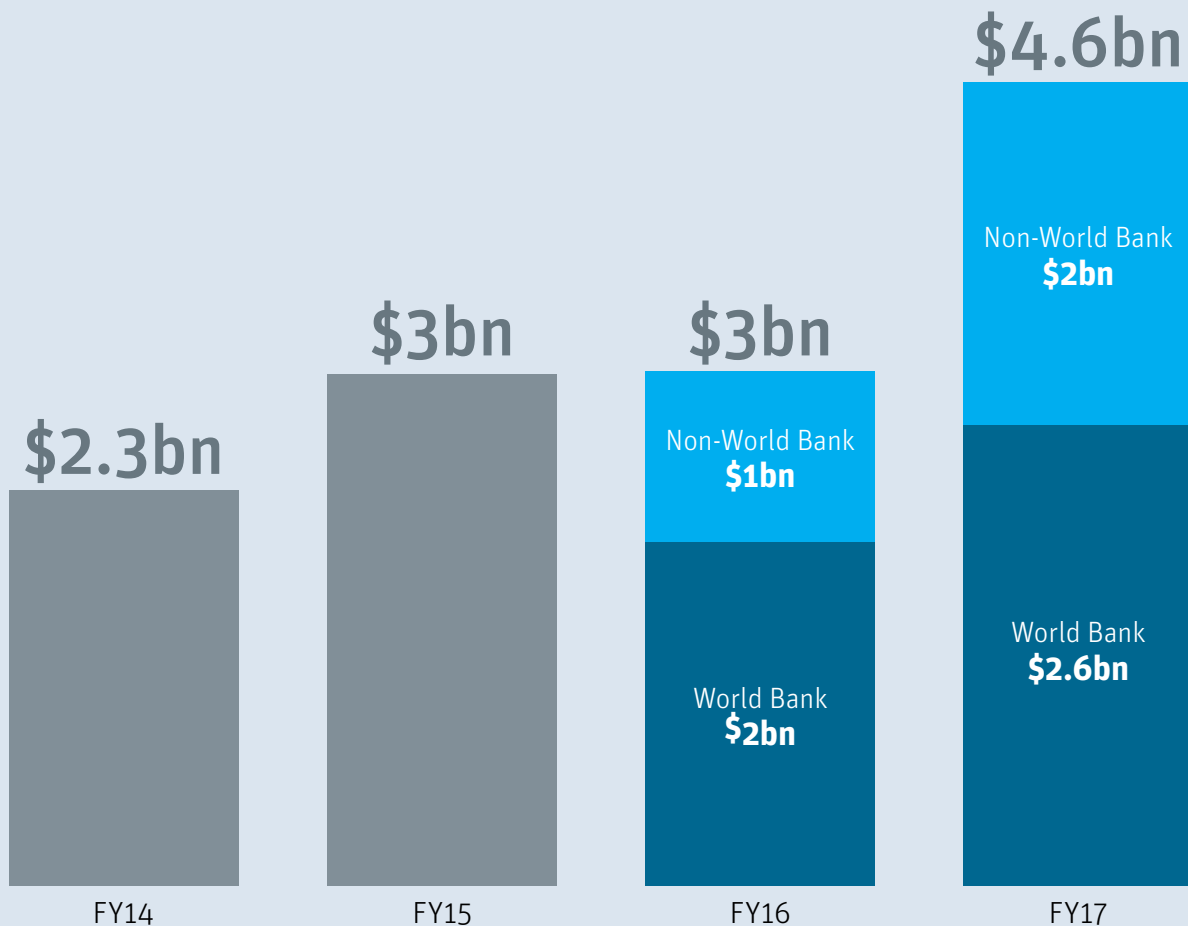
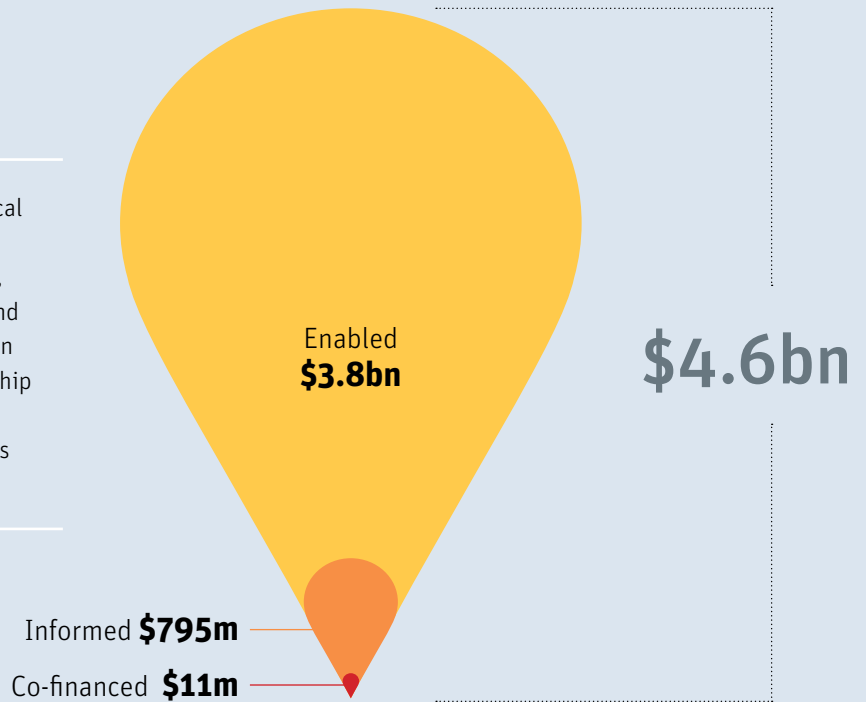
**CO-FINANCING** DRM operations with other development partners to increase the scale of interventions (for example, co-mingled funds packaged with the World Bank, donor countries, and UN agencies).

This happens when a project is conceived (for example, during project preparation or approval).

*Investments leveraged across all six regions can be found on page 14-15.*

## Evolution of GFDRR's Leveraging Portfolio

In FY17, GFDRR's financial and/or technical assistance mobilized over \$4.6bn in additional investments. Of this financing, \$3.8bn was enabled, \$795m informed, and \$11m co-financed. Of this funding, \$2.6bn was leveraged through GFDRR's partnership with the World Bank, and over \$2 billion was leveraged from national governments and other development partners.







# IN-COUNTRY ENGAGEMENTS

To make progress in its strategic areas of engagement, GFDRR channels financing to in-country engagements that help strengthen capacities. GFDRR awards grant resources based on established criteria aligned with its operating principles. Core to GFDRR's vision is helping countries bring resilience to scale. As such, many of GFDRR activities target interventions that inform larger development programs. In FY17, GFDRR leveraged over \$4.6 billion in development investments from the World Bank and development partners.





# Africa

Traditionally, GFDRR's assistance in Africa has responded to emergency and post-disaster situations, conferring a more humanitarian approach to disaster risk management (DRM). More recently, however, there has been an evolutionary shift toward increasing investment in risk reduction measures, specifically to strengthen risk analysis and assessments that can inform resilience investments. This strategic shift toward more proactive risk management is rapidly increasing awareness and demand for risk reduction measures in African countries.

Development finance leveraged

**\$917m**

More than 25 countries engaged

## Strategic shift toward a proactive risk-management approach

Over the past few years, activities in the region have begun to more strategically target disaster investments toward risk-informed development and planning. In Senegal, GFDRR has been supporting the 2035 government priority development program, which will help identify

targeted areas for better resilience and sustainability of the investment program. This approach has already leveraged \$45 million in World Bank investments in the last couple of years, for the protection against coastal erosion.

Further, Africa's climate and development agendas are closely linked. African governments are keen to improve National Hydrological and Meteorological Services, which are integral to strengthen resilience and development across Africa. In FY17, GFDRR's support reached over 18 countries, including Botswana, Democratic Republic of Congo (DRC), Ethiopia, Madagascar, Mali, and Uganda, to modernize the hydrological and meteorological services and systems and to strengthen their adaptive capacity.

The Africa Hydromet Program was launched in 2015 in partnership with GFDRR, World Bank, World Meteorological Organization, African Development Bank, Agence Française de Développement, World Food Programme, and United Nations Development Program, among others. Phase one of this program aims to strengthen hydromet services in at least 15 countries and four regional centers. GFDRR support in Mali has leveraged over \$30 million in grants and concessional financing from the Green Climate Fund and the World Bank to improve the country's hydromet infrastructure, systems, and services.

## Responding to urgent crises and needs

In FY17, assistance from GFDRR targeted Somalia, Nigeria, and Malawi. In Somalia for instance, GFDRR provided financial and technical support to post-disaster assessments. The findings of the

assessment have enabled \$50 million from the World Bank's Crisis Response Window to address the immediate needs of the drought-affected Somalians and to support resilient recovery through the provision of livelihood opportunities and the restoration of agricultural and pastoral production. Further, these investments will build on and scale up ongoing interventions led by the Food and Agriculture Organization of the United Nations and the International Federation of Red Cross and Red Crescent Societies.

## Going forward

Current fast-paced urbanization in Africa is changing disaster risk profiles of African countries from predominantly rural—with drought and food security challenges—to predominantly urban, with floods, cyclone, and earthquake challenges for urban services and the built environment. These demographic shifts—in addition to Africa's goal to transform itself from an exporter of raw materials to a major food exporter—requires vibrant, resilient cities that offer jobs and adequate living conditions for large populations. This transformation process will pose formidable challenges that have to be met in the era of climate change.

GFDRR's support to DRM in Africa will increasingly focus on building resilient and vibrant cities by improving building codes for safer infrastructure, modernizing hydromet systems, and engaging communities in the process. GFDRR and the World Bank will ensure African cities have access to the best available knowledge to manage disaster risk in city planning and investment processes.

## In Focus Kenya focuses on multiple approaches to fight recurrent floods and droughts

The livelihoods of smallholder farmers and pastoralists in Kenya are severely threatened by the increasing variability of rainfall patterns, triggering episodes of acute food insecurity. An average 0.6 percentage decline in GDP growth is observed in Kenya in years of poor rains, making droughts a severe economic and social hindrance for the country's progress. Floods remain an additional concern, with moderate droughts or floods every three to four years and major droughts every 10 years.

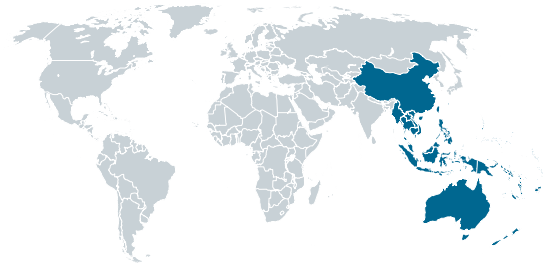
GFDRR has been in dialogue with the government on adopting a more proactive DRM approach. Much of this technical assistance has been financed through the Africa Disaster Risk Financing Initiative. This dialogue has led to the government taking systematic steps to develop a DRM policy: (i) building awareness of the need for a more comprehensive approach to risk management and climate change adaptation; (ii) building programs that strengthen national response; and (iii) recognizing that contingency financing provides important access to post-disaster liquidity to meet emergency and recovery needs.

Areas have been identified as priorities for investment and have received GFDRR support through a range of activities. These include convening stakeholders and supporting the process of negotiating the DRM policy as well as promoting innovative partnership arrangements with the private sector to strengthen national and sub-national resilience. To facilitate sharing of experiences and lessons learned, a

knowledge exchange was held between the Governments of Kenya and Colombia in April 2017. The exchange brought together 12 officials from different ministries, including four from the Ministry of Finance.

Further, GFDRR is working extensively to help Kenya develop "smart" insurance products for farmers and pastoralists through the national Kenya Livestock Insurance Program (KLIP). This program builds on the experience of similar engagements in China, India, and Mexico, with two program lines: one for livestock insurance and another for maize and wheat insurance. Already, the KLIP has produced noteworthy achievements. Over the past year, it paid out in August 2016 and February 2017 because of major drought. Payouts of \$2 million have reached over 12,000 beneficiaries in six counties. The fact that the KLIP has positively responded to two droughts indicates the product is working, paying when it is supposed to. It also demonstrates the value of insurance, keeping animals and crops alive because of quick payouts before disasters rather than the government waiting for public funds to mobilize after disasters.

Moving forward, the World Bank is progressing on designing a Catastrophe Deferred Drawdown Option (CAT- DDO) of \$250 million. The CAT-DDO, which will strengthen the institutional framework for DRM in Kenya and provide the government with access to contingent financing in case of a shock. Upon approval, this would be the largest CAT-DDO in the region.



## East Asia and Pacific

In East Asia and Pacific (EAP), regular dialogue with governments on DRM over the years has shaped the region's priorities, ensuring strategic use of GFDRR financing to target core vulnerabilities and critical investments. In response to growing country demand to reduce disaster and climate risk, GFDRR has helped mobilize substantial financing from national governments, the World Bank, and development partners to ensure that resilient principles and DRM approaches are integrated into policies and infrastructure investments.

Development finance leveraged  
**\$2.8bn**

More than 12 countries engaged

### Improving urban resilience with risk-informed critical investments

GFDRR has played an important role in introducing innovation and good practice on risk management into EAP's new and ongoing development investments, helping partners to reach national and regional development goals. In FY17, GFDRR's activities made progress in Indonesia, Samoa, the Philippines, the Solomon Islands, Tonga, Vanuatu, and Vietnam,

among others. These efforts are targeting integration of resilience measures into investments for urban planning and critical infrastructure, education, energy, and transportation systems.

Importantly, GFDRR's assistance has provided an entry point for longer-term engagements on DRM, which has leveraged national and regional investments, including in Lao PDR, Myanmar, and Cambodia, with commitments totaling over \$206 million from the World Bank. Investments have focused on resilient rural roads in Cambodia; flood risk reduction, hydro-meteorological and early warning systems in Lao PDR; and urban infrastructure in Myanmar. Across the three countries, financial planning for disaster resilience is being strengthened.

With rapid urbanization and an increasing need to support subnational authorities, GFDRR has been supporting governments to invest in DRM initiatives more strategically at the sub-national level. This includes detailed flood risk reduction analysis to integrate DRM into key sectors, including in the Mekong Delta Region, the Solomon Islands and Vietnam. GFDRR has also helped design preliminary risk assessments for select cities in Indonesia, in the Solomon Islands, and in the Marshall Islands to identify priority areas for resilience investments. In Vietnam, GFDRR enabled \$240 million in investments focusing on integrated planning in seven cities at the early stages of urbanization. Indonesia's national slum upgradation project enabled 1.3 billion in investments from the government. GFDRR provided support to train all project operators and over 4,000 facilitators working under the program.

### Strengthening contingency planning for resilient recovery

Building on lessons learned from the Pacific Catastrophe Risk Insurance Pilot, GFDRR helped to develop financial protection approaches in the Philippines and Southeast Asia. In the Philippines, GFDRR analysis has supported the government in developing customized financial instruments at the national and sub-national level. In Southeast Asia, GFDRR supported initial assessments to establish a risk pooling mechanism, which is currently under preparation. In response to post-disaster needs, GFDRR's assistance also supported mobilization of finance and integration of DRM into an often uncharted sector-cultural heritage. GFDRR supported the Philippines government to strengthen DRM institutional systems and sectoral agency capacity, and also develop a policy framework for post-disaster shelter assistance. Similarly, in Myanmar, GFDRR supported the government in recovery planning activities for cultural heritage assets affected by the earthquake in Bagan.

### Going forward

GFDRR investments will continue to proactively tackle growing disaster risks in EAP. Major initiatives include multi-hazard risk and prioritization assessment of public infrastructure. For example, GFDRR will support the Government of Fiji, ahead of COP23 to develop a comprehensive vulnerability assessment, which is expected to be a model case for the region. It is expected that financing will help develop comprehensive DRM investment plans to strengthen existing public facilities and infrastructure, improve risk-informed land-use planning and resilient construction, and strengthen urban emergency management.



## In Focus The Philippines integrates disaster risk reduction into cultural heritage

**A** 7.2 magnitude earthquake and a Category 5 typhoon (Haiyan) struck the Philippines in 2013. As a result, several centuries-old heritage structures (administrative buildings, churches, and other historically valuable public facilities) were either fully destroyed or severely damaged. In recognition of these irreplaceable losses, the Philippines Department of Tourism sought the World Bank's technical assistance to improve the resilience of heritage structures so that their multi-faceted value and contribution to local economic development would not be compromised by natural disasters.

As a result, in FY17, GFDRR capped four years of work for the Government of the Philippines that led to the inclusion of a risk perspective in the conservation guidelines for cultural and historical heritage structures, a notable innovation in disaster risk management.

GFDRR financing supported the Department of Tourism to assess and develop different options to reduce the vulnerability of 16 selected cultural heritage structures to multiple natural hazards, in three pilot locations: Intramuros Manila and the provinces of Cebu and Bohol. This involved detailed multi-hazard vulnerability

assessments of selected cultural heritage structures leading to specific recommendations, conceptual designs, and cost estimates for structural strengthening and restoration.

This innovative solution goes beyond traditional DRM initiatives, which usually focuses on strengthening public facilities such as schools and hospitals, not historical or cultural assets. The Department of Tourism and cultural agencies, including the Intramuros Administration, the National Commission for Culture and the Arts, and the National Museum, together with international and national experts mobilized by the World Bank, undertook site surveys, data collection, and the multi-hazard vulnerability assessment. Stakeholder workshops and training activities helped develop and disseminate the initiative's methodology, which is planned for adoption in the forthcoming Philippine Conservation Guidelines. Without this initiative, risk reduction would be absent from these standards.

Through public and private resources, additional locations in the Philippines will begin to integrate risk reduction into conservation of cultural heritage sites.

*We will apply the methodology to conduct multi-hazard vulnerability assessments in other tourism and priority cultural heritage sites in the country. Our ultimate goal is to be more prepared before the next disaster strikes by investing in risk reduction measures and strengthening our cultural heritage sites for sustainable tourism in the Philippines.*

— **Rolando Canizal**, Philippine Tourism Undersecretary



## Europe and Central Asia

Across the Europe and Central Asia (ECA) Region, governments have made strides in positioning DRM as a priority for sustainable development. This has become increasingly evident as countries deepen their collaboration with GFDRR and the World Bank to strengthen their risk analytics and knowledge base and to transform analytical work into concrete action. Recently, several countries have moved toward more comprehensive solutions that include institutional and policy reform and systematic risk reduction interventions aimed at accelerating disaster resilience.

Development finance informed

**\$311m**

More than 11 countries engaged

### Adopting best practices through learning and knowledge exchange

GFDRR has played a pivotal role in advancing the DRM dialogue in the ECA Region and in providing opportunities to strengthen international cooperation. For example, over the past five years,

about 220 high-level Serbian and Turkish officials have taken part in 23 international DRM events (international conferences, study tours, thematic workshop, trainings) to promote their countries' best practices in risk reduction and/or post-disaster recovery and to contribute to international initiatives centered on the Disaster Resilience Agenda. In FY17, GFDRR financed a study tour in Japan for 10 government representatives from Armenia, the Kyrgyz Republic, and Tajikistan. The purpose was to learn from national disaster preparedness and local response systems. In addition to participating in Japan's Disaster Prevention Day and witnessing coordinated disaster simulation drills, the delegations petitioned their own governments to convene similar activities. The Kyrgyz Republic also declared October 5 as national disaster risk reduction day.

### Moving from knowledge building to designing investment

Investment in risk analytics has enabled the Kyrgyz Republic and Serbia, among others, to start establishing risk information platforms. Moldova and Tajikistan developed institutional recommendations and in-depth hazard assessments to integrate extreme weather scenarios in key sectors (such as, transport and agriculture); the resulting guidance and improved decision-making tools have enabled government officials to better incorporate resilience considerations into wider investment frameworks and preparedness measures.

At a national level, with support from GFDRR, a combination of risk reduction

investments and preparedness measures are being implemented in Moldova and Turkey, while others are addressing challenges across the spectrum of DRM. In Turkey, GFDRR's technical assessments will inform the construction of 56 seismic-resistant schools and benefit 40,000 students. And in Moldova, GFDRR facilitated capacity-building efforts for decision-makers to improve the country's forecasting services and to expand the coverage of its early warning systems across productive sectors. As a result, the lead time for severe weather warnings extended from 10 minutes to 3–6 hours and allowed national emergency response services and local communities to better anticipate high-impact weather events.

### Going forward

In the coming year, GFDRR will continue to deepen its engagements in priority countries, especially to strengthen social infrastructure, to deepen financial protection, and to integrate resilience considerations across critical sectors. For example, in the Balkans and the Caucasus, GFDRR will partner with decision-makers to harness actionable risk information to strengthen the energy, transport, and water sectors and to ensure that investments are designed to minimize risks of infrastructure failure. Similarly, with the successful approval of the Serbia CAT DDO, Armenia, Georgia, the Kyrgyz Republic, and Tajikistan will increasingly focus on disaster risk finance to enhance their own financial protection capacities. Lastly, in the Kyrgyz Republic and Turkey, the development of tools is expected to put in place scalable seismic risk reduction measures that will strengthen education infrastructure across the country.

## In Focus Turkey builds disaster-resilient schools to support Syrian refugees

**T**urkey, is now the world's largest refugee hosting country, after a six-year influx of Syrian refugees. As of June 2017, the Turkish government estimated the total number of registered Syrians under Temporary Protection (SuTP) at 3 million, particularly in southeastern and southern provinces which are also among the least developed areas and where the majority of school-aged SuTP reside. Turkey is also significantly vulnerable to earthquakes, with approximately 90,000 fatalities caused by 76 earthquakes since 1900.<sup>1</sup>

The refugee crisis in Turkey has rapidly changed the population distribution along the Dead Sea Rift and East Anatolian Fault zones. In contrast to other countries in the Middle East—where refugees tend to be accommodated in camp environments—most displaced individuals in Turkey often opt for densely populated urban areas. This not only places significant stress on public services and calls for a better management of integration, but also increases the number of individuals potentially exposed to strong seismic shifts. This is because Turkey is one of the world's most earthquake-prone countries. It has suffered approximately 90,000 fatalities caused by 76 earthquakes since 1900. To enhance Turkey's response to the Syrian

Refugee Crisis, the European Union approved \$160 million to build safer schools in FY17. This project, administered by the World Bank with technical assistance from GFDRR, will help Turkey's Ministry of National Education build 56 earthquake-resistant schools (equivalent 1,420 classrooms) over the next three years, ensuring access to education for 40,000 school-age SuTPs and their host communities in priority provinces. The project will not only facilitate access of SuTP and host-community students to formal education facilities, but will also facilitate the construction of a community center that will benefit the community at large.

This program builds on 10 years of seismic risk mitigation achievements from the Istanbul Seismic Risk Mitigation and Emergency Preparedness Project (ISMEP), which retrofitted and reconstructed 873 schools (1,030 school buildings) and was led by the Government of Turkey.<sup>2</sup>

Moving forward, GFDRR will assist the Government of Turkey on its goal of improving seismic safety of all schools nationwide. This is considered a key area for operationalizing risk reduction in a systematic manner.

*Our Department intends to pursue this fruitful cooperation via the implementation of a Safe Schools Program with technical and financial support from the World Bank and GFDRR to help render the existing school building stock safe and compliant with the latest seismic code, given that the assistance offer extended by the Bank to our Ministry and the Turkish Treasury is favored by respective authorities.*

— **Ozcan Duman**, Head of Department, Construction and Real Estate Department, Ministry of National Education

<sup>1</sup> About half of the casualties were due to two earthquakes on the North Anatolian Fault in 1939 and 1999.

<sup>2</sup> ISMEP was initiated in 2005 and leveraged \$1.5 billion from other Multilateral Development Banks and bilateral donors (including \$550 million in World Bank financing).



# Latin America and the Caribbean

In Latin America and the Caribbean (LAC), partner needs have moved beyond traditional solutions such as building emergency operation centers to more advanced ones. GFDRR has been instrumental in providing more sophisticated solutions to meet these evolving needs. This includes supporting countries with multi-sectoral interventions and responding to requests for: (i) socioeconomic assessments on the impact of climate change and disasters on poverty; (ii) in-depth risk reduction interventions in the housing and infrastructure sectors; and (iii) comprehensive urban resilience solutions at the sub-national level.

Development finance leveraged

**\$261m**

More than 16 countries engaged

## Addressing the impacts of climate change and disasters on poverty

Countries in the region are working proactively to reduce disaster vulnerability as evidenced in Brazil, Dominica, the Dominican Republic, Haiti, and Saint Lucia. Over the past year, GFDRR has collaborated with

poverty reduction experts to pilot household surveys that evaluate the impact of large-scale natural disasters (such as, hurricanes and floods) on poverty, socioeconomic vulnerability, and shared prosperity. This effort also has targeted the identification of vulnerable households' coping mechanisms and of effective policy interventions to mitigate the adverse impacts of disasters. Additional activities are underway in Honduras and Nicaragua, with new engagements in the Caribbean, to ensure that early warning systems and climate services reach poor and vulnerable populations.

## Investing in risk-informed development

GFDRR and the World Bank are working with governments in the LAC Region to develop globally applicable tools to reduce risk in the infrastructure sector and to apply existing global expertise for concrete solutions. In the Caribbean, an analysis tool is prioritizing flood risk management interventions; in Dominica, GFDRR's support has brought Japanese expertise and technology to reduce the risk of debris flow on infrastructure; and in the Dominican Republic, GFDRR is training public officials to implement risk reduction strategies in the infrastructure sector and to develop fiscal resilience strategies. With the expansion of ongoing urban resilience analysis and advisory services throughout the LAC Region, GFDRR's support at the municipal level is helping to retrofit informal housing in Guatemala and to launch an urban resilience program for secondary cities in Argentina. Such work will support the design and implementation of comprehensive urban resilience solutions that better target the poor.

## Responding to disasters

In the past year, the region has tackled several emergencies, including the response to El Niño in Peru, which experienced devastating landslides and significant flooding in the coastal regions. GFDRR worked with the Peruvian government to develop a baseline assessment to understand the damages and vulnerabilities in the agriculture, health, housing, transport, and water and sanitation sectors. This will help to define the scope of future intervention strategies. In Haiti, after Hurricane Matthew, a rapid damage and loss assessment was conducted in partnership with the Ministry of Finance and other development partners, and contributed to the full post-disaster needs assessment. A recovery framework is being developed that capitalizes on lessons learned for preparedness and response.

## Going forward

LAC is experiencing a growing demand for integrating resilience across multiple sectors within cities. Over the next few years, GFDRR support will increasingly focus on advancing resilience at the municipal level by developing methodologies for prioritizing investments, promoting relevant policy reforms, and advising sub-national entities in identifying methods of leveraging private capital toward resilience investments. In the next year, GFDRR support to strengthen urban resilience will be scaled up in Argentina, Central America, Haiti, and Suriname and expand to, among other countries, Bolivia and Panama.

## In Focus Brazil steps onto the path of resilience

**B**razil saw a turning point this past year when DRM gained significant status as a national priority. The country experiences frequent small-scale disasters that cause significant damage and losses when aggregated as a whole—averaging \$200 million each month for the past decade.

The effort for this change began in 2011, when unusually high rainfall and subsequent floods and landslides in Rio de Janeiro’s mountainous region claimed over 1,000 lives and shifted the government’s position on managing disaster risks. GFDRR immediately entered discussions with authorities at the national, state, and municipal levels to engage Brazil in DRM. Yet, only in FY17 did the Brazilian government begin to actively move toward improved access, availability, and use of disaster loss information to inform policies.

The government, in collaboration with Santa Catarina Federal University, the World Bank, and GFDRR, launched a major initiative to assess data quality, to correct data errors, and to collect new information from 22,810 reports related to disaster events between 1995 and 2014. The results indicated staggering average monthly economic

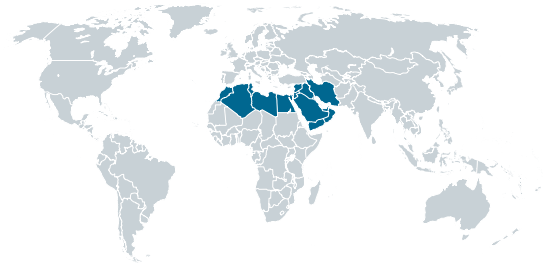
losses (\$200 million) and, beginning in 2000, increasingly frequent and intense natural disasters and associated losses. Given the largely unregulated growth of cities, limited urban planning, and the effects of climate change, this upward trend drew high-level attention.

GFDRR, through its Japan Program, supported the World Bank and the state of Santa Catarina to develop a state-level catastrophe model, the first of its kind. The initiative aimed to identify flood asset exposure risks and to empower the state government and its institutions to include DRM practices and information in daily operations and decision-making processes. It also used a methodological approach to ensure replicability in other Brazilian states and municipalities.

The complementary work of GFDRR, the World Bank, and the Government of Brazil over the last six years has nurtured momentum for generating DRM knowledge. With this new access to and availability of quality information and the evidence needed to build local capacity for better managing disaster risks, Brazil has started to proactively use data and information to integrate resilience measures in policies and investments.

*Thanks to the technical assistance provided by GFDRR and the World Bank, dialogue between national and state civil defense was strengthened thereby broadening the DRM knowledge base and helping the government better address the risk reduction needs of the poor in Santa Catarina State. In addition, the catastrophe model delivered to the state will help the government better address disaster risks in its strategic development plans.*

— **Fabiano De Souza**, Deputy Secretary of Civil Defense, State of Santa Catarina



## Middle East and North Africa

Conflicts in the Middle East and North Africa (MNA) Region have become progressively long-lasting and have led governments to adapt DRM approaches to respond to such situations. These efforts have included establishing national-level DRM units, early warning systems, preparedness plans, and national risk assessments. GFDRR enables the World Bank to engage with national and local municipalities to improve public understanding and responsiveness to managing risks and building urban resilience.

Development finance leveraged

**\$59m**

More than 8 countries engaged

### Promoting DRM through enhancing knowledge and awareness

GFDRR has been instrumental in providing technical advice and knowledge expertise to several development investments, including in Egypt, Iraq, Jordan, Lebanon,

Morocco, Saudi Arabia, Tunisia, and Yemen. In FY17, GFDRR financed three sub-programs in Tunisia that were implemented through a participatory approach. These programs target improvement of and access to municipal infrastructure delivery. They also provide capacity support for local governments and communities in Tunisia to better understand natural and climate risks by integrating appropriate resilience measures in local planning.

In Egypt, GFDRR has contributed to strengthening the capacity of government officials on resilient recovery, early warning systems, and disaster risk finance. In FY17, GFDRR financed two successful study visits to Germany and the United States for 12 Egyptian officials from eight different departments. Egyptian officials were able to learn from the host nation's experience setting up emergency operation centers and decentralized emergency response. These interactions helped the delegates to gain a broad overview of the national emergency management systems of Germany and the United States of America and how key elements provide federal leadership during major disasters. The activity has facilitated a process for sharing lessons learned and best practices for policy implementation.

### Addressing urban resilience

GFDRR is supporting MNA governments to address the onset of rapid urbanization in the region. In Lebanon, GFDRR has supported the World Bank

and the Office of the Mayor to inform the Comprehensive Urban Resilience Master Plan for the City of Beirut. The Urban Resilience Master Plan identifies clear strategies for shocks and stressors and outlines how the strategies can be put into action for the long-term benefit of the city. This pragmatic and beneficiary-centered approach has driven demand for similar engagements in other Lebanese and Jordanian cities.

GFDRR is also helping to improve the resilience of Lebanese cities impacted by the Syrian refugee crisis. GFDRR support is enabling the World Bank to identify natural, economic, and fiscal shocks and social tensions between host communities and refugees and to assess the impact on service delivery and local infrastructure. GFDRR's expertise in spatial analysis and research is supporting these efforts by helping to identify potential influx effects.

### Going forward

GFDRR will expand its work on strengthening urban resilience in fragile and conflict contexts. Operational and technical support will continue to shape how the World Bank contributes to urban resilience at the sub-national level within the MNA Region and worldwide. Additionally, the region will prioritize the implementation of projects that assist governments to better-understand risk and to integrate DRM into development. This will help to strengthen institutional DRM frameworks, resulting in better planning and preparedness.

## In Focus Lebanon continues down the path of making urban areas resilient

**T**he city of Beirut, long a center of commerce in the Middle East, is actively working to minimize its urban risk and to retain its preeminent status. The Comprehensive Urban Resilience Master Plan for the City of Beirut, prepared in 2015, is the result of coordinated efforts among the Office of the Mayor of Beirut, the World Bank, and GFDRR. It evolved out of an ongoing GFDRR and World Bank dialogue with Lebanon to address climate and disaster risk, and borrowed global good practices from a similar exercise in Dhaka, Bangladesh.

The Urban Resilience Master Plan aims to give decision-makers a clear view of city-level shock events, risk factors, and medium to long-term stresses and to help formulate an integrated, multi-sectoral strategy to bolster Beirut's resilience. Already in its preliminary findings the initiative has uncovered that, the city is subject to shocks and medium to long-term stresses; development planning does not account for combinations of risks or for the requisite mitigation measures; and a central database is needed to facilitate holistic and integrated risk modeling.

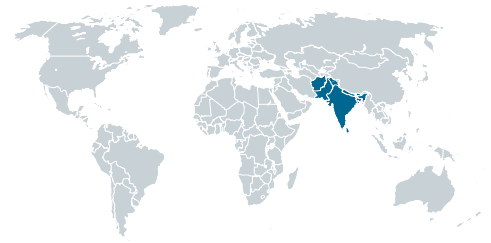
To this end, GFDRR supported the development of a diagnostic tool that combines holistic shocks and stresses and generates their proximal effects; this informed a resilience strategy and response plan for major risks. GFDRR also supported the World Bank to engage the private sector firm BuroHappold Engineering. The firm helped to collect and directly feed city diagnostics into the urban resilience strategy. Investments can now be prioritized and targeted by potential impact, co-benefits, timeframes, and costs.

The close working relations of GFDRR, the World Bank, and Beirut's municipality and stakeholders helped to strengthen the city's project implementation capacity and led to the city's request for a second phase. The World Bank will support the city to set up a central GIS risk database and governance parameters.

With the continued engagement of local stakeholders and partners, the second phase aims in fiscal year 2018 to update the Resilience Plan to delve deeper into high-risk shocks and stresses and to create a risk reduction and mitigation plan with a prioritized list of investments.

*Beirut is a diverse city with a remarkable ability to overcome challenges and to continuously build its future. Yet, this inherent ability needs to be strengthened and developed into a comprehensive resilience capacity, with resilience embedded in all development planning in order to enable improved preservation, adaptation, and sustainable growth.*

— **Matilda El-Khoury**, Councilor, Municipal Council of Beirut, Lebanon



## South Asia

In recent years, the South Asia Region (SAR) has seen exponential growth in its activities targeting disaster risk management. GFDRR has remained central to sustaining the dialogue on resilience and opening doors in countries, which previously had little or no pre-disaster planning. Countries within the region have quickly learned from one another and fast-moved from waiting for disasters to investing in preparing for such events. Most interventions have focused on strengthening climate information and hydro-meteorological (hydromet) systems in the region and on building coastal resilience. This has led to far-reaching impacts, including reducing the lives lost after major cyclones.

Development finance leveraged

**\$281m**

7 countries engaged

### Increasing action for preparedness

Bangladesh, Bhutan, Nepal, Pakistan, and Sri Lanka have been working with GFDRR and the World Bank to

ensure that investments incorporate climate impacts and support effective community-based early warning systems for disaster response. In Sri Lanka, for example, investments are helping improve the availability of climate and disaster information in urban and rural environments. The key achievement over the past year, however, has been the request for a large hydromet engagement in Pakistan; the request evolves out of a GFDRR multi-year dialogue on hydromet challenges. In complement, GFDRR supported risk assessments over the past year, which will inform infrastructure investments in Sindh, Pakistan.

Governments in several countries are also showing an increased demand for disaster risk finance. GFDRR has helped establish a dialogue with national and sub-national levels. In India and Pakistan, these conversations have generated an increased interest among provincial governments in Punjab and Sindh respectively, in developing financial risk assessments and strategies. At the federal level, a Catastrophe Deferred Drawdown Option (CAT-DDO) is expected to be processed in FY18 to help the government prepare for disasters and provide post-disaster finance. Maldives also has shown interest advancing its disaster risk finance activities and efforts are ongoing to prepare a CAT-DDO.

### Incorporating appropriate resilience measures into future development

In India, GFDRR's engagements have enabled investments that are being designed with participation of communities and are integrating resilience measures into ongoing investments and post-disaster efforts.

For example, housing reconstruction in Uttarakhand, India, was completed in FY17, supporting 2,400 families to rebuild their houses with Build Back Better principles following devastating floods in 2013; and 600 early warning system towers were installed in the coastal states of Odisha and Andhra Pradesh to provide cyclone and storm surge alerts to communities.

In Nepal, GFDRR played an instrumental role in enabling investments for recovery after the 2015 earthquake—bringing together donors and government including Canada, Japan, Switzerland, the United Kingdom. In FY17, the United Kingdom joined forces with the World Bank to contribute and coordinate financial resources of the ongoing housing reconstruction process, while Switzerland provided additional contributions.

### Going forward

GFDRR support will strengthen its coastal resilience engagements in Bangladesh and India. The aim is to invest in protective measures that will respond to a changing climate. Sri Lanka will benefit from multi-sectoral investment planning to be financed by Asia Infrastructure Investment Bank, the World Bank, and other donors in the coming year. To improve channels of delivery to support the poor and most vulnerable, GFDRR will strengthen disaster-responsive safety nets across the region, particularly in Afghanistan, Bangladesh, Nepal, and Sri Lanka.



## In Focus Bangladesh pursues a holistic approach to urban resilience in growing cities with growing risk

**N**early 15 million people—three times the population of Norway—live in the city of Dhaka. One-third of Dhaka’s residents are poor and its annual in-migration is about 350,000. Overall, Bangladesh is highly vulnerable to earthquakes and tropical cyclones and lacks land-use planning. This combination has inhibited emergency service delivery from keeping pace with rapid growth and demand.

In 2013, Rana Plaza in Dhaka collapsed, killing over 1,000. The tragedy brought attention to Bangladesh’s high earthquake risk and the poor construction quality of its swiftly-growing cities (Dhaka and Sylhet). This triggered a three-year process; GFDRR and the World Bank worked with over 40 stakeholders from ministries and agencies to pursue a holistic approach to urban resilience.

Enabled by GFDRR, this exercise laid the foundation of a \$173 million World Bank Urban Resilience Program that aimed to provide a comprehensive multi-sectoral approach to urban resilience in Bangladesh. The program

activities focused on: (i) assessing vulnerability of essential infrastructure, public facilities, and lifelines to better-guide future infrastructure and retrofitting investments; (ii) equipping national and local disaster risk management agencies with relevant response resources, including emergency operation centers, communication systems to exchange information across agencies, search and rescue equipment, and related training; and (iii) improving construction practices by integrating disaster risk into development planning.

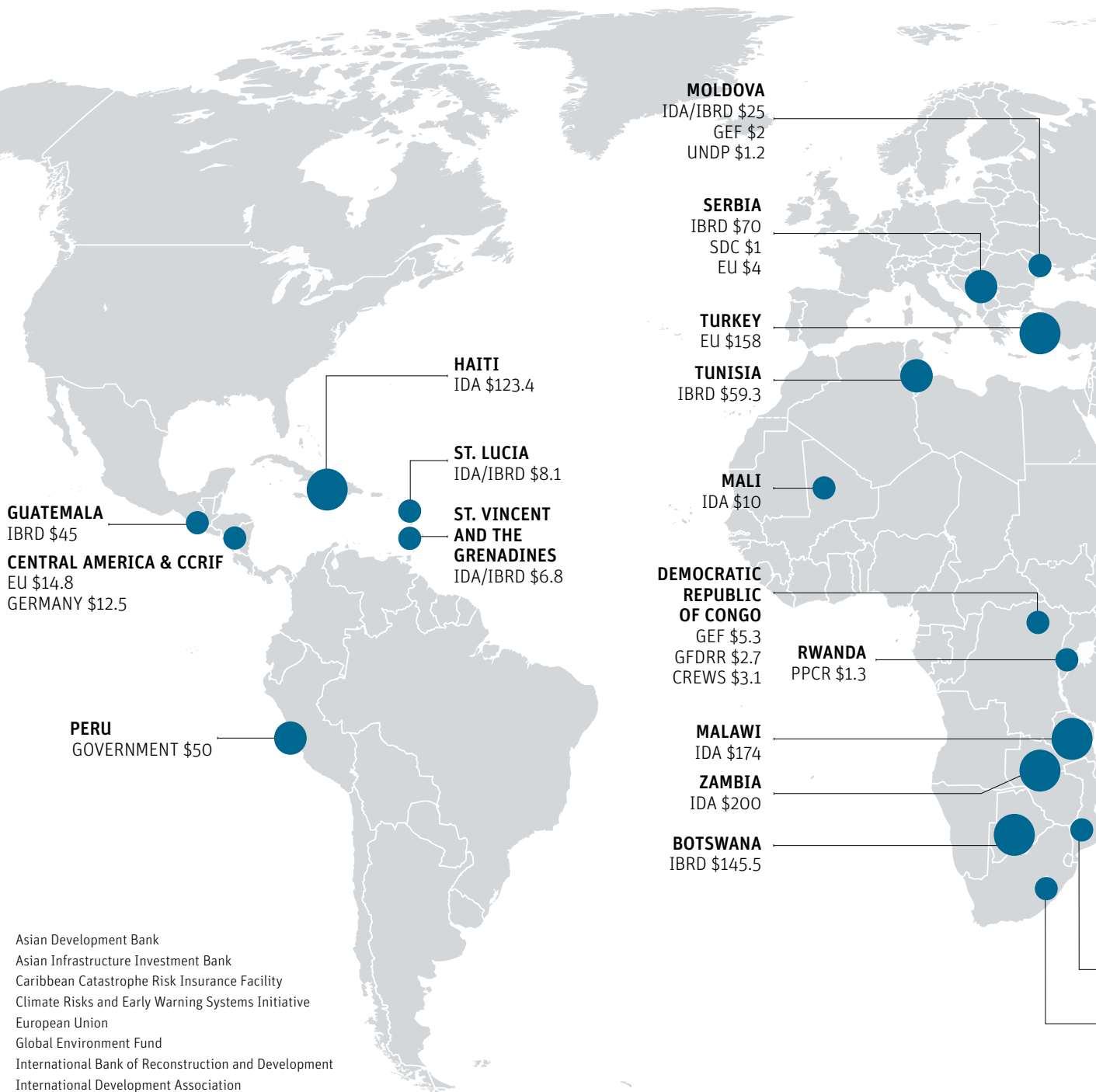
By providing better access to improved emergency preparedness and response services, as of FY17, the Urban Resilience Program benefitted approximately 17 million people living in the cities of Dhaka and Sylhet. Additionally, GFDRR played a key role through the Urban Resilience Program in establishing a coordination strategy with the Japan International Cooperation Agency to support Bangladesh in its new approach to urban resilience and to ensure financing of complementary activities.

*Bangladesh needs to enhance resilience to earthquakes and other disasters in the major cities to protect lives and accelerate development gains. The projects launched today underscore a long-term partnership among JICA, the World Bank, and the government to improve disaster preparedness in Bangladesh.*

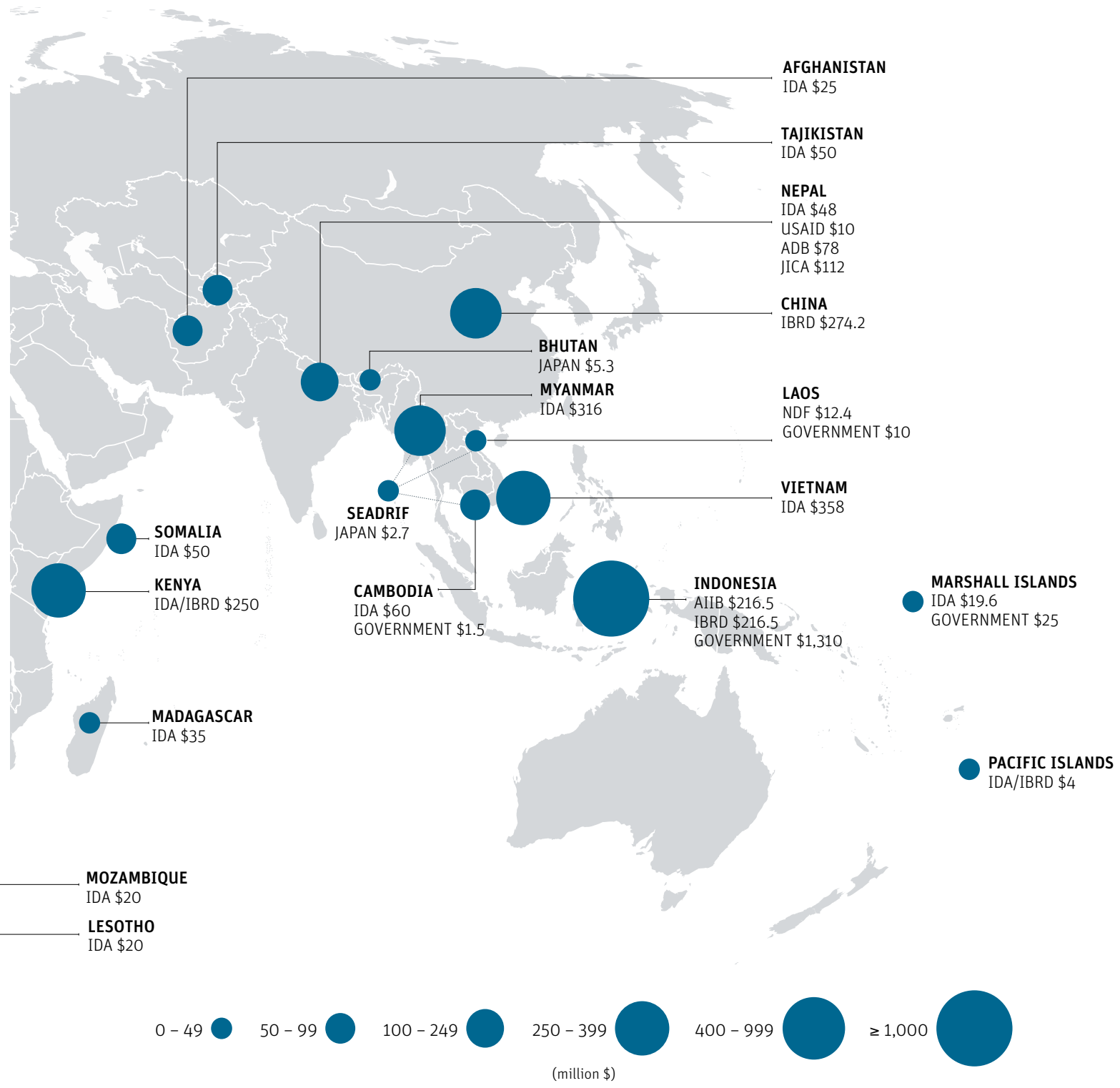
—AHM Mustafa Kamal, Honorable Minister of Planning, Government of Bangladesh

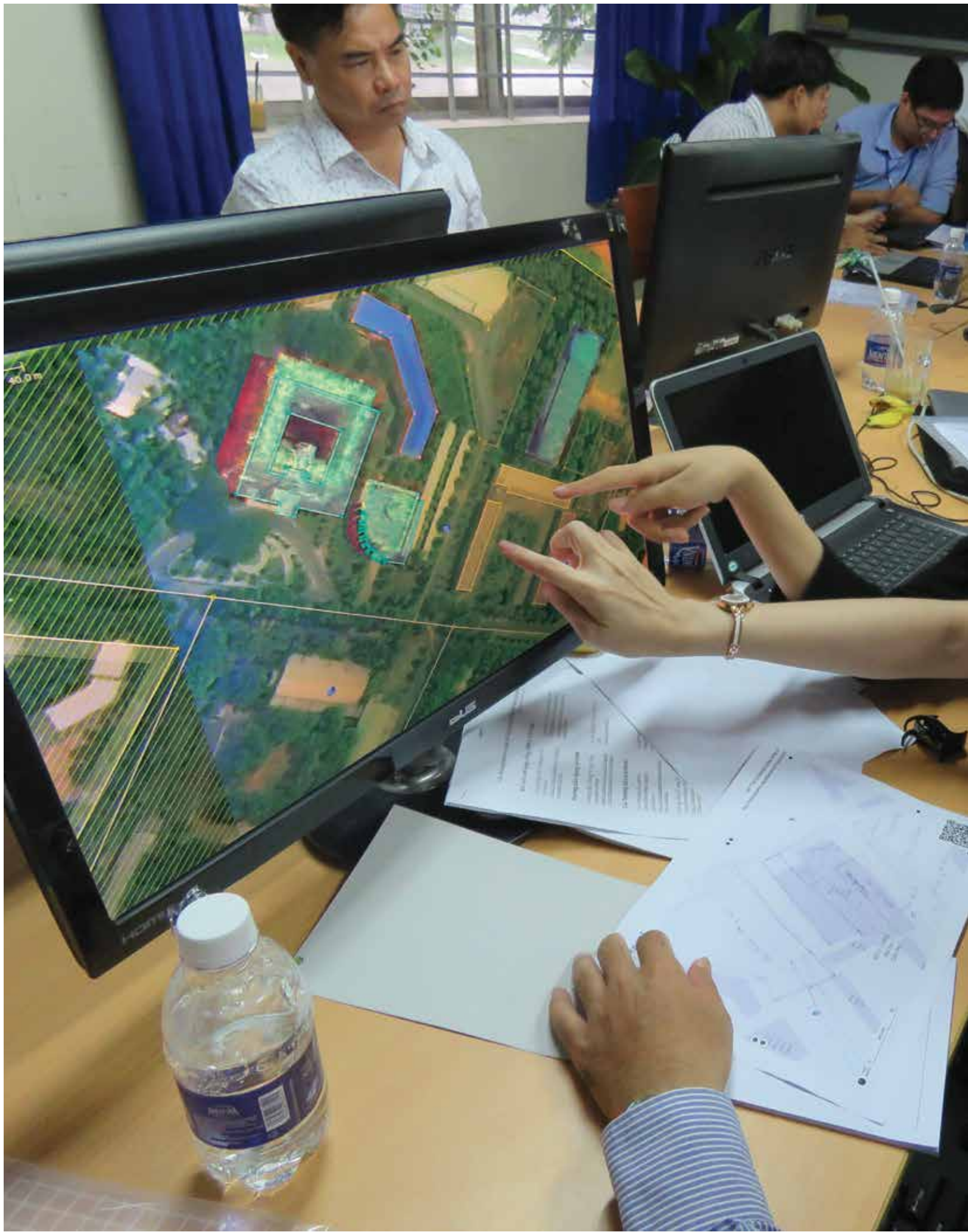
# Leveraging Development Finance

The numbers were reported by World Bank teams that have received GFDRR grants.  
(million \$)



- ADB Asian Development Bank
- AIIB Asian Infrastructure Investment Bank
- CCRIF Caribbean Catastrophe Risk Insurance Facility
- CREWS Climate Risks and Early Warning Systems Initiative
- EU European Union
- GEF Global Environment Fund
- IBRD International Bank of Reconstruction and Development
- IDA International Development Association
- JICA Japan International Cooperation Agency
- NDF Nordic Development Fund
- PPCR Pilot Program for Climate Resilience
- SDC Swiss Agency for Development and Cooperation
- SEADRIF South East Asia Disaster Risk Insurance Facility
- UNDP United Nations Development Program
- USAID United States Agency for International Development







# AREAS OF ENGAGEMENT

GFDRR implements its strategy through eight areas of engagement that support the Sendai Framework priorities and that contribute to achieving the Sustainable Development Goals and the Paris Agreement.

These include: (i) promoting open access to risk information; (ii) promoting resilient infrastructure; (iii) scaling up engagements for city resilience; (iv) strengthening hydromet services and early warning systems; (v) deepening financial protection through disaster risk financing and insurance; (vi) building resilience at the community level; (vii) deepening engagements in resilience to climate change; and (viii) enabling resilient recovery.

Local city officials and university students collaborate and learn about innovative mapping technology, OpenStreetMap, in Can Tho, Vietnam. Photo credit: Robert Banick

# Promoting Open Access to Risk Information

Opening and creating access to fundamental hazard, exposure, and risk information and developing decision-support tools is a key focus for the global DRM community. For non-DRM sectors, embedding resilience measures into project design and implementation is accelerating demand for accessible and useable disaster and climate information. With the 10 years of unparalleled advances in disaster risk modelling, multi-hazard risk assessments provide an invaluable tool for countries, a comprehensive view of the risks that hazards present. GFDRR endeavors to promote open access to risk information for all.

## Translating information to action

Promoting open access to risk information underpins GFDRR's work and activities. GFDRR collaborates with partners across the globe to improve access to tools and datasets that meet the needs of national and sub-national decision-makers. *ThinkHazard!*, an open source tool launched in mid-2016 provides an overview of the hazard profile for countries, had more than 125,000 users in its pilot year. This tool has been used for activities ranging from initial project screening for disaster and climate risks to more

complex disaster and climate risk analytics for Afghanistan, the Kyrgyz Republic, and Southwest Indian Ocean Island states. Disaster risk assessments and national level risk profiles are informing action on the ground, evident in Madagascar, where risk modelling was harnessed to provide rapid damage estimates to the Ministry of Finance within two weeks of Tropical Cyclone Enawo in March 2017. GFDRR also has been instrumental in breaking the barriers to understanding risk by bridging the gap between technology and on-the-ground user needs in 20 pilot projects under the GFDRR-DFID Challenge Fund.

## Learning from experience

The last year was a time of learning and reflection. GFDRR completed four independent evaluations of some of its longest running projects. An evaluation of the GeoNode, a geospatial platform developed by GFDRR in 2010, revealed a 200 percent return on GFDRR's investment in this open source tool, totaling a \$3.5 million investment in the platform, of which \$1–1.5 million was financed by GFDRR. This investment strategy has enabled a self-sustaining open source community that functions independently of any long-term sponsor, key to GeoNode's success.

The Understanding Risk (UR) community, which convened local events in Vancouver and Tanzania this past year, was also evaluated. The evaluation highlighted overwhelming support from the public, private, academic, and international community for the UR community and for the

**746**  
people trained in risk tools;  
1,500 risk datasets accessed

global forums. One-hundred percent of respondents said their participation in the UR community resulted in an improved understanding of disaster risk, 90 percent credited UR events with helping to form new partnerships, while 80 percent report applying risk assessment technology discovered at the UR events at the country level. Two other evaluations were also delivered for a drought visualization tool in the Pacific, as well as the Open Data for Resilience Program.

## Going forward

GFDRR will continue to advance and improve its existing work promoting risk information. *ThinkHazard!* Version 2 will feature enhanced visualization and include data for more hazards. GeoNode will provide data and information to power *ThinkHazard!* and will allow universal access to these datasets. A new open data risk dashboard will support governments to monitor progress toward their data readiness for assessing disaster and climate risk and for enabling all actors involved in the assessment of risk to more efficiently access fundamental datasets. A data exploration will be launched that allows users to explore risk information and visualize risk to support better decision-making. Finally, GFDRR will continue to convene partners to develop innovative solutions and to learn from one another, especially through the UR Forum, which next meets in Mexico City in May 2018.

## In Focus GFDRR-DfID Challenge Fund finds local voices to innovate for disaster resilience

**G** FDRR, by fostering disruptive approaches to overcome barriers to understanding risk, helped bridge the gap between technology and the needs of users on the ground. In 20 countries, the DFID Challenge Fund and Code for Resilience supported (successful) pilots to deliver high-quality, demand-led data, tools and approaches for decision makers to be able to make greater and more effective investments in climate and disaster resilience, preparedness, response, and recovery.

A key success factor, innovative approaches were co-developed with decision-makers; the pilots that demonstrated the most success were tools created in response to on-the-ground demand and in partnership with the country counterparts. Every pilot challenged the traditional approaches of producing and delivering disaster information to vulnerable communities—tackling issues like gender, language barriers, open data access, and gaps in risk communication. From collecting data through Twitter for flood analysis in the Philippines, to visualizing risk data for civil society groups in Africa, the pilots harnessing the power of technology for climate and disaster resilience.

The success and innovation of the Challenge Fund is reflected in its acknowledgments: DFID gave the program an A+ implementation rating and the World Bank granted it a “Presidents Award for Innovation.” Illustrative pilots include:

- **Is it raining?** Traditional technology to measure rainfall and predict flood, such as observation systems like radar is expensive and high-maintenance equipment is often out of reach for low-income countries. In Burkina Faso, in partnership with Institute of Research and Development and the leading mobile operator, a new system measures rainfall via the loss of cellular network signals. This pilot to support flood resilience is now being tested in real time and expanded to other countries in the Sahel.
- **Too much or too little water?** To provide an effective, sustainable, and affordable solution to managing

reservoirs in Sri Lanka, the International Water Management Institute developed a locally sourced, low-cost mobile weather station that transmits data through text messages using open source hardware and software for the Sri Lankan Irrigation Department:

- **To evacuate or not?** In partnership with the Red Cross and the Togo Ministry of Environment, the combination of SMS data, a low-cost flood model for dam operations, and community communication tools have enabled vulnerable communities downstream from a major dam to receive sufficient warning (and financing) to evacuate before dam-water releases.
- **Is my school safe?** Partnering with UNESCO in Indonesia, a survey and mobile app enables engineering and architectural students to rapidly and robustly assess the safety of schools—and to ensure that this information is shared with national decision-makers.
- **Help, we are flooded!** With climate change bringing more frequent and intense flooding in cities, help may be delayed because authorities cannot rely on traditional approaches to determine flood zones. However, thousands of messages per hour are shared on Twitter during flood events, which include early, on-the-ground observations accessible in real-time. In the Philippines, Floodtags piloted a solution to efficiently and effectively capture risk information generated on social media to help improve preparedness and response actions.

Comprehensive monitoring and evaluation, a mainstay of GFDRR work, unveiled the following project results: (i) 23 decision-makers are regularly accessing tools; (ii) 15 tools are openly available; (iii) 2,025 downloads/access of tools have been reported; (iv) 10 projects were found to actively integrate gender considerations into implementation; and (v) more than about \$2.15 million in partner funding have been leveraged to date.

*Thanks to the dashboard, we are able to monitor flooding incidents immediately after people tweet photos and information on the level of flood. We also save time as we can verify the reports we receive from our volunteers.*

# Promoting Resilient Infrastructure

Over the past decade, GFDRR has continued to provide financing and technical advice to integrate risk-reduction principles into infrastructure. This includes activities for enabling resilient reconstruction after disasters, as well as for informing planned or ongoing infrastructure investments across different sectors. Since 2014, GFDRR had a dedicated program on building safer schools, which has shown tremendous impact. Following on the success of this program, GFDRR has expanded the scope of its engagements in infrastructure, initiating dedicated sectoral programs. In FY17, progress was made in such programs for transport and urban, with similar engagements planned for water and energy in the coming year.

## Protecting children with safer schools

In 2017, GFDRR Safer Schools engagements reached 20 countries. The Safer Schools Initiative, specifically, entered its second phase, with ongoing engagements in 12 countries. These investments of \$8.5 million are being implemented in Armenia, El Salvador, Indonesia, Jamaica, Kyrgyz Republic, Mozambique, Nepal, Samoa, Tonga, Vanuatu, Peru, and Turkey. In Peru, GFDRR supported a nationwide risk assessment for the education sector, which led to a National Plan and a Seismic Retrofitting Program for

School Infrastructure of \$3 billion to be implemented over 10 years. For this, over \$50 million was allocated by the Peruvian government in FY17. Similarly, working alongside the Government of Nepal, GFDRR conducted a vulnerability and damage assessment to collect baseline information of damage condition, exposure to multiple hazards, and student population in education facilities. These efforts have resulted in over \$200 million in investments to improve the condition of Nepali schools from the Asian Development Bank, China, India, Japan International Cooperation Agency, and United States Agency for International Development.

## Making all infrastructure more resilient

Recognizing the importance of expanding this agenda to other sectors, in FY17, GFDRR formalized a partnership with the World Bank's Transport team, establishing a collaborative "Resilient Transport Partnership Program." Through this program, GFDRR will leverage existing information, tools, and technical expertise in countries to inform current and future World Bank transport investments by ensuring that such information can be shared widely to benefit as many countries and people as possible. Operational engagements build on an initial series of country engagements funded by GFDRR's Japan Program. To support South Asian governments, \$1 million has been invested in Bangladesh, India, Nepal, and Sri Lanka to develop innovative approaches and solutions for resilient infrastructure, and influence policy and strategy dialogues. Further, an additional \$1 million is being

# 20

countries with safer school engagements

invested in Paraguay, Serbia, Sri Lanka, Kenya, and Laos to support climate vulnerability analyses and investment plans to increase the resilience of World Bank financed transport sector interventions.

In FY17, the Resilient Transport Community of Practice organized a knowledge exchange in Tokyo, Japan, bringing together experts from 16 countries to share concepts and practices on resilient transport, including asset management, contingency programming, engineering and design, and systems planning.

## Going forward

GFDRR will continue to advance on its Safer Schools engagements in countries, especially in Africa, and establish new partnerships with development partners, universities and private sector firms—for example, to develop the Global Library of School Infrastructure. Additionally, pilot projects in Paraguay, Serbia, Sri Lanka, Kenya, and Laos, will begin under the Resilient Transport Partnership Program. GFDRR will also scale up its infrastructure engagements in other sectors—including water and energy. Exploratory work on the energy sector will include estimating the vulnerability of the global energy system based on available energy databases and *ThinkHazard!*. Engagements in resilient energy systems will build on initial investigations and pilots in a few countries such as Fiji and Bangladesh. Operational engagements will also increase in the program on transport resilience.



## In Focus A Roadmap for Safer Schools

**G** FDRR, through its Safer Schools Initiative, collaborated with partners to host a two-day workshop to launch “A Roadmap for Safer Schools,” which also was developed in partnership with Arup International Development. The purpose of this Roadmap is to enable development partners, such as the World Bank, to engage with the ministries of education, finance, and public works within a country to promote investments that ensure safety of new or existing school infrastructure at risk from natural hazards.

The event gathered close to 50 participants mainly from the Ministries of Education and other ministries involved in construction and retrofitting of schools. Representatives from Armenia, El Salvador, India, Jamaica, Japan, Malawi, Nepal, New Zealand, the OECD Effective Learning Environments (LEEP), and the World Bank shared their experiences and lessons learned from Safer School engagements implemented around the world in both

developing and developed countries. Participants discussed challenges as well as the need for solutions at scale which can be adapted to different country contexts.

The workshop itself focused on the integration of risk considerations into education infrastructure, with case studies from Japan, Nepal, New Zealand, Peru, and countries in East Asia and Central Asia. These presentations were made by experts from Arup International Development, Applied Technology Council, the World Bank Group, University College London, and University of Los Andes.

The success of this launch has laid the ground work for additional work in the area. Over the coming year, the Safer Schools Initiative will prepare a Reconstruction and Recovery Roadmap for School Infrastructure, expected to be launched in 2018. This Roadmap will aim to support World Bank teams and governments to improve the safety and resilience of educational infrastructure in the affected areas in the aftermath of a disaster.

# Scaling Up the Resilience of Cities

**10+**  
cities with deeper  
engagements

Urbanization is a defining phenomenon of the 21st century and government investment priorities are shifting as a result. Global targets for climate change adaptation, mitigation, and poverty reduction are all impossible to meet without municipalities becoming much better at creating resilient urban environments. Along with addressing the challenges of disaster and climate risks, the additional complication of rapid urbanization in developing countries requires substantial and well-planned infrastructure investments to meet resource demands and enhance economic growth.

## A promising program for cities

Given the inherent complexity for mayors to address resilience challenges, GFDRR has been providing advisory services and a suite of tools and analytical products to help mayors respond to the fast-changing needs of cities. The World Bank has invested significant financial resources through development projects across sectors to strengthen urban resilience.

In FY17, GFDRR had active urban resilience engagements in more than 27 countries with \$27 million in investments. These activities ranged from (i) promoting disaster risk reduction and climate change adaptation planning in Ethiopia,

(ii) retrofitting housing in Guatemala, (iii) improving public service delivery in India, (iv) strengthening urban resilience of cities impacted by the Syrian refugee crisis in Jordan and Lebanon, (v) enhancing the resilience of secondary cities in Vietnam's Mekong Delta Region, to (vi) enhancing awareness and knowledge on urban resilience across the Central Asia region.

And as reflected in World Bank's FY17 flagship report "Investing in Urban Resilience," World Bank activities over the last five years directly and indirectly contributing to urban resilience reached about \$9.7 billion, spanning 41 countries, growing each year incrementally. A large financing gap remains, amounting to an annual deficit of \$4.5–5.4 trillion. To bridge this financing gap, in FY17, GFDRR jointly with the World Bank launched the City Resilience Program, currently financed by the State Secretariat for Economic Affairs, Switzerland. The program will help to target more innovative mechanisms for raising public and private capital through a single investment platform at the city level.

## Developing a one-stop shop delivering value to cities

This City Resilience Program provides a cascading platform for resilience-building investments in finance, governance, infrastructure, and systems. The program's main objective is to catalyze a shift from a siloed, single-stream approach to one which provides more comprehensive, multi-disciplinary packages of technical and financial

services. To provide targeted support to cities, the initiative has identified 10 thematic areas for quick support through knowledge, tools, and expertise.

Secondly, the World Bank will act as "broker" to support cities in financing these engagements. This support allows cities greater access to finance through instruments such as debt, concessions, and land value capture. This is an effort to bridge the financing gap at the city level by enabling access to private capital in addition to financing from traditional development partners.

## Going forward

A major push in the next year will be piloting the City Resilience Program in 10 cities, ideally in countries where the World Bank has engagements. A preliminary list includes cities in Algeria, Argentina, Bangladesh, Colombia, India, Indonesia, Myanmar, Peru, and Vietnam. Over the next three years, engagements will expand to 30 cities and aim to leverage \$1.5 billion from public and private sources. Furthermore, in FY18, the first flagship event of the City Resilience Program—the, Financial Solutions for City Resilience Conference, will bring together up to 35 cities in Bangkok in November. Organized across the World Bank Urban/Resilience and Governance Global Practices, together with the Rockefeller Foundation's network of resilient cities, the objective of the event is to provide a forum for city leaders to interact with their peers, World Bank teams, financial advisory firms, and potential investors.

<sup>3</sup> CCFLA. 2015. *State of City Finance 2015*. Cities Climate Finance Leadership Alliance.

## In Focus Can Tho brings together infrastructure investments, policy reforms, and technical systems

**G**FDRR and the World Bank are supporting the city of Can Tho to become more climate resilient and to promote sustainable urbanization and transport corridors. Situated in the economic center of the Mekong Delta (the agricultural center of Vietnam), Can Tho suffers from recurring flood losses. For instance, the most recent flooding affected about 69 percent of the total core urban area (2,000 hectares) and more than 200,000 people.

GFDRR's CityStrength diagnostic tool proved instrumental in enabling a \$240 million investment. The Can Tho Urban Development and Resilience Project (2015) pulls together six development sectors and forms a nexus of infrastructure investments, policy reforms, and technical systems to increase the city's physical, financial, and social resilience to adverse events.

The results from these efforts are fast-becoming evident. One infrastructure investment combines a transport link and an embankment that, among many benefits, reducing flooding in the Mekong Delta while saving over \$40 million per year. Where areas have benefitted from significant flood risk reduction, the sale of land and development rights has

attracted private investment and increased government revenues. In the same vein, the project has catalyzed a public-sector transport strategy; already the feasibility studies for bus rapid transport are nearing completion and increases in land values are expected to cover the costs of financing the bus lines.

Other interesting results include the establishment of a flood-triggered, scalable safety net to provide cash support to the poor and vulnerable who are not protected by the flood protection works; an open source GIS platform within the Office of the Mayor that links data and information across line departments for integrated spatial planning and data-driven analysis; and, a sophisticated flood risk management information system that includes climate change projections that inform construction heights and capacity sizes for flood control measures.

The pilot exemplifies how projects can address policy, infrastructure, and finance simultaneously to build resilience in a holistic way. The approach will be replicated across several cities in FY18.

### The Habitat III Conference

The Habitat III Conference, a once-every-20-year global event, was hosted by the Government of Ecuador and United Nations-Habitat in Quito, Ecuador. From October 17–20, 2016 nearly 50,000 participants congregated to discuss the growing importance of the urban agenda.

The main outcome of the conference was the New Urban Agenda, a non-binding document, which provides a global framework for housing and sustainable urban development centered around three principles: (i) leave no one behind: sustainable urban development for social inclusion and ending poverty; (ii) sustainable and inclusive urban prosperity and opportunities for all; and (iii) environmentally sustainable and resilient urban development.

GFDRR supported a World Bank-led event at the conference—the launch of the flagship report “Investing in Urban Resilience.” The launch included a new commitment by the World Bank to scale up its support to make cities more resilient through leveraging, financing, technical assistance, and knowledge sharing.

GFDRR also contributed by participating in sessions on:

- Guiding Principles for City Climate Action Planning;
- Financing for Resilient and Green Urban Global Solutions;
- Policy Dialogue on Urban Ecology and Resilience; and
- Resilient Cities at Habitat III: Shifting toward resilient urban development.

Some key messages from the World Bank and GFDRR at the conference were:

- The World Bank plays a premier role in providing financial solutions and technical assistance to the urban agenda. To retain this role, the World Bank will adapt its approaches to the New Urban Agenda, which requires new ways of doing business, leveraging private sector investors;
- The need to urgently strengthen urban resilience by scaling up investments to support cities and local governments, who can plan for and implement investments for climate smart, resilient cities; and
- The need to scale up lessons learned globally in building inclusive and productive cities.

# Strengthening Hydromet and Early Warning Systems

**40 million**  
people benefiting from  
\$870 million in investments

The importance of reliable hydromet information and the consequences of underfunding National Meteorological and Hydrometeorological Services (NMHS) are often underestimated, depriving proposed technical solutions of institutional ownership and sustainability. For this reason, the sector's modernization evolved from primarily upgrading meteorological infrastructure and services to an integrated strengthening of countries' hydromet services. Today, GFDRR support contributes to strengthening early warning systems; providing multi-hazard, impact-based forecasting; and addressing issues of "last-mile" connectivity to deliver timely and understandable information to vulnerable communities.

## Enhancing country capacity

In FY17, GFDRR partnered with the World Bank and other financiers to support new engagements in the Democratic Republic of Congo (DRC), Ethiopia, Mali, Pakistan, Sri Lanka, and Zambia and supported project implementation in Jamaica, Myanmar, Nepal, Pacific Island states, Russia, and Vietnam, among others. In DRC, for example, the country is being supported to strengthen its hydromet and climate services thanks to a combined funding from several partners, namely \$3.09 million from the Climate Risks and

Early Warning System (CREWS) Initiative;<sup>4</sup> \$2.7 million from the ACP–EU NDRR Program; and \$5.3 million from the Global Environment Facility.

## Strengthening global coordination

Weather forecasting and early warnings in every country is part of the global system functioning under the guidance of the World Meteorological Organization (WMO). To this end, one of GFDRR's priorities is to enable cooperation between NMHSs and to facilitate dialogue among the WMO, development partners, and donors to increase the efficiency of funding channeled for hydromet and early warning systems. GFDRR has been appointed as the focal point to the Global Framework for Climate Services for the World Bank, and ensures that investments support international norms and standards.

GFDRR also prepared a memorandum of understanding signed between the World Bank and the World Meteorological Organization to update their framework for collaboration. The expanded scope of cooperation now includes areas like climate-smart agriculture and food security, climate-smart urban infrastructure, and public health; the framework also highlights the need to establish better implementation modalities for development support.

## Sharing knowledge and experience

To further support global partnerships and knowledge exchange, GFDRR organized technical workshops in

China, Japan, and several European countries—training over 150 specialists from the national meteorological, hydrological, and DRM agencies of at least 20 countries. For example, in December, GFDRR led a workshop on “Reducing the Impact of Hydro-Meteorological Hazards” in Shanghai. Forty representatives of national meteorological and hydrological services and DRM agencies from 14 countries learned how to handle many types of warnings, including hydrological and meteorological phenomena. The representatives also learned about impact-based forecast and warning services, including ways that they can be implemented in national hydromet services and DRM organizations. Furthermore, GFDRR worked jointly with UNISDR to organize the WMO Multi-Hazard Early Warnings Conference on the sidelines of the 2017 UN Global Platform on Disaster Risk Reduction in Cancun, Mexico.

## Going forward

GFDRR's hydromet engagements are likely to grow substantially in FY18 and later years, thanks to support from GFDRR partners and targeted programs like the CREWS Initiative. These engagements are expected to complement larger investments, allowing for quicker preparation of investment projects and catalyzing funding from other financial partners, such as the Green Climate Fund, Global Environment Facility, and African Development Bank.

<sup>4</sup> CREWS is a collaboration with UN Office for Disaster Risk Reduction (UNISDR), World Bank, and World Meteorological Organization (WMO).

## In Focus Pakistan strengthens its engagement on hydromet

Over the past few years, GFDRR has played a strategic role in coordinating financing from development partners and donors to improve the efficiency and results of hydromet engagements in South Asian countries. Afghanistan, Bangladesh, Nepal, Pakistan, and Sri Lanka, among others, share the common problem of flooding during the monsoon season. For this reason, the South Asia Region (SAR) is a champion of modernizing hydromet systems.

Currently, GFDRR coordinates an \$11 million EU–SAR Capacity Building Program for DRM, which focuses on supporting the implementation of large, ongoing capital investment programs in hydromet and on building regional capacity and cross-country learning. Further, discussions are ongoing with the United Kingdom to scale to this work through a proposed South Asia Weather and Climate Services Program.

A positive development for this past year has been GFDRR's contribution to the hydromet engagement in Pakistan. Pakistan faces a full range of hydro-meteorological hazards, which is why the country's ability to deliver reliable and timely weather, hydrological, and climate information and services to the public and key economic sectors is of utmost importance.

GFDRR has been working alongside the Pakistani government and the World Bank to strengthen hydromet services. One of the outcomes of these efforts was the government's request to the World Bank to assist in developing a large program for stronger hydromet systems. To this effect, GFDRR played an integral role in designing a World Bank project of over \$100 million targeting hydro-meteorological and climate services in Pakistan, one of the largest World Bank investments in its hydromet portfolio.

The project aims to strengthen the capacity of national meteorological and hydrological services, to modernize existing infrastructure, to advance end-to-end multi-hazard early warning systems—spanning all steps from hazard detection to community response, and to introduce public weather and hydrological services with a special focus on agriculture, civil aviation, DRM, and water resource management. Pakistan will also develop a national framework for climate services, as recommended by the Global Framework for Climate Services.

GFDRR was instrumental in drawing from its network to bring together strategic partners to reinforce the project's technical soundness. This involved experts, among others, from the WMO on numerical weather prediction and service delivery improvement. GFDRR's strong partnership with the Japan International Cooperation Agency also was critical to coordinating financing for the project.

*Over the past year, GFDRR has supported the World Bank's dialogue with the Government of Pakistan on improving hydromet and climate services. In collaboration with the government, we are preparing a transformational project that would take the Pakistan Meteorological Department from being a forecasting agency to a service delivery agency, providing a range of weather and climate information and products to various user groups.*

— **Haris Khan**, Senior Disaster Risk Management Specialist, World Bank

# Deepening Financial Protection

**250+**  
government officials trained  
in 20+ countries

Through its Disaster Risk Financing and Insurance Program, GFDRR has played a central role in bringing together financial, analytical, and advisory skills within the World Bank to deliver customized solutions to partner countries. Through this model, disaster risk financing solutions have become largely anchored in World Bank policy reform programs and development investments. As of FY17, about 60 countries have benefited from GFDRR's assistance to strengthen their financial resilience—ranging from influencing policy reform to leveraging larger investments.

## Delivering customized solutions to partner countries

In FY17, GFDRR helped institutionalize financial resilience through policy change and investments in Colombia, Myanmar, Pakistan, Pacific Island states, and Serbia. Following the 2014 floods, GFDRR contributed to supporting Serbia in establishing the National Disaster Risk Management Program. As part of this effort, the European Union (EU) is financing a \$6.5 million follow-on project which is currently supporting the country in enhancing disaster risk management and flood prevention systems by reducing existing and avoiding new flood risks, and responding more efficiently to disasters. Furthermore, WB/GFDRR supported the government to develop a

national disaster risk finance strategy, which led to the government's decision to establish a fiscal risk management unit. Building on this work, in May 2017, Serbia became the first country in Europe and Central Asia to have access to \$70 million in contingent credit from the World Bank, securing predictable finance for future post-disaster response.

With support from the EU, the \$22 million Africa Disaster Risk Financing Initiative has focused on identifying needs and priorities for disaster risk financing and on formulating these priorities into strategies for action by building elements of financial protection strategies. Technical assistance has accelerated in African countries that have demonstrated a strong commitment to developing disaster risk financing strategies, primarily in Ethiopia, Kenya, Mozambique, and Uganda. Additionally, the \$6.4 million Disaster Risk Financing Analytics Project financed by the EU continues to support countries and to increase the capacity of governments to make informed decisions on disaster risk financing based on sound financial analysis.

## Applying disaster risk financing solutions for crisis response

GFDRR continues to support World Bank efforts on crisis response, for example, by integrating insurance principles into social protection schemes. This includes building stronger and operational links between social protection and disaster risk finance. In the last year, this effort has shown significant results: (i) governments better understand the financial costs of delivering assistance to the poor during crisis events; (ii) financial/actuarial analyses and tools

are used to design the rules of response and the risk financing strategies to support the scale-up of crisis-response mechanisms; and (iii) sound monitoring and evaluation of financial strategies are developed to provide robust evidence and to support the global knowledge agenda in this new and evolving area. This has informed large reform programs in Kenya and Uganda, where both countries are trying to tackle response to drought, famine, and other challenges.

## Going forward

During the next year, GFDRR will participate in the launch of a major new initiative led by Germany and the United Kingdom—the InsuResilience Global Partnership—which will rapidly scale up financial protection through insurance and other financial instruments. The InsuResilience Global Partnership aims to increase access to direct or indirect insurance coverage against the impacts of climate change for 400 million of the most vulnerable people in developing countries by 2020. The initiative is to be implemented in close partnership between the G7 states, developing countries and emerging economies. The overall objective of the initiative is to stimulate the creation of effective climate risk insurance markets and the smart use of insurance-related schemes for people and risk-prone assets in developing countries. As an implementing partner for the InsuResilience Initiative, GFDRR and the World Bank will work through a dedicated new funding window with \$22 million from Germany to deepen our impact in countries working towards financial resilience goals, including through closer dialogue and cooperation with the private sector.

## In Focus Southeast Asia begins the process to establish its first-ever regional risk pool

**R**isk pooling for protection against disaster losses works when done right. Ever since its inception in 2016, Pacific Island Countries have received two payouts in the aggregate amount of \$3.2 million within 10 days of the disasters from the regional risk pool—Pacific Catastrophe Risk Assessment and Financing Initiative Facility.

Following suit from the success of its neighbors, Cambodia, Lao, and Myanmar decided to come together in FY17 to start the process of establishing a similar initiative—the Southeast Asia Disaster Risk Insurance Facility (SEADRIF). This will be the first risk-pool in Asia, with countries taking leadership in building a joint mechanism for better managing climate and disaster risks. This is a result of years of ongoing dialogue led by the World Bank, with an aim to ensure that countries can rapidly finance response to climate and disaster risks. The foundational activities of this program have been supported by the Japan–World Bank Program.

The three countries along with Japan have established a Regional Technical Working Group. This group will conduct the feasibility and preparatory work toward the establishment of SEADRIF by 2019.

Through SEADRIF, the three countries will benefit in multiple ways:

- The risk pooling mechanism will lower premiums, with expected savings to be in excess of 25 percent compared to the cost if countries were to access the international reinsurance markets individually.<sup>5</sup>
- SEADRIF would provide rapid funds in the immediate aftermath of a disaster, thereby reducing the need to wait for budget reallocation or mobilization of international assistance. This would also reduce reliance uncertain humanitarian assistance.
- Ownership, accountability, and transparency of SEADRIF and innovative financial products to cover natural disasters can attract donor support. Over the past few years, financial protection against disaster and climate shocks, especially regional solutions with a focus on Asia, have received significant attention in policy dialogues, such as ASEAN, ASEAN Plus Three, G7, and G20.

While the initiative is currently being implemented in three countries, there is interest and potential for expansion to other ASEAN countries in the coming years.

<sup>5</sup> Indicative premium savings were determined based on assumptions for the pooled Risk and Retention Facility.

# Building Resilience in Communities

**Ninety-nine percent of disaster victims are saved by their neighbors. This demonstrates the importance of strengthening the resilience of communities. GFDRR continues to systematically prioritize an inclusive approach that engages communities in implementation of activities, and their design. In 2015, GFDRR rolled out the Inclusive Community Resilience Strategy to strengthen local-level engagement and to integrate gender, citizen engagement, and social inclusion across the GFDRR and World Bank DRM portfolio.**

## Channeling DRM resources to the local level

In FY17, GFDRR supported the promotion of social inclusion, community-led disaster risk reduction, institutional decentralization, and social protection systems. In Kenya, for example, GFDRR is working alongside the World Bank and the government to strengthen the capacity of county governments to manage climate and disaster risk and engage with communities on resilience strengthening.

GFDRR also continued to support civil society and citizen engagement in DRM efforts for greater accountability and impact. In FY17, 38 percent of GFDRR grants included citizen engagement components. Activities varied from

including citizens in extensive consultations to inform project design, to allocating resources to communities for resilient investments. Further, GFDRR also played an active role in promoting the voice of vulnerable communities in national and global policy dialogues. For example, at the Global Platform for Disaster Risk Reduction in May, GFDRR facilitated the participation of 23 grassroots and indigenous women leaders from 11 countries.

GFDRR also supported resilience investments in fragile contexts. In Mali, GFDRR is partnering with the International Federation of Red Cross and Red Crescent Climate Center to pilot the integration of forecast-based financing into existing social protection mechanisms. By using weather forecasts rather than emergency declarations or weather observations to trigger safety net payments, social protection systems can get vital support to poor and vulnerable households prior to the onset of an extreme weather event. This allows households to prepare and avoid maladaptive coping mechanisms such as selling off assets.

In Madagascar, GFDRR is supporting an innovative response to the El Niño in the country's southern regions, characterized by complex social dynamics, fragility, and a high dependency on humanitarian aid. By tracking how poor households use cash provided by emergency safety nets, and making visible the informal mechanisms and social networks that communities rely on to cope with shocks, The World

**~4 million**  
people benefit from community engagements or access to adaptive social protection

Bank works with the government to design a program to build on community-led resilience strategies and initiate a shift from emergency response to longer-term resilience building.

## Increasing awareness through learning and training

In FY17, GFDRR carried out its first training on socially inclusive DRM. The course highlights the exclusion of persons with disabilities, indigenous peoples, and issues related to sexual orientation and gender identity. GFDRR also organized the Grassroots Academy for Resilience for the 2017 UN Global Platform for Disaster Risk Reduction.

## Going forward

In FY18, GFDRR will continue to increase its support to in-country engagements by implementing community-led disaster risk reduction, resilience planning, and adaptive social protection systems. GFDRR also will continue to advance its efforts on social inclusion through additional face-to-face trainings and development of eLearning courses focused on gender integration and socially inclusive DRM. Targeted activities to promote disability-inclusion will be a key priority for the next year. Efforts will continue to increase citizen engagement for DRM through GFDRR grants. Lastly, GFDRR will conduct a review of the implementation of the first three years of the Inclusive Community Resilience Initiative to capture results and lessons learned.



## In Focus Tunisia's participatory approach for planning DRM investments

**T**unisia, the smallest country in North Africa, has an interesting geographic landscape, with a mix of mountains in the North, plains in the center, and Sahara Desert in the South. In FY17, GFDRR enabled a World Bank project in Tunisia to streamline DRM in municipal investments and urban planning, directly touching the lives of those often overlooked in disaster preparedness, the urban poor.

In 2014, the World Bank began a Program-for-Results Operation in Tunisia to strengthen the capacity of local governments in delivering municipal infrastructure and improving access to services in targeted disadvantaged neighborhoods. In FY17, GFDRR supported this work by helping Tunisia to decentralize DRM and to reach communities across the socioeconomic and geographic spectrum.

As part of the Tunisia Urban Development and Local Governance Program (2014), local governments and citizens co-create annual investment plans. GFDRR is supporting the integration of risk identification and mitigation into

the plans. These efforts were kicked off at a high-profile meeting in March 2017 with ministries, local civil society organizations, and the international community, including members from the Embassy of Japan and the Japan International Cooperation Agency.

Specifically, risk maps are being developed with special attention given to disadvantaged neighborhoods to mobilize and sensitize citizens in high-risk zones. This participatory approach allows decisions to be made where potential disasters occur and helps to build consensus at the community-level to drive plans, budgets, and implementation of risk mitigation measures. The production of participatory risk mapping is cultivating community-driven DRM in Tunisia, showcasing the widespread effect of a simple, yet strategic, intervention.

Going forward, empowering women to take a lead role in risk mapping will remain a priority, as does engaging the governments to adopt and implement the annual investment (“preparedness”) plans.

*Mapping risks and vulnerabilities with city level stakeholders allows local decision-makers to both prepare for existing risks and support risk avoidance in planning future investments.*

— **Lotfi Attafi**, Head of Department, Municipal Development Fund, Ministry of Local Affairs, Tunisia

## Deepening engagements in resilience to climate change

GFDRR continues to support countries in fulfilling their commitments to the Sendai Framework for Disaster Risk Reduction 2015–2030, the Sustainable Development Goals, and the Paris Agreement by jointly addressing disaster and climate risks. In FY17, GFDRR scaled up efforts to mainstream climate resilience into development plans, policies, and investments across sectors. GFDRR continues to gather new data, develop new tools, and methodologies to help countries make more informed decisions to build climate resilience.

### Integrating climate resilience into all development

In FY17, 77 percent of new grants integrate climate resilience, compared to 62 percent in FY16 and 41 percent in FY15. Climate-resilient measures are being implemented across all regions and in 56 countries, largest to date. In Bhutan, GFDRR is supporting the government's broader climate and disaster preparedness plan by targeting hydro-meteorological services. Here, the National Center for Hydrology and Meteorology, Department of Disaster Risk Management, and Department of Agriculture are working to strengthen their inter-agency coordination, share information, and deliver better services.

Increasingly, development sectors—including agriculture, transport, energy, and water—are benefitting from GFDRR's expertise. In April 2017, GFDRR launched a broad outreach campaign on the Just-in-Time instrument that integrates climate resilience into all development sectors, resulting in increased requests for such specialized support with an award of 19 new grants in FY17 alone. In Sudan, Just-in-Time support is helping to integrate climate resilience into a \$7.7 million natural resources management investment financed by the Global Environment Facility. This assistance will inform national policies and strategies tackling the drivers of deforestation and land degradation in the country, including the ongoing work on the national strategy for REDD++ Readiness. In six countries of the Organization of Eastern Caribbean States, Just-in-Time support is enhancing the resilience of the energy sector to extreme weather and climate-related risks; and in Mongolia, a Just-in-Time grant will help increase the resilience of the livestock sector to climate-related disasters, including desertification, drought, and dzuds—severe winter following a drought that causes large loss of livestock.

### Tools and innovative solutions for better decision-making

In FY17, GFDRR supported the development of an interactive platform for nature-based solutions and hybrid infrastructure projects. GFDRR increased financial and

**77%**  
new grants integrate climate resilience

technical support to develop innovative methodologies and tools to support *decision-making under deep uncertainty* across development projects. The sophistication of the risk modeling provides decision-makers with a powerful tool. GFDRR is contributing to piloting this work in several countries, and already successfully engaging in Sri Lanka.

### Going forward

GFDRR will continue to increase its support to the climate resilience agenda, by helping integrate climate and disaster risk into development policy and planning; by promoting that all investments account for climate change and weather related risks; and by influencing the design of larger development investments by combining various sources of climate funding including the CREWS Initiative, to target the most vulnerable countries. In addition, GFDRR will continue to develop and promote the use of new tools, refining climate parameters; measuring resilience more accurately to help countries plan and better monitor results; and highlighting natural and ecosystem-based solutions to build resilience.

## In Focus São Tomé and Príncipe adapt to a changing climate through participatory approaches

**S**ão Tomé and Príncipe, two volcanic islands off the coast of West Africa, house coastal communities that continue to experience flash flooding and sea-level rise. GFDRR is supporting the government to increase its adaptive capacity through improved participatory risk planning, monitoring, adaptation planning, and project design for vulnerable coastal communities.

The support is informing the first five-year phase of the \$4.1 million Adaptation to Climate Change Program, which is financed by the GEF Least Developed Countries Fund and implemented by the World Bank. GFDRR is helping to prepare a \$12 million second phase of the program to deepen São Tomé and Príncipe's engagement in climate resilience, with the aim to scale up the pilot activities to an additional seven communities. These engagements are part of a large regional effort supported by the Global Environment Facility and the World Bank through a linked \$600 million project, West Africa Coastal Areas Resilience Investment Program (WACA).

Working alongside São Tomé and Príncipe's on its strategy on coastal communities and climate resilience, GFDRR has helped to manage voluntary population retreat from coastal areas at risk to safer, higher ground. This has been addressed through a participatory approach identifying at-risk areas and vulnerable groups. Satellite imagery and models to estimate areas at risk of erosion and flooding were used to raise awareness of the hazards and the potential damages, and expansion areas were delineated with lots earmarked for the most vulnerable households in the communities. The communities have been involved in each stage of the retreat process ensuring the ownership and success of the population retreat.

This engagement has offered valuable lessons on how to manage retreats through community engagement and leadership. Based on the lessons learned, GFDRR is supporting a gender-sensitive inclusive social framework that will be integrated in WACA for engaging on climate-resilience activities, including planned coastal retreats/relocations, climate-resilient community development, and alternative livelihoods.

### Small Island States come together to share knowledge and experience

GFDRR provides dedicated support to small island states for resilience building. Through its Small Islands States Resilience Initiative (SISRI), GFDRR enables peer to peer knowledge and experiences exchange and develops analytical products. Technical support from GFDRR also helps island nations leverage predictable and long-term financing to strengthen their resilience.

In FY17, GFDRR, the World Bank, and UN agencies organized the second workshop on "Building a Community of Practice for Small Island States on Climate and Disaster Risk." The workshop was an official side event of the UN Global Platform for Disaster Risk Reduction 2017, bringing together 80 practitioners from 34 small island states and highlighting Mexico's risk information platform (which has access to real-time data throughout the country).

The participants shared solutions on such challenges as actions to protect coastlines, communities, and infrastructure through:

- An improved understanding of risk, ecosystem-based solutions, land-use planning, and planned relocation and migration with dignity;
- Promoting end-to-end multi-hazard early warning systems on remote islands using low technology;
- Using risk and exposure modelling with limited data to inform project preparation;
- Building coordination across sectors and at governance scales underpinning the move toward climate-resilient development; and
- Reviewing different choices of risk insurance coverage, payouts, and outcomes.

Participants reiterated the value of the community of practice as: "a platform where we speak, learn from each other, and also share challenges openly and honestly."

# GFDRR helps integrate climate resilience in development investments

(million \$)

GFDRR provides grants up to \$50,000 as Just-in-Time assistance to the World Bank for specialized advice or training requested by developing countries to help address specific climate-resilience or weather-related DRM issues across sectors. In FY17, GFDRR's Just-in-Time assistance helped integrate climate-resilience measures into large investments in 20+ countries, across 8+ sectors.

## ST. LUCIA

Hydromet

\$68

## EASTERN CARIBBEAN

Energy resilience

\$1.5

## HAITI

Agriculture

\$27

## GUATEMALA

Urban

\$45

## COLOMBIA AND GUATEMALA

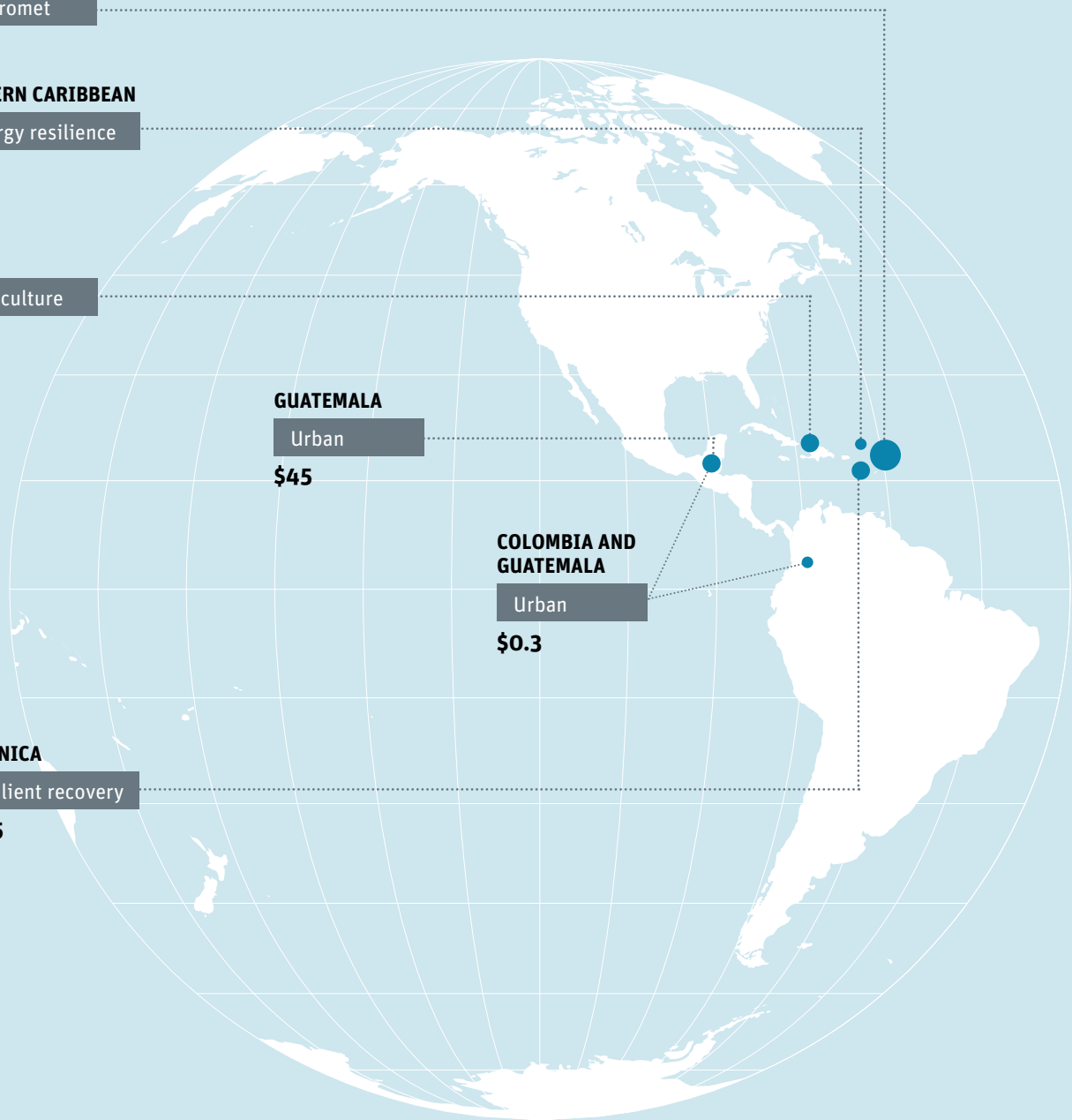
Urban

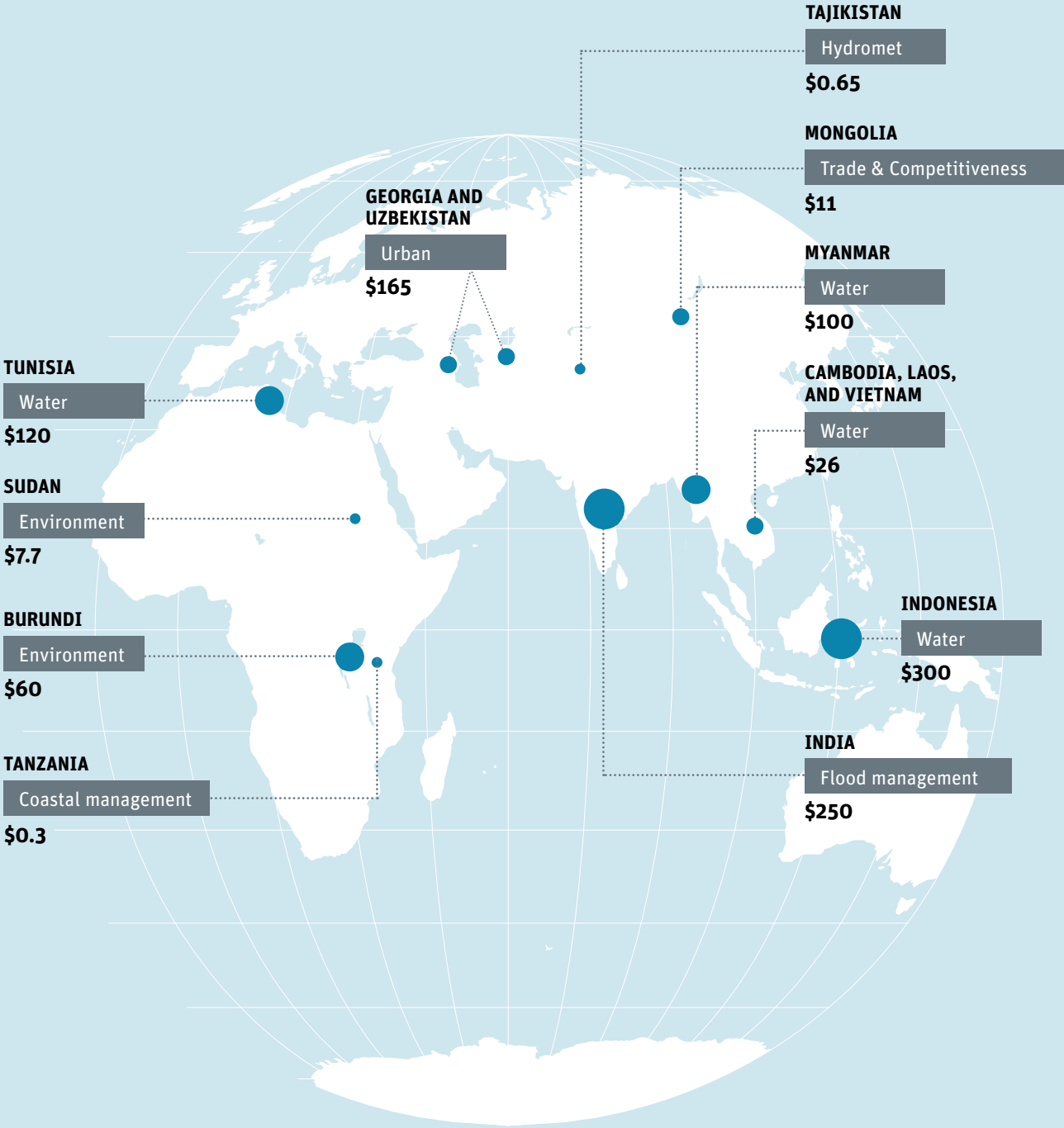
\$0.3

## DOMINICA

Resilient recovery

\$39.5





**\$1bn+**  
of investments supported  
through Just-in-Time  
assistance grants

## Enabling Resilient Recovery

Enabling countries to recover with greater resiliency after a disaster is a core priority for GFDRR. Since 2008, GFDRR has played a central role in coordinating rapid damage assessments, post-disaster needs assessments (PDNA), and post-disaster financing from the European Union (EU), World Bank, and United Nations Development Program (UNDP), as outlined in a tripartite agreement. But more recently, GFDRR along with its partners has been incentivizing governments to invest in contingency planning and preparedness before disasters, while maintaining its recovery support to governments after disasters.

### Building the preparedness of development partners

The momentum to invest in planning and preparedness is increasing not only as awareness grows but also as evidence of benefits from such investments become more apparent. This entails a range of activities that contribute to strengthening different aspects of recovery systems. In FY17, GFDRR, EU, and UNDP jointly organized seven trainings on PDNA and the Disaster Recovery Framework (DRF). A standardized concept note and agenda for all trainings was approved, which can be tailored and adapted to any regional and national contexts. These trainings were conducted at the regional level

for the Africa, Caribbean, and Pacific (ACP) Group of States and the Economic Community of Central African States and at the national level for Peru, Sudan, Tanzania, Thailand, Togo, and Uzbekistan, reaching a total of 490 participants.

To strengthen the World Bank's capacity to respond to countries affected by major natural disasters and other emergencies, GFDRR has developed new guidance to help task teams include Contingent Emergency Response Components (CERCs) in Bank projects. A CERC enables countries to gain rapid access to World Bank financing to respond to an eligible crisis or emergency. GFDRR set up a support desk to provide hands-on assistance on CERCs-related matters, along with a learning package that includes: (i) information sessions for managers and staff; (ii) an information session for teams working on World Bank investment projects; (iii) face-to-face clinics and an e-learning module; and (iv) a resource website.

### Sharing knowledge and strengthening partnerships

GFDRR, in collaboration with the EU and UNDP, continues to helping countries improve processes for post-disaster response by sharing worldwide experiences and lessons learned. GFDRR also continues to work with many countries on developing disaster recovery frameworks, for example, this past year with Mali. To scale up this effort, GFDRR recently launched the disaster recovery framework guide as part of its trainings; published guidance notes to provide detailed sectoral and thematic support for building back better, education, energy, health,

**490+**  
people trained in post-disaster  
assessment and recovery

housing, and social protection; and documented and shared the rapid damage assessment methodology that was used to assess the damages from Hurricane Matthew in Haiti in October 2016 and the Tropical Cyclone Enawo in Madagascar in March 2017. And, GFDRR continues to strengthen its partnerships on preparedness and recovery at the global and local levels by supporting the launch of the Global Preparedness Partnership. This partnership will help vulnerable countries reach a minimum level of preparedness to respond to disasters and other emergencies.

### Going forward

In the coming year, GFDRR will continue to provide assistance on post-disaster and conflict assessments as needed, including the development of innovative tools such as rapid assessments. To advance engagement with governments, support will continue to strengthen recovery systems. GFDRR will continue to develop disaster recovery frameworks, including a guide for local governments and civil society on their roles in recovery. GFDRR will promote contingent financing tools in at least three additional countries, and it will also activate a Just-In-Time support facility to accelerate recovery and to create a window for contingency planning through World Bank projects. In partnership with the EU, UNDP, and the World Bank, a key focus will be to disseminate good practices, including the launch of a recovery hub to share knowledge and lessons learned and to strengthen global recovery alliances and partnerships.

## In Focus Working in fragile countries

**G**FDRR continues to support fragile countries with weak governance systems to prepare for and respond to disasters. In FY17, GFDRR had active engagements in 27 fragile and conflict-affected countries, with over \$50 million in grant commitments. However, the nature of GFDRR's existing and potential engagements has been evolving over the past few years. This includes vulnerable and marginalized communities in fragile countries to build resilience to disasters; generating and collecting data on damage, loss, and needs in countries facing ongoing conflict and areas that have been difficult to access by international partners; and supporting the World Bank's engagements within the agenda.

In fragile countries, engaging communities to build back better is a necessity, but often a big challenge. Previously, GFDRR has supported engagements in Ethiopia and Kenya to help pastoral women sustain disaster resilient livelihoods. Similar activities were implemented in Papua New Guinea, where GFDRR helped convene multi-stakeholder dialogues between local communities, civil society, government, and private sector.

GFDRR continues to develop new methodologies and data tools by combining existing post-conflict and post-disaster assessment tools as well as remote assessment methodologies by using satellite imagery, social media analytics, data mining, and verification by local partners on the ground. In FY17, GFDRR financed the development and application of a rapid damage assessment methodology with the World Bank Group's Disaster-Resilience Analytics and Solutions group. This methodology was used to quickly assess the damages from Hurricane Matthew in Haiti in October 2016 and the Tropical Cyclone Enawo that hit Madagascar in March 2017. Furthermore, in Somalia, findings from the GFDRR-supported post-disaster

assessment on the impacts of the 2016/17 drought in Somalia were influential in the design of the \$50 million Somalia Emergency Drought Response and Recovery Project, particularly in informing which affected areas the project should focus on and on the choice of partners to implement the project based on comparative advantages, informed by the assessment's gap analysis.

Additionally, in collaboration with partners, GFDRR supported post-disaster needs assessment and disaster recovery framework trainings in April 2017 to enhance Sudan's capacity to assess and recover from natural disasters. The Central African Republic, Democratic Republic of the Congo, and Chad also received a regional training in PDNAs and disaster recovery frameworks in April 2017 in Libreville, Gabon. In order to strengthen its own capacity, GFDRR also brought on board a leadership and training specialist who will work to enhance awareness of this agenda as well as contribute to the development of the World Bank Group's Global Crisis Risk Management Platform.

Lastly, GFDRR plays a coordination role for different teams within the World Bank working on strengthening the resilience of fragile and conflict-affected states. For instance, many activities mentioned above are implemented in close coordination with the Fragility, Conflict and Violence team and the Social Protection team. As a global partnership, GFDRR's existing agreements and strong collaboration with international partners ensure that its contributions to risk reduction and recovery from crises are conducted in a way that complements the role of other international partners. This collaboration also allows that the role of the GFDRR within the wider international architecture remains focused and complementary to the role of other actors.







# FINANCING WINDOWS

GFDRR finances demand-driven technical assistance through development partners. While all donors contribute to a common multi-donor trust fund, dedicated financing is received from Japan, the European Union, and the Climate Risks and Early Warning Systems Initiative.

Photo credit: Joaquín Toro

# Multi-Donor Trust Fund

## FY17 Overview

**\$38.8m**  
committed

**42+**  
countries

**86**  
projects

The Multi-Donor Trust Fund (MDTF) is the primary financing window for the realization of GFDRR's mission to help build resilient societies that manage and adapt to emerging disaster and climate risks, and to contribute to the substantial reduction of disaster risk and losses. The Annual Work Plan approved by the Consultative Group (CG) provides strategic direction to the Secretariat for allocation of resources of the MDTF. Thus, the program funded through the MDTF is reflective of the full scope of expertise that GFDRR offers.

The MDTF pools funding from all GFDRR donors. This enables a coordinated approach for scaling up disaster resilience and reducing fragmentation of financing, enabling larger impacts. The MDTF provides support to finance the in-country engagements that: (i) mainstream DRM into sub-national, national, regional, and global development priorities; (ii) promote global dialogues and initiatives; and (iii) develop innovative tools and knowledge products.

**In-Country Engagements:** GFDRR implements most activities in countries and at the regional level. In FY17, grants from the MDTF supported over 40 countries to mainstream DRM in their investment and planning strategies. This financing also allowed GFDRR to provide specialized technical support to countries in its areas of engagements.

**Global Dialogues and Initiatives:** Through the MDTF, GFDRR engages actively in the Global Resilience Agenda and convenes stakeholders to scale up global action on resilience. In FY17, the MDTF financed GFDRR's engagement

in such international events as the UN Global Platform for Disaster Risk Reduction 2017 (GP17), the Third Edition of the World Reconstruction Conference (WRC3), the UN Conference on Housing and Sustainable Urban Development (Habitat III), and the Twenty second conference of parties (COP 22). Trainings for public officials were financed for modernizing hydromet systems, conducting post-disaster needs assessments, as well as understanding and using data and information for risk-informed planning and investments.

**Knowledge Products and Innovative Tools:** GFDRR, through its ability to convene and share knowledge and best practices, continues to lead within the global DRM community. In FY17, the MDTF financed the production of 60+ publications such as, "Unbreakable: Building Resilience of the Poor in the Face of Natural Disasters" and of innovative tools such as the Recovery Hub. With support from the MDTF, work also started on the nature-based solutions platform, expected to be launched in fiscal year 2018.

# The GFDRR Secretariat

The GFDRR Secretariat helps carry out GFDRR's mission by awarding and monitoring grants, and reporting on program results to donors and the Consultative Group (GFDRR's primary decision-making and advisory body).

Grants are awarded based on established criteria aligned with its operating principles. As such, a large part of GFDRR activities target interventions that inform larger development programs. Most resources are dedicated to in-country engagements that support on-the-ground implementation of the Sendai Framework for Disaster Risk Reduction

2015–2030. GFDRR grants also contribute to supporting countries achieve their commitments on the Sustainable Development Goals as well as the Paris Agreement.

The Secretariat also has thematic experts that help advance GFDRR's eight areas of engagement and to facilitate global cooperation. GFDRR's production of innovative tools and knowledge products is made possible by such experts, who oversee GFDRR grants and work alongside its 400 local, national, regional, and international partners.

## THE CONSULTATIVE GROUP

The Consultative Group (CG) is GFDRR's primary decision-making and advisory body and is composed of Members and Observers. The CG has a Chair, who is a representative of the World Bank Group, and a Co-chair, who is a Member selected for a one-year term by other Members. The CG meets twice a year to ensure coherence in discussion regarding GFDRR's current and future direction.

GFDRR's Members include countries, intergovernmental organizations, international financial institutions, and United Nations agencies that commit to contributing at least \$3 million or an equivalent amount over a three-year period to the Multi-Donor Trust Fund. To encourage the participation of developing countries as Members, the contribution threshold is lower, at \$500,000 over a three-year period. Similarly, developing countries that receive GFDRR support can be invited by the CG to serve as Non-Contributing Members for a one-year renewable term.

GFDRR's Observers include prospective Members, developing countries, civil society organizations, private sector organizations, and foundations, as agreed by the Consultative Group.

In FY17, GFDRR's CG met twice, once at the margins of COP22 in Marrakech to discuss the Facility's progress over the past year, and a second time in Zurich to plan for FY18. Over the course of the year, Switzerland served as co-chair, guiding the Facility's work program. A notable achievement under their leadership was GFDRR's Strategy 2018–2021, which was endorsed by the CG in Zurich. It was agreed that in FY18, GFDRR priorities will include scaling up efforts in resilience to climate change and in city resilience.

## ACP–EU Programs

### FY17 Overview

**\$2.65m**  
committed

**20+**  
countries

**5**  
projects

The European Union (EU) is a key partner of GFDRR and its largest donor, having contributed \$156 million under various programs since 2008. GFDRR is currently managing six EU-funded programs, three of which in close collaboration with the Secretariat of the ACP Group of States.<sup>6</sup>

The **ACP–EU Natural Disaster Risk Reduction (ACP–EU NDRR) Program** was launched in 2011 as an initiative of the ACP Group of States, with \$75.6 million in contributions from the EU. The ACP-EU NDRR Program aims to address natural hazard prevention, mitigation, and preparedness in ACP countries. In addition to implementing activities on the ground, the Program contributes

to developing knowledge-sharing and analytical work. As of FY17, the Program has implemented 87 projects equivalent to \$59.4 million, in more than 40 countries. Activities are implemented as:

- *Regional projects* strengthen regional and sub-regional cooperation to advance ACP countries' national DRR agendas.
- *Country projects* provide need-based and demand-driven TA for DRR and climate adaptation policy development and implementation, including the provision of technical advisory capacities in ACP countries.
- *Post-disaster and capacity-building activities* offer fast-track mechanisms that support ACP countries after a disaster, with rapid TA to build back better, bolster ex-ante capacities for PDNAs, and foster DRR mainstreaming in recovery planning.

The **ACP–EU Building Disaster Resilience in Sub-Saharan Africa (SSA) Program**, launched in 2015, has the overall objective to strengthen the resilience of SSA regions, countries, and communities to the impacts of natural disasters. It comprises five result areas implemented by the African Development Bank, African Union Commission, UNISDR, and GFDRR/WB which implements two of them, each worth \$22 million:

- The **African Regional Economic Communities (RECs) DRM Program (Result 2)** contributes to DRR coordination, planning, and policy advisory capacities of RECs, namely the Economic Community for Central African States; Economic Community of West African States; Intergovernmental Authority on Development, and Southern African Development Community, to support their respective member states and (sub-)regional programs. FY17 saw wide RECs' implication in leading policy and strategic dialogues, providing trainings and reinforcing their internal DRM structures.
- The **Africa Disaster Risk Financing Initiative (Result 5)** supports the development of multi-risk financing strategies to help African countries make informed decisions, improve financial response capacity post-disaster, and mitigate the socioeconomic, fiscal, and financial impact of disasters. In FY17, the Program has extended engagement in thirteen countries, with customized technical assistance in developing disaster risk financing policies, instruments and strategies.

<sup>6</sup> The ACP Group of States was created by the Georgetown Agreement in 1975; it comprises 48 African, 16 Caribbean, and 15 Pacific Island states: <http://www.acp.int>.

## Other EU-funded programs

Collaboration with the EU has expanded since 2014 with the following programs:

- **The Serbia National Disaster Risk Management Program:** Following the 2014 floods in the Balkans, a \$6.5 million project is supporting the Republic of Serbia to enhance disaster risk management and flood prevention systems by reducing existing flood risks, avoiding the creation of future flood risks, and responding more efficiently to disasters.
- **The Disaster Risk Financing Analytics project:** This \$6.4 million project was established in 2015 to help improve the understanding and increase capacity of governments to make informed decisions on disaster risk financing based on sound financial analysis.
- **The European Union–South Asia Capacity Building for Disaster Risk Management (EU–SAR DRM) Program:** This \$11 million EU-funded program was launched in 2015 to support hydromet service delivery and focus on enhancing capacity among regional bodies and the national disaster management centers, agencies, or appropriate disaster-focused counterparts.

### **GFDRR'S PARTNERSHIP WITH THE EUROPEAN UNION**

GFDRR and the EU continue to support the Climate and Disaster Risk Management Agenda at major international events, including (iterations of) the Conference of Parties, European Development Days, Understanding Risk Forum, and World Reconstruction Conference.

Further, the EU, UNDP, and GFDRR/World Bank are signatories to the 2008 Joint Declaration on Post-Crisis Assessments and Recovery Planning. This tripartite agreement aims at mobilizing partners and their resources to harmonize and to better coordinate post-crisis response frameworks. As such, the three have collaborated closely to carry out more than 50 post-disaster assessments since 2008 and to implement Disaster Recovery Frameworks. This tripartite collaboration was reaffirmed at the last World Reconstruction Conference (WRC3).

# Japan–World Bank Program

## for Mainstreaming Disaster Risk Management in Developing Countries

### FY17 Overview

**\$19.2m**  
committed

**11+**  
countries

**22**  
projects

The Japan–World Bank Program for Mainstreaming Disaster Risk Management in Developing Countries was launched in 2014 to help developing countries integrate DRM into national development planning and investment programs. Financed by a \$100 million contribution from the Ministry of Finance of Japan, the program is managed by GFDRR and implemented by the DRM Hub, Tokyo.

The program has two components:

- The **Country Program** provides technical assistance grants that inform, enable, and co-finance World Bank investments, engaging Japanese and global expertise on the ground. The program funds pilot projects along four pillars of ex-ante DRM: (i) risk identification; (ii) risk reduction;

(iii) preparedness and early warning; and (iv) financial protection. The DRM Hub, Tokyo supports innovative projects with the aim of influencing disaster resilient investment in new sectors, particularly related to quality infrastructure.

- The **Knowledge Program** connects developing countries with the knowledge, expertise, and technology solutions to build resilience to disaster and climate risks. To achieve this, the DRM Hub, Tokyo (i) develops knowledge products to meet developing country demand for expertise, best practices, and solutions in DRM and (ii) conducts knowledge exchanges, including technical knowledge exchanges, to build the capacity and awareness of public officials and World Bank teams implement high-quality DRM investments.

In FY17, the Japan–World Bank Program enabled engagements on resilient infrastructure and promoting risk-informed decisions to make policy:

- **Building Solutions at Scale for Resilient and Safer Schools.** The DRM Hub, Tokyo supported GFDRR’s Safer School engagements, bringing together experts from urban as well as education sectors. In FY17, the case study “Making Schools Resilient at Scale: The Case of Japan” documented the successful

collaboration of all of Japan’s schools to achieve seismic resilience standards. In Peru, analytic work, including a national seismic risk assessment of public school infrastructure, informed the design of a seismic vulnerability reduction program that was integrated into Peru’s first \$3.2 billion National School Infrastructure Plan. Moreover GFDRR and World Bank are helping Peru implement an incremental retrofitting approach for the first time in the country for the structural rehabilitation of 42,000 school buildings benefiting 2.2 million students.

- **Improving Disaster Preparedness in Armenia, the Kyrgyz Republic, and Tajikistan.** The DRM Hub, Tokyo facilitated a visit to Japan for the government representatives of Armenia, the Kyrgyz Republic, and Tajikistan in September 2016 to participate in Japan’s national disaster preparedness day training drills and to learn from Japanese experts to implement improved emergency and disaster drill exercises and apply mobile early warning. As a result, Armenia drafted a law to convene a nation-wide disaster simulation drill and to designate a national day on disaster preparedness. The Kyrgyz Republic and Tajikistan are drafting similar policies.

## Stakeholders convene to share knowledge on resilient transport systems

The GFDRR managed Japan–World Bank Program has been at the forefront of expanding the World Bank’s efforts in building resilient transport. In 2017, a newly established community of practice brought together the Knowledge and Country Program engagements and generated new value in the proposition.

In May 2017, the DRM Hub, Tokyo and the Resilient Transport community of practice hosted a week-long technical knowledge exchange (TKX) that convened developing country partners and World Bank project leads from 16 countries. In Japan, the challenges and lessons learned from large-scale disasters have been the driving force to continuously review and enhance the regulations, institutional frameworks, financing, staff capacity, and technology of advancing resilience in transport. The exchange tapped into this experience by inviting speakers from the public sector, private sector, academia, and civil society to share their lessons learned in relation to each of the life-cycle phases.

The Resilient Transport TKX also served as a platform for the launch of the new Road Geohazard Risk Management Handbook developed under the Knowledge Program of the

DRM Hub, Tokyo. The tool was presented alongside case studies of its application across federal, state, and municipal levels in Brazil and Serbia. The handbook itself urges a shift away from traditional and reactive approaches toward a multi-dimensional geohazard risk management approach. One that proactively incorporates people, the environment, hydrology, geology, and transportation infrastructure and can result in 60–70 percent life-cycle cost savings. The Road Geohazard Risk Management Toolkit also will be used for the Hub’s Resilient Transport Infrastructure Country Program. The toolkit currently is assisting Kenya, Lao PDR, Paraguay, Serbia, and Sri Lanka to increase the resilience of their transport sector interventions, primarily focusing on roads.

Furthermore, the DRM Hub, Tokyo is developing a Guidance Note and a case study on Japan to capture best practices in developing and operating resilient rails. With the Resilient Transport CoP, the Japan Program will continue to connect current and future World Bank transport investments with the information, tools, and technical expertise that exist in Japan and in many countries in resilient transport through its Country and Knowledge Programs.

### GFDRR’S PARTNERSHIP WITH JAPAN

Japan has been a strong partner of GFDRR since its inception in 2007. The Japan–World Bank Program for Mainstreaming Disaster Risk Management in Developing Countries has made it possible to bring Japanese expertise and knowledge in disaster resilience, quality infrastructure, and sustainable urban development to support in-country engagements.

Japanese ministries and agencies, especially the Japan International Cooperation Agency; the Ministry of Education, Culture, Science, and Technology (MEXT); and the Ministry of Land, Infrastructure, and Transport, and Tourism (MLIT), are central partners in the program, providing critical technical advice and strategic guidance.

Notably, contributions from MLIT have proven highly effective to GFDRR-driven engagements on the ground by enhancing the quality of the DRM Hub’s resilient infrastructure and urban resilience programs. The DRM Hub, Tokyo has deepened its network of Japanese Centers of Excellence in DRM. More than 280 Japanese expert contributors from public, private, and academic organizations participated in Hub events or were deployed to help developing countries address on-the-ground needs.

# CREWS: Climate Risks and Early Warning Systems Initiative

## FY17 Overview

**\$14m**  
committed

**19+**  
countries

**6**  
projects

The Climate Risks and Early Warning Systems (CREWS) Initiative, led and initiated by the French government, contributes to Target 7 of the Sendai Framework for DRR 2015–2030. It also lends to the DRR priority area of the Global Framework for Climate Services and supports the International Network on Multi-Hazard Early Warning Systems.

CREWS projects are implemented by the World Meteorological Organization (WMO), the UN Office for Disaster Risk Reduction (UNISDR), and the World Bank through a program managed by GFDRR, all supported by a Financial Intermediary Fund (FIF). The WMO provides Secretariat services and the World Bank serves as Trustee of the FIF.

The CREWS Initiative focuses on Least Developed Countries and Small Island Developing States. By funding technical assistance, the partnership strives to facilitate and leverage integrated investments at the national level to support regional and global programs, and to develop analytical and policy documents.

As of FY17, the CREWS Steering Committee approved six projects, three of which are implemented by the World Bank:<sup>7</sup>

- The **DR Congo Strengthening Hydro-Meteorological and Early Warning Services Project** aims to advance the national hydromet and early warning services by improving and disseminating weather forecasts through media (mostly in urban areas and along fluvial navigation channels) and aviation services. CREWS' \$3 million complement a \$5 million engagement from the Global Environment Facility and \$3 million from the ACP–EU NDRR Program.
- The **Mali Hydrological and Meteorological Services Modernization Project** aims to improve hydromet, early warning, and response systems and services in targeted areas. This funding complements a larger World Bank

investment, with \$22.7 million from the Green Climate Fund and \$8.25 million from International Development Association resources.

- The **Niger Strengthening Early Warning Services Project** aims to improve the food security early warning system and to establish flood and extreme weather warnings (mostly in urban areas and along Niger and Komadougou Rivers). The CREWS financing would expand the scope of World Bank DRM and Urban Development Project and the AfDB Climate Information Development and Forecasting Project.

Additional projects are in the pipeline (that is Papua New Guinea proposed by WMO) and regional projects for the Caribbean and Western Africa are under identification.

GFDRR has actively supported the CREWS Initiative since its inception. GFDRR facilitated the participation of World Bank senior management in CREWS sideline events to COP 22 in 2016, and co-organized with WMO the Multi-Hazard EWS Conference on the sidelines of the UN Global Platform for Disaster Risk Reduction in May 2017.

<sup>7</sup> The WMO is implementing approved projects in Burkina Faso and the Pacific region, while the UNISDR provided support to the least developed countries and small island states to participate in the UN Global Platform for Disaster Risk Reduction in Cancun, Mexico, in May 2017.



# Multi-Hazard Early Warning Systems (MHEWS) Conference

In FY17, GFDRR co-organized the Multi-Hazard Early Warning Systems (MHEWS) Conference in the margins of the 2017 DRR Global Platform, funded by CREWS. The conference gathered around 400 people from key development partners and donors to national DRM and hydromet agencies, academia, and the private sector. GFDRR co-led a session on investments in MHEWS that addressed questions like the sustainability of the investments in hydromet and EWS, an integrated approach to investments, service delivery models, and the role of the private sector in providing funding, knowledge, and technical solutions. It was discussed and concurred by all panel members and the general audience

that there is room and a need for better coordination between DRM/EWS and hydromet institutions at the national level. Institutional frameworks and service-delivery strengthening require attention and investments as much as observation and ICT infrastructure. Disaster management requires better national coordination, public and private sector partnerships, and better collaboration among development partners. Information flow and smooth coordination increase the value of investments and reduce fragmentation. How to maintain early warning systems that deliver critical social services in a timely and reliable manner was a special focus of the conference.

## Improve national weather and climate information and early warning services

Improving risk knowledge through identification of risks	<ul style="list-style-type: none"> <li>analyzing relevant natural hazards and related risks</li> <li>understanding vulnerable groups</li> </ul>
Strengthening capacity of National Meteorological and Hydrological Services	<ul style="list-style-type: none"> <li>developing the legal and regulatory frameworks</li> <li>training staff to improve products</li> </ul>
Modernizing hydrometeorological infrastructure	<ul style="list-style-type: none"> <li>the observing network</li> <li>data, information, and communication systems</li> <li>modeling and forecasting software</li> </ul>
Developing linkages with sectors and communities by tailoring services and products	<ul style="list-style-type: none"> <li>for decision-making in agriculture, health, transport, and emergency preparedness</li> </ul>
Improving dissemination and communication of actionable warnings	<ul style="list-style-type: none"> <li>consistent warning dissemination</li> <li>multiple communication channels</li> <li>tailored warnings</li> </ul>
Strengthening the ability to prepare for and respond to warnings	<ul style="list-style-type: none"> <li>operational protocols</li> <li>tailored education programs</li> <li>public awareness campaigns</li> </ul>

## Modernizing regional hydrometeorological centers

Strengthening the capacity and management to improve collaboration across borders	<ul style="list-style-type: none"> <li>impact-based forecasts and warnings from global and regional data and tools</li> <li>training for seasonal regional climate forums</li> </ul>
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## Integrate into global services and agendas

Improving access to and use of global products Supporting strategic development, project preparation and management, coordination, and service delivery	<ul style="list-style-type: none"> <li>meteorological, hydrological, climatic, and oceanographic data</li> <li>to address identified priority needs</li> </ul>
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# SPECIAL FEATURES

A young woman prints her palm on a wall during a tribute to the victims of Mexico's September 19, 2017 earthquake. Photo credit: Pedro PARDO/AFP/Getty Images



# Gender

**70%**  
of new grants were  
gender-informed

**E**mpowering women and mainstreaming gender is a key GFDRR operating principle in climate and disaster risk management and a critical component of effective DRM. In the last two fiscal years, GFDRR has made dedicated efforts to integrate gender equality into its portfolio through technical advice, capacity building, and knowledge products.

In FY16, GFDRR launched the Gender Action Plan 2016–2021 to accelerate its commitment to: (i) understanding and addressing the different needs of men and women in DRM investments and (ii) promoting women’s empowerment for broader resilience strengthening. Interventions began targeting knowledge, learning, and innovation and in programming, analytics, and advisory services. In FY17, GFDRR helped build institutional capacities and bring forward the contributions, partnerships, and priorities of women’s organizations in communities worldwide.

*Internationally*, GFDRR facilitated women representing grassroots organizations to participate in major policy dialogues at the Twenty-Second Conference of Parties and UN Global Platform for Disaster Risk Reduction 2017. At the Global Platform, 23 grassroots women leaders from 11 developing countries led discussions of national implementation, policy congruence, and decentralized risk reduction as related to implementing the Sendai Framework for Disaster Risk Reduction 2015–2030. Nearly half of these leaders were indigenous women from Central and South America.

*Institutionally*, GFDRR directed support to knowledge, learning, and innovation activities to build capacities, training World Bank and GFDRR staff not only to identify and analyze gender

issues but also to address these through the GFDRR portfolio and measure gender-differentiated impacts. GFDRR began developing—and expects to complete in early FY18—guidance to support World Bank teams on identifying entry points for the gender perspective in specific sectors of the GFDRR portfolio (for instance, in post-disaster needs assessments and early warning systems).

Finally, in FY17, GFDRR set up a new monitoring and evaluation framework, which includes specific indicators that will help measure the inclusion of gender equality and women’s empowerment in the GFDRR portfolio with greater detail.

## Gender in GFDRR’s portfolio

In FY17, 70 percent of GFDRR’s newly approved grants were gender-informed<sup>8</sup> and 55 percent of the newly approved grants had undertaken gender analysis or considered existing gender analysis to identify gaps between females and males in projects. Further, 39 percent of new grants act on their findings and 32 percent include indicators to measure the results of the proposed actions.

## Going forward

Gender equality and women’s empowerment will continue to be one of GFDRR’s key priorities going forward. The implementation of the Gender Action Plan is expected to accelerate in FY18 through additional capacity-building activities, sharing best practices, pooling expertise in gender and DRM, increasing technical advice for including gender in the design and implementation of projects, and strengthening monitoring and evaluation mechanisms to better track the progress made on enhancing gender equality and women’s empowerment in DRM investments.

<sup>8</sup> A grant is gender-informed if it has included a gender analysis, specific actions to address gender issues or indicators to measure the progress of actions to reduce gender gaps.

## Working with grassroots women and indigenous leaders

In May 2017, GFDRR played a key role in promoting grassroots women and indigenous leaders' participation in the UN Global Platform for Disaster Risk Reduction in Cancun, Mexico, bringing 23 grassroots and indigenous women leaders from 11 developing countries. This effort ensured that grassroots priorities, contributions, and partnerships for realizing the Sendai Framework for Disaster Risk Reduction 2015–2030 were included in the discussions of national implementation, policy congruence, and decentralized risk reduction.

Together with grassroots leaders, GFDRR co-organized a half-day preparatory Grassroots Academy on Community

Resilience. Community leaders shared practices on resilience building, partnering with governments and engaging in national policy dialogue. Next, a Community Practitioners Platform Caucus distilled and shared lessons learned with a broader international audience. Finally, an official side event, co-organized with the Community Practitioners Platform Caucus, Japan International Cooperation Agency, ActionAid, and others, focused on linking grassroots women's leadership on resilience to the Sustainable Development Goals. The events produced commitments and practical actions for strengthening the implementation of the Sendai Framework in partnership with local authorities and national agencies.

### **FIJI EMPOWERS WOMEN TO TACKLE CLIMATE AND DISASTER RISK MANAGEMENT**

In the last two years, GFDRR through its ACP–EU NDRR program financed and supported the Government of Fiji on a post-disaster needs assessment (PDNA) and a disaster recovery framework after Tropical Cyclone Winston (February 2016)—the first Category 5 cyclone to directly impact Fiji and the most intense tropical cyclone on record. Tropical Cyclone Winston caused widespread damage and destruction, impacting 62 percent of the total population (over half a million individuals). The PDNA included an assessment highlighting the gender-differentiated impacts of the cyclone and provided specific recommendations on gender. It also included a recovery and reconstruction needs estimate on gender and recommended targeted investment in women be an integral part of all the recovery strategies. The inclusive and pro-poor disaster recovery framework focused on addressing the needs of the most socioeconomically vulnerable individuals, groups, and communities. Women, because of existing gender inequalities and disempowerment, were identified as the largest disadvantaged group. The findings from the PDNA and disaster recovery framework are informing a Fiji's climate vulnerability assessment. The assessment builds on Fiji's response to Cyclone Winston and gender-related challenges such as the increase in violence against women and children in some evacuation centers and the lack of expertise in responding to psycho-social trauma. The findings will be presented at the Twenty-Third Conference of Parties.

## Analytical Work

### 4

#### household surveys

**N**atural risks keep people in poverty by preventing them from accumulating assets, dis-incentivizing them from making necessary investments in housing and businesses, and often forcing long-term impacts on their education and health. GFDRR has been supporting analytical work focused on better understanding the relationship between natural risk and poverty. Thanks to this work, it is now increasingly clear that ending poverty will not be possible without considering disaster risk and climate change and how it impacts the poor.

#### Measuring resilience at the national level

In FY17, GFDRR's analytical work focused on developing methodologies to measure and track progress on resilience building in countries, to assess the impact of DRM investments, and to prioritize actions to build resilience at the country level. To achieve this, GFDRR supported the development of a national-level indicator to measure socioeconomic resilience to river and coastal floods, storms, earthquakes, and tsunamis in 117 countries. The resilience indicator is part of GFDRR's broader effort to strengthen its capacity to conduct socioeconomic analysis that makes the business case for investing in disaster resilience, identifying priorities for action at the national level, and measuring the outcome of resilience-enhancing operations. The results of this analysis were published in the November 2016 flagship report, "Unbreakable: Building the Resilience of the Poor in the Face of Natural Disasters" and disseminated at the Twenty-second Conference of Parties (COP 22).

To identify policy options and priorities for intervention, the indicator is combined with a scorecard that shows how different policy changes (for example, enhanced social protection or better physical protection) would affect resilience and the overall risk level. The resilience indicator and policy scorecard enable development practitioners and policy-makers

to develop a country diagnostic on resilience, identify policy priorities, and assess the impact of those policies in terms of avoided losses.

#### Increasing access to information at the household level

To improve access to household data on poverty and exposure to risk and to support further analytical work, GFDRR is interacting with teams across the World Bank to standardize the collection of data on exposure. This effort will go a long way to promote comparability of exposure to risk across countries and hazards. In FY17, GFDRR began conducting household surveys to inform additional analytical work and to advance monitoring and evaluation methodologies with a pilot survey completed in Accra, Ghana. The analytical work will contribute to understanding the effects of exposure to risk on poverty and the length on recovery (if any) in relation to different hazards. In the context of monitoring and evaluation, this data will allow for a more complex analysis of the impact of resilience-building measures and help design appropriate indicators for the monitoring and assessment of DRM interventions.

#### Going forward

In FY18, GFDRR is committed to furthering its analytical work by making the resilience indicator model accessible as an online tool and by building on the ongoing work for country-level applications to improve the model. The online tool of the global resilience indicator will be an interactive platform that provides visualizations of the data. The platform will enable quantifications of expected annual loss to assets and well-being at the national level due to disasters and of the social resilience indicator derived from the ratio of those losses. Additionally, GFDRR will launch household surveys and follow-up surveys to (i) better understand the effects of exposure to risk on poverty and (ii) advance on monitoring and evaluation to assess DRM interventions.

## Well-being comes to the fore of measuring natural disaster impacts, and gives voice to the poor

**E**conomic losses from natural disasters totaled \$210 billion in 2016.<sup>9</sup> Such statements, all too commonplace, assess the severity of disasters by no other measure than the damage inflicted on buildings, infrastructure, and agricultural production. However, \$1 in losses does not mean the same thing to a rich person as it does to a poor person; the gravity of a \$210 billion loss depends on whom it affects. A focus on aggregate losses—the traditional approach to understanding the impact from disasters—restricts consideration to how disasters affect those wealthy enough to have assets to lose in the first place, and largely ignores the plight of poor people.

In FY17, GFDRR released “Unbreakable: Building the Resilience of the Poor in the Face of Natural Disasters,” a flagship report that moves beyond asset and production losses and shifts attention to how natural disasters affect people’s well-being. This approach provides a more nuanced view of natural disasters than reporting to-date and a perspective that takes fuller account of poor people’s vulnerabilities. Poor people suffer only a fraction of economic losses caused by disasters, but they bear a much larger brunt of disasters’ consequences.

Understanding the disproportionate vulnerability of poor people also makes the case for setting new intervention priorities to lessen the impact of natural disasters on the world’s poor, such as: (i) expanding financial inclusion; (ii) increasing access to disaster risk and health insurance; (iii) scaling up social protection and adaptive safety nets; (iii) maintaining contingent finance and reserve funds; and (iv) establishing universal access to early warning systems.

Since the launch at COP 22, “Unbreakable” has been presented in the United States and in 15 countries in Asia and Europe, and the Swiss Agency for Development and Cooperation and the Government of Netherlands organized global webinars with development partners. This outreach effort helped disseminate findings, triggered discussions with development partners, and collected feedback to prepare for the second phase of the “Unbreakable” work.

This report, which showcased the resilience indicator to measure socioeconomic resilience to natural risks in 117 countries, attracted considerable interest and requests for national and local level application. Since then, GFDRR has been working with countries to develop national-level applications of the resilience indicator—including in the Philippines and Sri Lanka. This work uses household surveys and national hazard databases and is, therefore, more detailed and precise than the global analysis. This will help governments identify vulnerable hot spots within the country or identify regional priorities for action. The Government of the Philippines announced that the “Unbreakable” model, called the “Socio-economic Resilience model”—the version specifically developed for the country—would be used by its economic development agency (NEDA) to assess investment projects.

Efforts to reduce disaster risk and poverty go hand in hand. Because disasters impoverish so many, DRM is inseparable from poverty reduction policy, and vice versa. As climate change magnifies natural hazards, and because protection infrastructure alone cannot eliminate risk, a more resilient population has never been more critical to breaking the cycle of disaster-induced poverty.

<sup>9</sup> 2016 Annual Global Climate and Catastrophe Report.

## Decision-Making under Deep Uncertainty

**N**ew and additional investments in infrastructure and development reduce the long-term vulnerability of the population only if it is designed to resist natural hazards, absorb climate change, and remain efficient despite changes in climatic and environmental conditions. Doing so, however, is difficult because of the lack of data and the deep uncertainty about the likelihood of extremely unlikely events and the effect of climate change on hazard distribution and frequency.

Fortunately, over the past few years, new methods have been developed to support decision-making under deep uncertainty. These approaches seek to identify robust decisions—that is, those that satisfy decision-makers’ multiple objectives in many plausible futures and over different time frames. They help evaluate the trade-offs among the options (using such measures of success as economic return, number of people benefiting, etc.) and help identify policies that reduce the vulnerability of future investments.

Often, these methodologies favor soft and flexible options, including for monitoring systems so that risks are assessed throughout the life of a project and solutions can be adjusted over time. They also encourage decision-makers to look beyond interventions within a sector and to combine prevention and reactive actions within a consistent strategy.

GFDRR is supporting the World Bank to pilot these methodologies, to good end. Positive outcomes include water supply in Lima, flood risk management in Ho Chi Minh City, nature-based solutions and wetlands in Colombo, hydropower investment in Nepal, and road network resilience in Peru and Nepal. These pilots provide strong evidence for continued investment in this methodology.

The transport pilot in Mozambique illustrates how decision-making under uncertainty unfolds in practice. The pilot was designed to address questions around helping countries improve the resilience of their transport networks in a context of scarce

resources and rising climate uncertainty. How countries could increase maintenance or invest in bigger culverts and elevating roads; and how they can decide between building “redundant” roads versus ensuring that people have alternative routes if the main links are disrupted.

In addressing these questions, the first step is to identify the most critical road segments in the transport network by simulating the consequences of removing one transport link from a wider network (such as a bridge or road) and evaluating the potential impact on users’ travel cost and time. The next step is to assess the vulnerability of each of these links and the likelihood of their disruption, in various climate and socioeconomic scenarios. Finally, for each critical link, a “stress-test” is conducted to assess and, if necessary, increase the network’s resilience, by calculating the economic performance across a wide range of conditions.

Importantly, in Mozambique, factoring climate risk into the economic analysis of projects could change the prioritization of a portfolio and allow projects initially neglected to receive funds for completion or implementation. This approach allows partner countries to choose robust options among pre-defined projects and to spend their scarce resources in a more efficient way. Based on the successful pilots, GFDRR will scale up its analysis on the resilience of transport networks in Kenya and Zambia in Africa; Laos in East Asia Pacific; the Balkan countries and Tajikistan in Europe and Central Asia; Ecuador, Paraguay, and Peru in Latin America; Afghanistan, India, and Sri Lanka in South Asia.

GFDRR, recognizing the potential of this methodology, is working alongside the World Bank to develop and train development practitioners to make decisions under deep uncertainty through knowledge sharing and knowledge management. This will include the development of an e-learning course for multi-lateral development banks, including the World Bank, and for developing countries. The e-learning module will guide development practitioners to perform economic analysis for projects under climate uncertainty and to identify the most robust investment options.



# Different state-of-the-art models can give very different answers







# EVENTS AND PUBLICATIONS

GFDRR actively engages in global dialogue and works with partners to ensure that the resilience agenda remains central to global policy discussions.



**MARRAKECH COP22|CMP12**  
UN CLIMATE CHANGE CONFERENCE 2016

## COP 22—the “Implementation” COP

The Twenty-Second Conference of the Parties (COP 22) to the United Nations Framework Convention on Climate Change took place in Marrakech, Morocco, from November 8 to 18, 2016. One year after the landmark Paris Agreement, which became effective four days before the conference. COP 22 was quickly nicknamed the “Implementation COP” and focused on how to translate the principles approved in Paris into processes and implementation.

The Moroccan leadership also made it an “Adaptation COP,” targeting adaptation in the most vulnerable countries, especially in Africa. Negotiations included discussions on: (i) the future of the Adaptation Fund (created under the Kyoto Framework); (ii) countries reporting on their adaptation actions (the “Adaptation Communications”); (iii) indicators and metrics to measure adaptation finance; and (iv) creation of a five-year Work Plan on loss and damage (that is, how to deal with climate change impacts that exceed adaptation capacity).

GFDRR was a visible partner, advocating for the scale-up of climate action and showcasing results achieved through investment in climate and disaster risk management. GFDRR and its partner network co-organized 12 side events on such topics as building climate-change resilience in small island states, scaling up cities’ resilience, fostering

community-based resilience, and deepening financial protection.

On the sidelines of COP 22, GFDRR organized its Fall 2016 Consultative Group meeting, bringing together climate and humanitarian experts to discuss, among other topics, the importance of integrating the resilience to climate change into all development. The Climate Risk and Early Warning Systems (CREWS) Initiative held its second Steering Committee meeting; the committee approved the initiative’s first five projects in Burkina Faso, the Democratic Republic of Congo, Mali, and the Pacific region.

GFDRR received a pledge of \$22 million from Germany to support the implementation of a major new initiative—the InsuResilience Global Partnership—which will rapidly scale up financial protection through insurance and other financial instruments. The InsuResilience Global Partnership aims to increase access to direct or indirect insurance coverage against the impacts of climate change for 400 million of the most vulnerable people in developing countries by 2020. GFDRR also co-organized the Development and Climate Days, leading sessions on adaptive social protection and on mobility and displacement. The sessions presented experiences from Fiji, Somalia, and the International Organization of Migration. Lastly, GFDRR participated in a workshop

on adaptation finance and launched its flagship reports, “Unbreakable – Building the Resilience of the Poor in the Face of Natural Disasters” and “Climate and Disaster Resilience Financing in Small Island States.” To support the implementation of the Paris Agreement, the Nationally Determined Contributions Partnership (championed by the World Bank) was launched. This partnership brings together 33 countries and 9 international institutions to strengthen institutional coordination, knowledge transfer, and capacity building. GFDRR will continue to support the implementation of the Paris Agreement providing partners with specialized expertise on decision-making under climate uncertainty, new technologies, and nature-based solutions.

GFDRR is working with partners to integrate adaptation into the 2050 Pathways Platform Agenda. Ethiopia, Peru, and Norway were among 22 countries, 15 cities, and nearly 200 businesses backing the platform (championed by French envoy Laurence Tubiana). Initially focused on mitigation, the 2050 Pathways Platform offers GFDRR and others an opportunity to engage with countries on the long-term challenges related to adaptation and risk management, such as urban planning, large-scale infrastructure in transport or energy, and forestry and natural resources management.



# Global Platform for Disaster Risk Reduction 2017

The UN Global Platform for Disaster Risk Reduction 2017 (GP2017) was held May 21–26 in Cancun, Mexico. As a biennial forum that facilitates information flow, discussion on the latest developments, knowledge-exchange, and partnership-building across developing sectors, the platform’s objective is to review progress on the implementation of international instruments to reduce the risk of disaster, especially the Sendai Framework for Disaster Risk Reduction 2015–2030. This past year, GFDRR led the World Bank’s delegation of DRM specialists to GP2017. Hosted by UN Office for Disaster Risk Reduction and the Government of Mexico, the forum was attended by 5,000 stakeholders from more than 180 countries committed to reducing disaster risk and building the resilience of communities, countries, and regions.

GFDRR has cultivated an ecosystem of partners unsurpassed in the DRM field, and the ecosystem was on exhibit at GP2017:

- GFDRR, the World Bank, and the United Nations (UN) co-organized the Second Meeting of the Network of Practitioners on Resilience to Climate and Disaster Risk in Small Island States (May 21–23), which brought together 80 practitioners from 34 small island states for

peer-to-peer knowledge sharing and for participating in the main conference—giving greater voice to this constituency.

- Along with grassroots leaders, GFDRR co-organized the Grassroots Academy on Community Resilience, a Community Practitioners Platform Caucus, and a side event on Institutionalizing Grassroots Women’s Leadership for Greater Resilience. GFDRR supported the participation of 23 grassroots and indigenous women leaders from 11 developing countries. Without GFDRR support, there would have been very little representation or engagement of grassroots community leaders in GP2017 activities.
- Led by WMO, GFDRR co-organized the Investments in Multi-Hazard Early Warning Systems (May 23) for the Multi-Hazard Early Warning Conference on the sidelines of GP2017, hosted by the Government of Mexico, focusing on channeling integrated investments to strengthen the institutional frameworks and service delivery of national DRM and hydro-meteorological agencies.
- Supporting a foundational planning meeting for the Global Preparedness Partnership among the V20 group of 48 climate-vulnerable countries, four UN agencies, the World Bank,

GFDRR, and associated partners (Global Network of Civil Society Organizations for Disaster Reduction, International Federation of Red Cross and Red Crescent Societies and UN Office for Project Services) to review the rationale and development of the Global Preparedness Partnership, its current principles and procedures, and guidance on applying for the partnership’s support.

- Co-organizing consultations and side events on: Priority 1 of the Sendai Framework; Water and disasters; Enhancing urban resilience; Partnering for risk-informed development; and, Inclusive disaster risk management: Persons with disabilities and elders.

GFDRR and World Bank engagements at the GP2017 led to notable outcomes. For example, the Armenian Minister of Emergency Situations officially requested support from the World Bank to strengthen Armenia’s hydro-meteorological (hydromet) and early warning systems. As a first step, the World Bank will assess the ministry’s hydromet needs and capacities, including readiness to modernize early warning. And, conversations with Latin American representatives indicate an increasing interest in urban resilience at the national and sub-national levels in Brazil, Guatemala, and Honduras.

***Good development, which is disaster and climate-risk informed, can help address all three challenges—poverty, vulnerability, and disaster risk—and reduce the impacts of disasters on development gains by 80 percent or more.***

— **Laura Tuck**, Vice President for Sustainable Development, The World Bank

# PROMOTING RESILIENCE THROUGH POST-CRISIS RECOVERY

World Reconstruction Conference 3



## OPENING CEREMONY: PROMOTING RESILIENCE THROUGH POST-CRISIS RECOVERY

World Reconstruction Conference 3

AN IMPERATIVE FOR SUSTAINABLE DEVELOPMENT





# World Reconstruction Conference



Every three years, the World Reconstruction Conference meets to identify effective and forward-looking approaches to achieve resilient post-crisis recovery. The participants, since its founding in 2011, have been working to mainstream climate and disaster risk reduction, fragility, and conflict considerations in the reconstruction process.

From June 6 to 8, 2017, more than 500 participants from civil society, national and local governments, academia, the private sector, and international organizations gathered in Brussels, Belgium, for the Third Edition of the World Reconstruction Conference (WRC3). They addressed the role of post-crisis recovery and reconstruction for resilience building and shared experiences with a view to advance the implementation of the Sendai Framework for Disaster Risk Reduction 2015–2030.

The conference was co-organized by the African, Caribbean, and Pacific (ACP) Group of States; the EU; UNDP; World Bank; and GFDRR. It hosted 29 sessions organized around four main themes: (i) recovery interventions; (ii) recovery in conflict and fragile situations; (iii) recovery preparedness; and (iv) leveraging political consensus on Priority 4 of the Sendai Framework.<sup>10</sup> The conference also included special sessions on Nepal and Somalia.

The conference was followed by the ACP Day on June 9, which was attended by over 70 ACP policy-makers and development partners to discuss the GFDRR-implemented ACP–EU Natural Disaster Risk Reduction Program. Other events included workshops and consultations on building regulations for resilience, the Catastrophe Deferred Drawdown Option, the draft Local Disaster Recovery Framework Guide, and private sector support for strengthening civil protection systems.

The WRC3 Communique highlighted the following messages:

- Resilient recovery is an imperative for sustainable development.
- Situations of conflict and fragility require special attention in recovery processes.
- Preparing for recovery pays off.
- Better prepared communities recover faster.
- Women’s participation as actors in recovery is essential for building back better.
- Cultural heritage is a central element of resilient recovery and reconstruction.
- The potential for partnering with the private sector should especially be pursued.

## Focus Day on Post-Disaster Response and Recovery Frameworks

GFDRR capitalized on the many delegates from the ACP Group of States at WRC3 to organize a “Focus Day” on lessons learned from post disaster response in ACP countries in the frame of the ACP–EU Natural Disaster Risk Reduction (NDRR) Program. The purpose was to promote an intra-ACP knowledge exchange of best practices and lessons learned on post-disaster response in ACP countries since the inception of the Program in 2011. Hosted on June 9, 2017 by the ACP Secretariat, the Focus Day allowed delegates to better understand the purpose and process of post-disaster needs assessments and disaster recovery frameworks. The event highlighted the impact of the ACP–EU NDRR Program, which helps build country and regional capacities and has leveraged nearly \$1 billion since its inception. Country delegates indicated the ACP–EU NDRR Program can adapt flexibly to country needs when conducting PDNAs, rapid assessments, disaster risk frameworks, and capacity-building activities.

<sup>10</sup> Priority 4. Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation, and reconstruction.

# Summary of events

## OCTOBER 2016

### **Hard Talk – Is Insurance the Answer for Building Resilience to Climate Change?”**

GFDRR partnered with Germany’s Ministry of Finance for a high-level panel discussion on how insurance countries increasingly vulnerable to a changing climate. Held on the sidelines of the World Bank–IMF Annual Meetings in Washington D.C., the October 7 event was part of G7 InsuResilience Initiative. Soon after the event, Germany made a new contribution of €20 million to GFDRR’s Disaster Risk Financing and Insurance Program. [gfdrr.org/hardtalk](http://gfdrr.org/hardtalk)

### **UN Conference on Housing and Sustainable Urban Development (Habitat III)**

GFDRR and the World Bank launched the flagship Investing in Urban Resilience report and helped shape several sessions at this major international conference which gathered more than 30,000 people from 167 countries in Quito, Ecuador, October 17–20. A global commitment was made to sustainable urbanization, with member states adopting the New Urban Agenda, which aims to guide the development of inclusive, resilient cities. [gfdrr.org/habitat3](http://gfdrr.org/habitat3)

## NOVEMBER

### **Twenty-Second Conference of the Parties (COP 22)**

At this year’s COP, GFDRR released its flagship report “Unbreakable: Building the Resilience of the Poor in the Face of Natural Disasters,” highlighting the intersection of poverty and natural disasters in the context of a changing climate. GFDRR also partnered on high-level events on topics like early warning, resilient cities, and resilience of small island states. COP 22 took place from November 7 to 18, 2016, in Marrakech, Morocco, laying the groundwork for execution of the landmark Paris climate accord. Countries affirmed their commitment to its “full implementation” with the signing of the Marrakech Action Proclamation.

### **Fall Consultative Group Meeting**

The meeting took place in Marrakech, Morocco, on the sidelines of COP 22. The group discussed GFDRR priorities, including scaling up GFDRR’s program on climate adaptation, progress on the inclusive Community Resilience Agenda and gender action plan, and approaches to building resilient cities.

## JANUARY 2017

### **A Roadmap for Safer Schools**

The Safer Schools Initiative hosted a two-day workshop on January 30–31 in London, United Kingdom. Attended by more than 50 officials from around the world, the workshop focused on the integration of risk considerations into education infrastructure. It also launched two new reports, including the Roadmap for Safer Schools and, “Making Schools Resilient at Scale: The Case of Japan.” [gfdrr.org/event-a-roadmap-for-safer-schools](http://gfdrr.org/event-a-roadmap-for-safer-schools)

## FEBRUARY

### **Second International Conference on Sustainable Development through Quality Infrastructure Investment (QII)**

The Tokyo DRM Hub moderated a session on DRM at the QII conference in Tokyo, Japan, on February 3. The session, part of a broader conference co-organized by Japan and the World Bank, served as a forum for around 120 participants from multiple sectors to exchange good practices and opportunities in integrating DRM with infrastructure investments.

**MARCH****Understanding Risk Vancouver**

From March 29–31, the Understanding Risk Community supported a local spinoff event in Vancouver, Canada. The event focused on actionable strategies to reduce earthquake and flood risk in British Columbia. The independent organization of this event by local counterparts spoke to the reach of the UR Community at large and its growth as a self-supporting organization. [understandrisk.org/event/ur-vancouver/](http://understandrisk.org/event/ur-vancouver/)

**InterMET Asia 2017**

GFDRR hosted a special session on public and private sector collaboration at the InterMET Asia conference on March 23 in Singapore. The annual conference serves as the biggest marketplace for public and private providers of weather and climate services. As a next step, GFDRR is developing recommendations for continued dialogue between public and private sector actors.

**APRIL****Spring 2017 Consultative Group Meeting**

The meeting was hosted by Switzerland in Zurich (April 5–7) and kicked off with a Knowledge Partnership Day on urban resilience. The new GFDRR Strategy 2018–21 and Work Plan 2018 were presented. Discussion focused on GFDRR priorities, including deepening engagement on resilience to climate change, scaling up engagement on city resilience, and strengthening the monitoring and evaluation framework.

**MAY****UN Global Platform for Disaster Risk Reduction 2017**

During May 22–26, GFDRR joined more than 5,000 participants from over 180 countries in Cancun, Mexico, for the UNISDR-organized biennial Global Platform. GFDRR contributed substantively to the platform by co-hosting events, including two pre-conferences on hydromet and small island states. GFDRR experts spoke at events and contributed blogs on such topics as housing reconstruction, water management, and resilient cities.

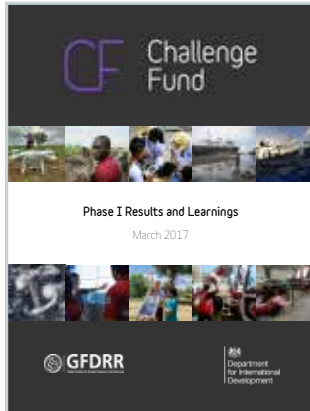
**Understanding Risk Tanzania**

GFDRR's Understanding Risk team supported a joint DfID–World Bank conference on urban resilience and green urban development in Dar es Salaam, Tanzania, from May 31 to June 2. The event introduced participants to the broad portfolio of urban resilience projects under the Tanzania Urban Resilience Program, which supports the Government of Tanzania efforts to improve resilience to climate and disaster risk. [understandrisk.org/event/tanzania2017/](http://understandrisk.org/event/tanzania2017/)

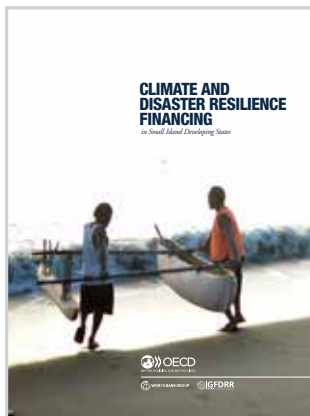
**JUNE****Third Edition of the World Reconstruction Conference (WRC3)**

More than 500 policy-makers and practitioners from across public and private sectors gathered in Brussels, Belgium, June 6–8, to discuss best practices and lessons on post-disaster recovery. Specific themes explored included recovery preparedness and recovery in fragile and conflict contexts. Convened by GFDRR; the European Union; UN Development Program; and the African, Caribbean, and Pacific Group of States, WRC3 also launched the Recovery Hub, an innovative online tool for recovery guidance. [gfdr.org/wrc3](http://gfdr.org/wrc3)

## Key publications

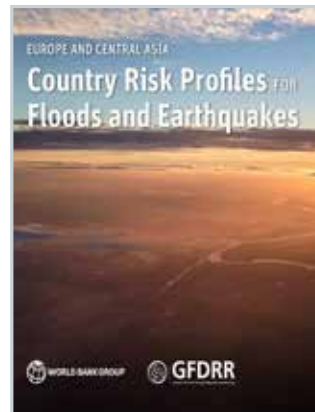


**Challenge Fund – Phase I Results and Learning:** Documents milestones, progress to date, and lessons from the Challenge Fund (CF), a competitive initiative to deliver an innovative demand-led toolkit to support risk identification and decision-making. Managed by GFDRR, the Challenge Fund is supported by the Science for Humanitarian Emergencies and Resilience Project of the U.K. Department for International Development.

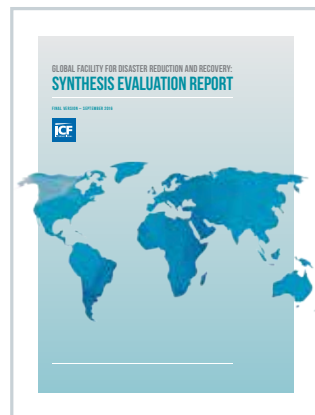


**Climate and Disaster Resilience Financing in Small Island States:** (GFDRR/World Bank/ OECD): Attempts for the first time to quantify the flow and patterns of concessional finance in support of climate and disaster

resilience in SIDS; and aims to inform policy and decision-makers, in both SIDS-recipient governments and among funding providers, and to promote more effective provision and use of financing.

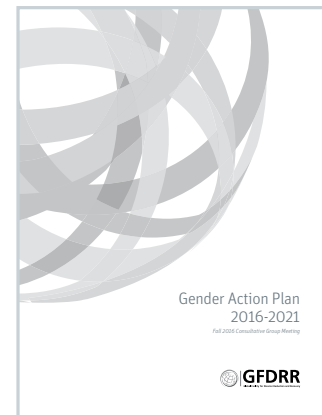


**Europe and Central Asia Country Risk Profiles for Floods and Earthquakes:** Examines current and future trends in earthquake and flood risks for countries across the Europe and Central Asia Region; models the disaster risks for each country under current conditions and future risks by considering risk drivers such as changes in climatic scenarios or patterns of socioeconomic development.



**GFDRR Synthesis Evaluation Report:** Consolidates findings and recommendations of two recent

independent evaluations of GFDRR; identifies approaches to strengthen results measurement, looking at GFDRR's results at the output, intermediate outcome, outcome, and impact levels as well as how GFDRR informs larger investments by the World Bank and other partners.

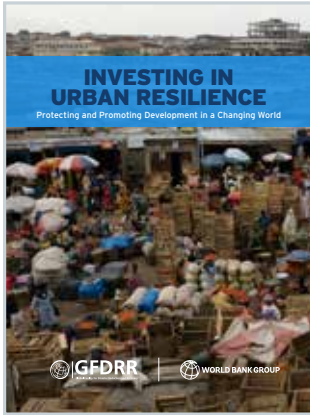


**Gender Action Plan:** The gender strategy targets two critical aspects of gender and DRM: (i) understanding and addressing the different needs of men and women in DRM investments; and (ii) promoting women's empowerment for broader resilience strengthening.



**ISMEP Success Stories:** Commemorates 10 years of implementation of the Istanbul Seismic Risk Mitigation and Emergency Preparedness Project

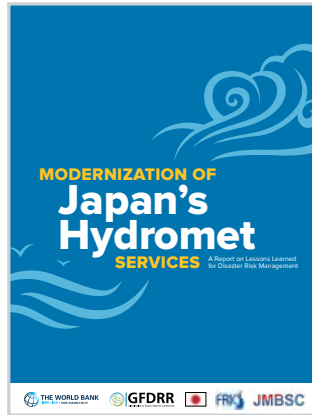
(ISMEP), prepared by the World Bank and the Government of Turkey, with support from GFDRR, in the aftermath of the devastating 1999 Marmara Earthquake.



**Investing in Urban Resilience: Protecting and Promoting Development in a Changing World:** Focuses on the need for investment in rapidly growing urban centers, how cities can take action to build resilience, and ways the World Bank and GFDRR can support cities' efforts.



**Making Schools Resilient at Scale: The Case of Japan:** Shares knowledge from this program, through GFDRR, with developing countries. Since Japan's program accelerated in 2003, the share of earthquake-resistant public elementary and junior high schools has increased from under half of schools in 2002 to over 95 percent in April 2015.



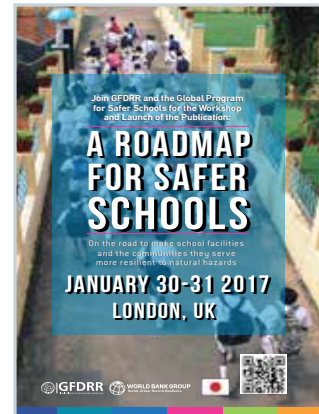
**Modernization of Japan's Hydromet Services: A Report on Lessons Learned for Disaster Risk Management (Summary Report):** Provides policy and decision-makers with an understanding of the fundamental operations of weather, climate, and hydrological services, and consequently target effective funding, in particular to developing countries.



**OpenDRI & GeoNode: A Case Study for Institutional Investments in Open Source:** Examines the history of the GeoNode software project, tracing GFDRR's contribution to the project's success; looks at the technical and social aspects of creating and participating in an open source ecosystem, including OpenDRI's investment strategy to encourage institutional investment by non- and for-profit organizations.



**Reviewing the Impact of Capacity Building in GFDRR:** Assesses the effectiveness of GFDRR's capacity-building activities, reviewing projects active in fiscal 2014 and 2015 (FY14 and FY15); GFDRR devotes up to 24 percent of its resources to capacity-building efforts.



**Roadmap for Safer Schools:** Promotes a long-term systematic approach to improving the safety of school infrastructure at risk from natural hazards.

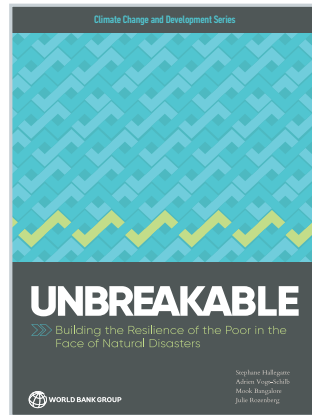
These and other GFDRR publications are available here:

[https://www.gfdr.org/sites/default/files/publication/Pub\\_Catalogue%20November%202017.pdf](https://www.gfdr.org/sites/default/files/publication/Pub_Catalogue%20November%202017.pdf)

# Key publications



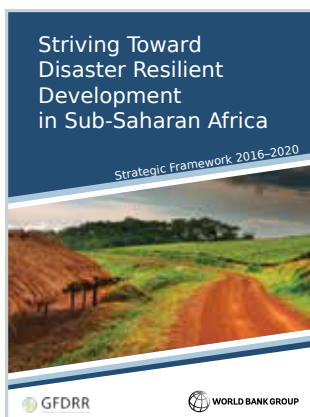
**Sovereign Disaster Risk Financing in Middle Income Countries:** Examines promising outcomes from a partnership between Switzerland’s State Secretariat for Economic Affairs and the World Bank Disaster Risk Financing and Insurance Program to support middle income countries in strengthening their financial resilience against natural disasters.



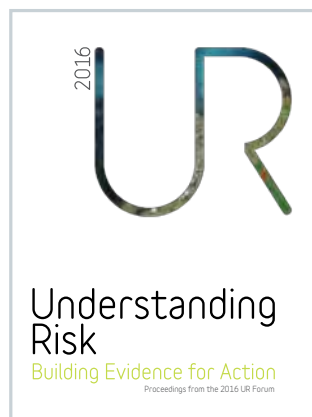
**Unbreakable: Building the Resilience of the Poor in the Face of Natural Disasters:** (flagship analytical report): Looks at the impact of extreme natural disasters and climate change on global poverty; this new research warns that the combined human and economic impacts of extreme weather on poverty are far more devastating than previously understood.



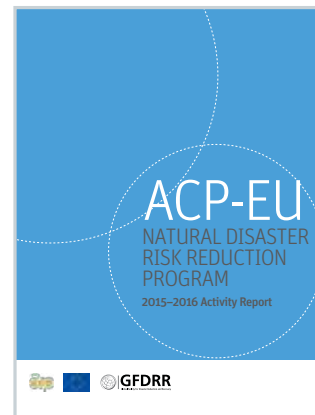
**Understanding Risk (UR) Forum Evaluation:** Evaluation of UR Forums, aimed at informing and improving the work of the Forum.



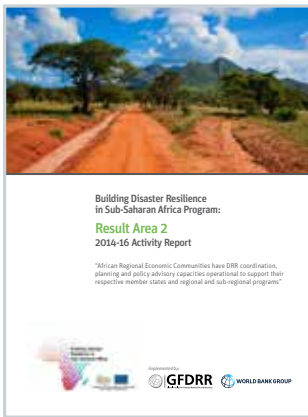
**Striving toward Disaster-Resilient Development in Sub-Saharan Africa:** Presents a strategic framework to programmatically approach and orient Africa toward climate- and disaster-resilient development in 2016–20.



**Understanding Risk: Building Evidence for Action—Proceedings from the 2016 UR Forum:** Presents findings from UR2016, “Building Evidence for Action,” held in Venice, Italy, from May 16 to 20, 2016; every iteration of the UR Forum has produced new ideas and partnerships that have improved risk assessments and helped to integrate them into policy and development planning.



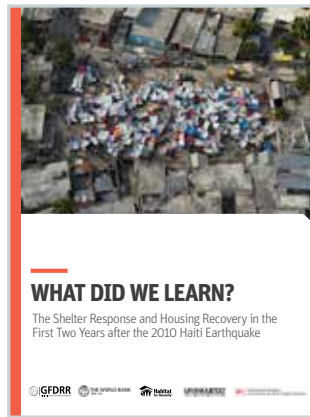
**2015-2016 ACP-EU NDRR Activity Report:** The 2015-16 Activity Report of the ACP-EU NDRR showcases the Program’s support to more than 40 countries in Africa, the Caribbean and the Pacific in building their resilience to natural hazards and CCA while also featuring highlights on lessons-learned from specific projects in Malawi, Belize and Timor Leste.



**2014-2016 Result Area 2 Activity Report:** The first Activity Report of the Result 2 - African Regional Economic Communities (RECs) DRM Program for the period 2014-16 showcases how RECs are supported to develop coordination, planning, and policy advisory capacities to support their Member States.



**2014-2016 Africa Disaster Risk Financing Initiative Activity Report:** The first Activity Report of the Africa Disaster Risk Financing (ADRF) Initiative for the period of August 2014 to June 2016 gives an overview of the ADRF Initiative's achievements and highlights to date and identifies upcoming priorities and challenges.



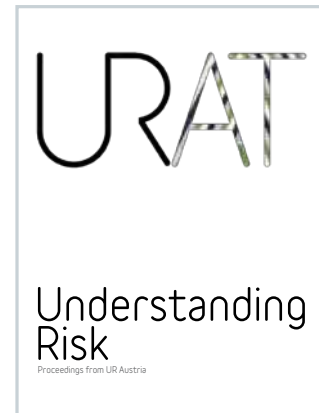
**What Did We Learn? The Shelter Response and Housing Recovery in the First Two Years after the 2010 Haiti Earthquake:** This report on lessons learnt from Haiti housing recovery is meant to help countries and recovery agencies understand how vulnerability not only contributes to disasters but complicates recovery. It provides advice to governments on more effectively directing its partners and better managing housing recovery.



**Preparedness Map for Community Resilience: Earthquakes – The Experience of Japan:** This manual focuses on Japanese Seismic Preparedness Maps, one of the tools used in Japan to communicate earthquake risks for better preparedness at the community level. Produced by local governments, these maps aim to help communities prepare for future potential seismic events with information on hazard and risk levels, estimated damages, and evacuation routes and sites.



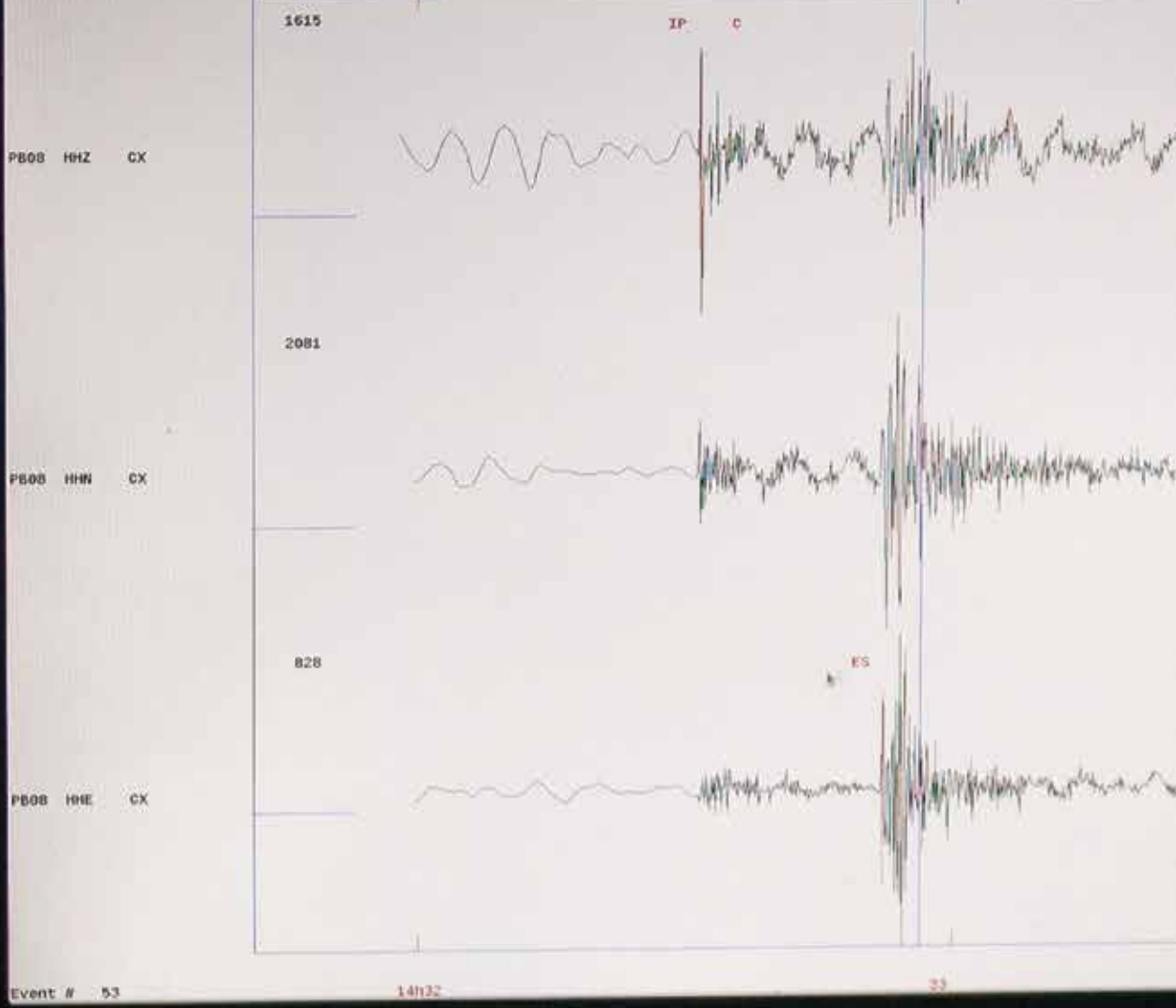
**Disaster Risk Country Profiles series:** GFDRR co-produced a series of risk profiles for more than a dozen countries in Africa, Latin America and the Caribbean, and South Asia. The profiles break down each country's risk geographically and by hazard, providing a detailed picture of the economic and social risks that countries face.



**Understanding Risk: Proceedings from UR Austria:** During January 20th and 21st of 2016, the city of Vienna hosted the first Understanding Risk Conference for a developed country, URAT. The conference brought together for the first time policy makers, risk modelers, insurance, risk communicators, academia, and practitioners (private and public sectors) from all the corners of Austria to meet, learn, and share best practices in disaster risk management and adaptation to climate change.

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A person's silhouette is shown in profile, looking at a computer monitor. The monitor displays a line graph with three distinct horizontal sections, each containing a fluctuating line. The background is dark, and the monitor's light illuminates the person's face and the text on the screen.

# ANNEXES

These annexes provide information about GFDRR's portfolio of activities and financial health. This includes information on donor resources available, commitments, disbursements, portfolio of projects, and monitoring of results. It also includes financial statements for the period of July 1, 2016 to June 30, 2017.

# Resources

## Contributions to Funding Windows

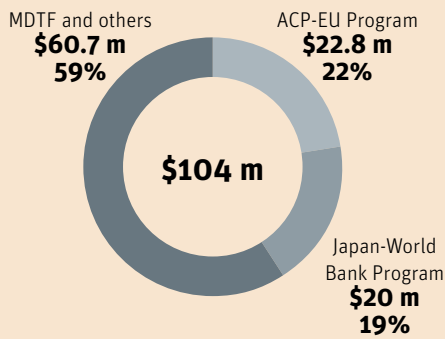
In FY17, 12 GFDRR donors contributed a total of \$103.6 million,<sup>1</sup> in support of GFDRR’s broad-based DRM investment program.<sup>2</sup> The total contributions fulfilled the FY17 funding target of \$90 million across the three main funding windows: GFDRR’s Multi-Donor Trust Fund (MDTF); the Japan–World Bank Program for Mainstreaming Disaster Risk Management in Developing Countries; and the ACP–European Union (EU) Program (see Figure 1).

Core funding into the MDTF this fiscal year amounted to \$60.7 million, or 59 percent of the overall contributions, as compared to \$32.6 million in FY16 (see Figure 2). During the same period, contributions of \$42.8 million were received into the two special programs, representing 41 percent of contributions received in FY17. Overall, the total contributions received of \$103 million were approximately 14 percent above the average annual contributions (\$90 million) received by GFDRR over the prior three years. As of June 30, 2017, \$30.5 million had been pledged to GFDRR through five multi-year contribution arrangements.

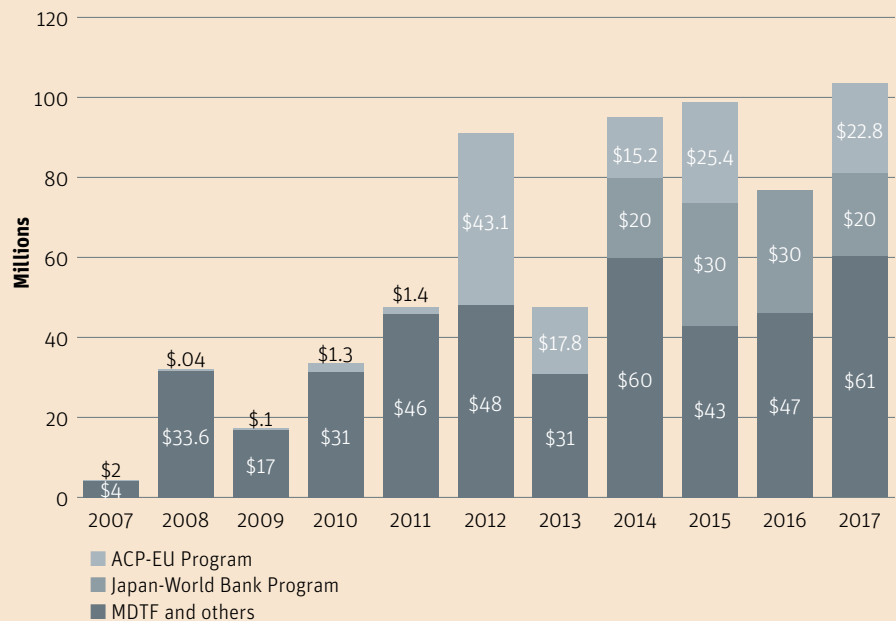
## In-Kind Support via Staff Exchanges and Secondments

GFDRR’s program benefited from in-kind resources that several donors made available in the form of secondees and staff exchanges. In FY17, GFDRR hosted seven staff members from the governments of Austria, France, Japan, Norway, Sweden, and Switzerland. These staff exchanges help strengthen GFDRR’s technical expertise, particularly its thematic initiatives, and provide partners with opportunities to establish more direct connections with the Secretariat’s work.

**Figure 1. Total Contributions, FY17**



**Figure 2. Contributions to GFDRR, FY07–FY17**



<sup>1</sup> Before trust fund administration fees of \$0.8 million

<sup>2</sup> Bringing Resilience to Scale: A Work Plan for the Global Facility for Disaster Reduction and Recovery, 2017. <https://www.gfdr.org/sites/default/files/gfdr-work-plan-fy17.pdf>

# Commitments

In FY17, GFDRR approved 126 new projects for a total amount of \$64.1 million. This level of engagement was at the same level as the \$63 million approved during the previous fiscal year (see Figure 3). Combined with \$13.7 million that was provided to ongoing projects as additional financing to scale up successful ongoing activities, the Secretariat was able to commit a total of \$77.7 million overall in FY17.

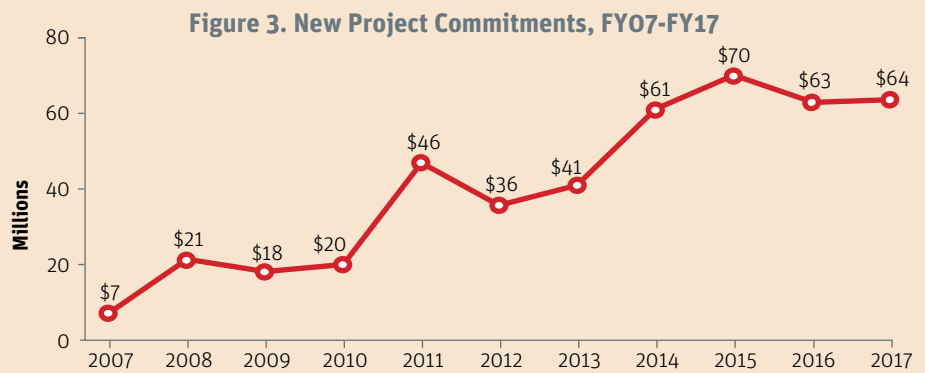
Of the \$77.7 million committed last year, about 94 percent (\$73 million) related broadly to mainstreaming ex-ante disaster risk management and climate change adaptation activities; while approximately 6 percent (\$4.7 million) went to activities linked to post-disaster and resilient-recovery interventions (see Figure 4).

When compared to the estimated \$80 million allocated under GFDRR’s Work Plan,<sup>3</sup> the total commitments were consistent with the planned projections for the fiscal year (see Figure 5).<sup>4</sup> The total commitments to all the regions except South Asia met or were within approximately \$1 million of the allocations planned in the Work Plan. Commitments to global activities saw a marked increase above the planned allocations (\$20 million vs \$14 million, respectively) and this was largely driven by additional support to scale up: (i) activities under the Access to Information area of engagement, such as Code for Resilience (30 percent of the additional financing), (ii) knowledge activities under the Knowledge Program implemented

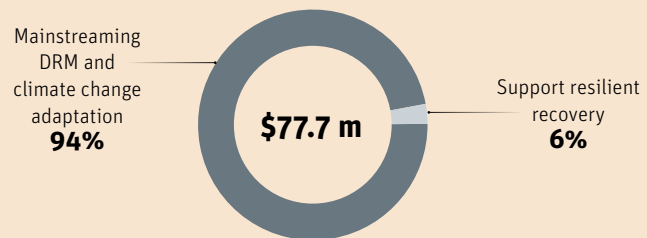
by the DRM Hub, Tokyo, such as Resilient Infrastructure (20 percent), and the remainder in expanding global activities in resilient recovery, hydromet, and disaster risk financing and insurance (49 percent).

The Africa Region received the largest share of new financial support (20 percent), followed by Europe and Central Asia Region (15 percent), East Asia and Pacific (14

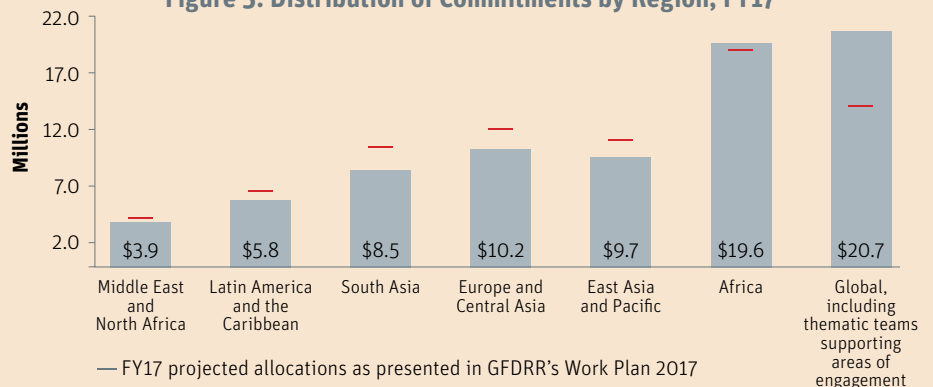
percent), South Asia (13 percent), Latin America and Caribbean (8 percent), and Middle East and North Africa (5 percent). The annual average activity size for projects approved in FY17 was approximately \$500,000 for both country-based activities and global engagements. Since 2009, the annual average project size has been between \$450,000 and \$600,000.



**Figure 4. Overall Commitments Approved in FY17<sup>4</sup>**



**Figure 5. Distribution of Commitments by Region, FY17**



<sup>3</sup> Bringing Resilience to Scale: A Work Plan for the Global Facility for Disaster Reduction and Recovery, 2018 <https://www.gfdr.org/sites/default/files/publication/2018-gfdr-work-plan.pdf>

<sup>4</sup> Total commitments approved includes new commitments plus additional financing to ongoing activities. The commitments for additional financing were largely through proactive reallocation of existing grant resources within the portfolio to other ongoing activities that are responding to a risk that is more relevant or immediate within the country context.

# Disbursements

In FY17, GFDRR trust fund expenditures, or disbursements, amounted to \$70.9 million (see Figure 6). Approximately 91 percent of the disbursements were project-related, with the remaining 9 percent going as follows: (i) \$0.8 million (1 percent) in administration fees to the World Bank as GFDRR’s trustee;<sup>5</sup> (ii) \$0.5 million in uncommitted balances returned to donors following the closure of three single donor trust funds; and (iii) \$4.9 million (7 percent) in program management and administration costs.

The FY17 project expenditures represented a 14 percent increase when compared to FY16. This was driven by an overall improved implementation progress across the majority of projects in the portfolio, coupled with proactivity by the Secretariat to address slower-disbursing activities.<sup>6</sup> Specifically, disbursements from project-related activities rose to \$64.7 million in FY17 when compared to \$57 million in FY16, allowing GFDRR to achieve its highest annual disbursements over the past four years (see Figure 7). GFDRR’s annual disbursement rate, calculated as disbursements over undisbursed balance in a fiscal year, rose moderately from 31 percent to 36 percent, which is broadly indicative of improved portfolio performance. Additionally, since GFDRR’s grants typically disburse funds over a period of between two to three years on average, the FY17 disbursement ratio was above the expected

disbursement performance standard of around 33 percent.

At the same time, GFDRR’s program management and administration expenditures, which include Secretariat staff, consultancy fees, travel, rent, communications, information technology, equipment, and other non-overhead costs (such as, back-office support staff), remained at similar levels to the prior fiscal year at \$4.9 million in FY17. During the same period, the

overall portfolio has grown from \$240 million to \$260 million, and annual project disbursements have increased from \$57 million to \$65 million, which is broadly indicative of improving the effectiveness of GFDRR’s operating model (see Figure 8). Thus, as expected, the share of GFDRR’s program management and administration expenditures when compared to total expenditures has been declining steadily over the past four years, with FY17 being 6.8 percent.

Figure 6. Distribution of GFDRR Expenditures, FY17

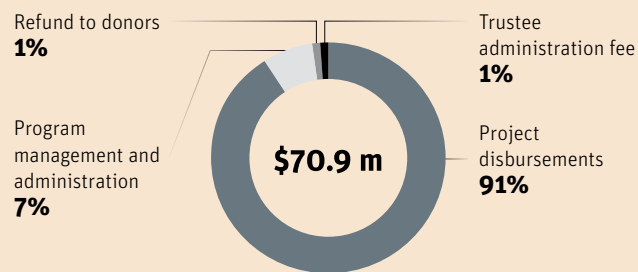


Figure 7. Project Disbursements, FY14–FY17

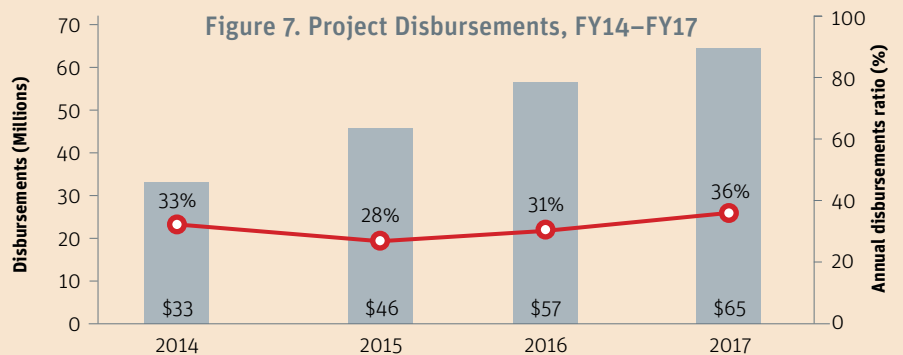
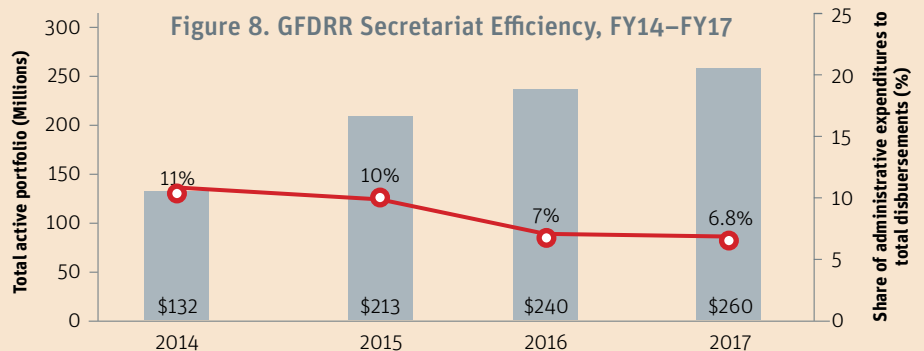


Figure 8. GFDRR Secretariat Efficiency, FY14–FY17



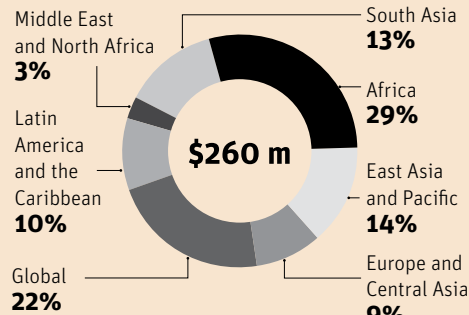
<sup>5</sup> The World Bank Group collects trust fund administration fees from GFDRR donor contributions at the time of receipt.

<sup>6</sup> This included reallocation of grant resources to faster disbursing activities; restructuring of projects; and proactive monitoring of existing commitments to ensure timely disbursements, for example.

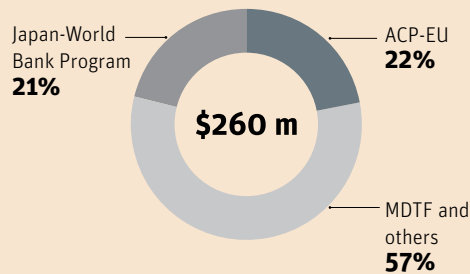
# Portfolio Summary

GFDRR’s total portfolio during FY17 included 369 grants, for a total commitment amount of \$260 million. This represents an 8 percent increase in portfolio size when compared to FY16 (see Figure 9). This portfolio growth was driven by: (i) increased investments responding to demand from some of the world’s most vulnerable countries, including Afghanistan, Myanmar, Somalia, and Yemen; (ii) new engagements in fragile and conflict-affected situations, such as in the Democratic Republic of Congo and Somalia; and (iii) scaling up of support to ongoing resilient recovery efforts in Haiti, Malawi, and Serbia.

**Figure 9. Distribution of Active Commitments by Region, FY17**



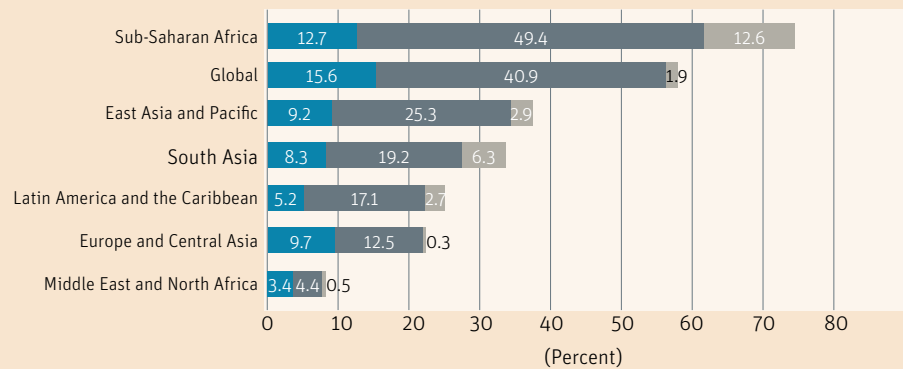
**Figure 10. Distribution of Active Commitments by Funding Window, FY17**



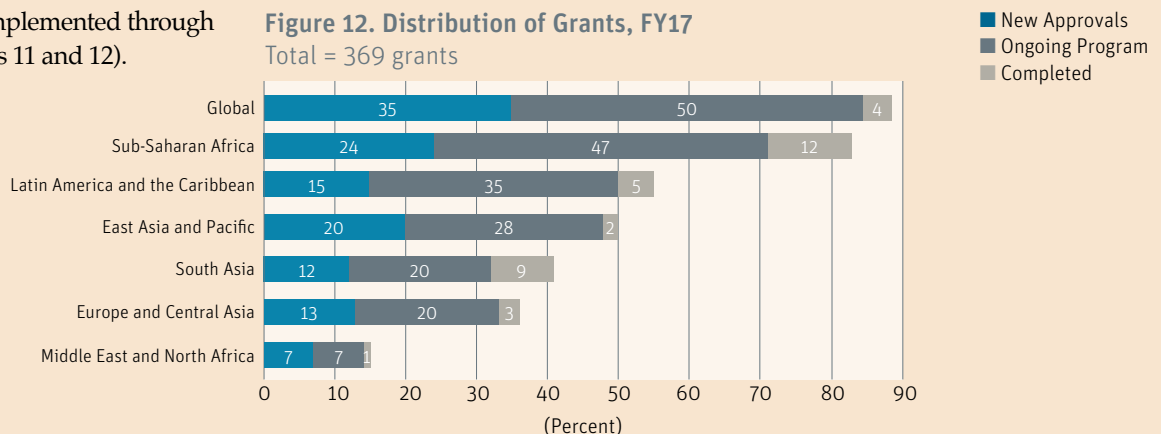
Over the past six years, GFDRR’s portfolio has grown by an average increasing rate of about 15 percent annually, from \$115 million in 2012 to \$260 million in 2017. Of the 369 grants supported through the \$260 million committed cumulatively as of FY17, 246 grants were financed through the MDTF, 64 through the ACP-EU programs, and 59 through the Japan-World Bank Program (see Figure 10). The total commitments from the MDTF amounted to about \$147 million (52 percent of the portfolio), while ACP-EU programs accounted for \$58 million (22 percent), and the Japan-World Bank Program for \$54.5 million (21 percent).

Across regions, the largest share of financing went to Africa, representing 29 percent of the overall portfolio, followed by East Asia and Pacific (14 percent), South Asia (13 percent), Latin America and the Caribbean (10 percent), Europe and Central Asia (9 percent) and Middle East and North Africa (3 percent). Out of the 369 active grants in the fiscal year, 36 projects reached completion in FY17, disbursing \$27 million in total. 207 grants worth \$233 million will continue to be implemented through FY18 (see Figures 11 and 12).

**Figure 11. Distribution of Project Commitments, FY17**  
Total = \$260 million



**Figure 12. Distribution of Grants, FY17**  
Total = 369 grants



Portfolio Summary (cont.)

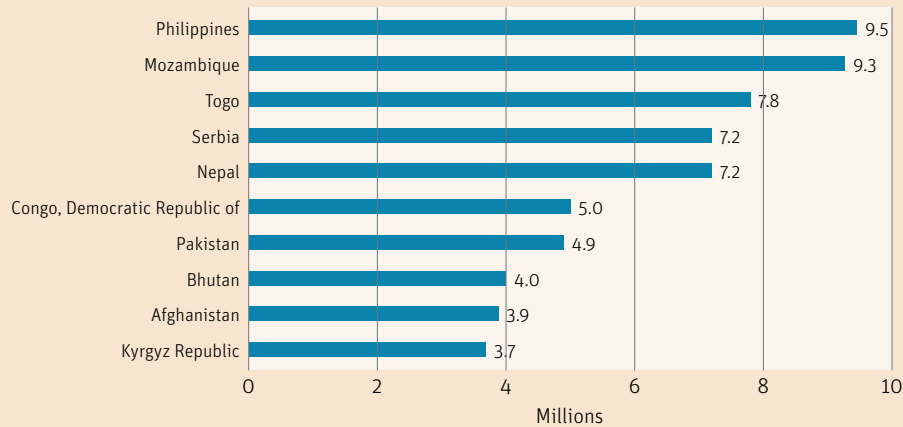
In FY17, the top ten recipient countries of GFDRR’s support accounted for approximately 31 percent, or \$62.5 million, of commitments to in-country engagements, which amounted to \$202 million (see Figure 13). Many of these large programs were in support of recovery efforts and risk reduction needs that emerged following recent disasters. Examples

include the comprehensive DRM program in Serbia that was developed following the 2014 floods, large-scale rehabilitation works in Mozambique following floods and landslides in 2014, and the Safer Schools Initiative in Nepal after the 2015 earthquake. In other countries in the top 10 recipient list, GFDRR has grown existing programs to deepen key engagements in

areas of country demand, such as disaster risk financing to support implementation of a \$500 million contingent credit line (a Catastrophe Deferred Drawdown Option) in the Philippines, strengthening of hydro-meteorological and climate services in the Democratic Republic of Congo, and improving early warning systems and climate risk information in Afghanistan.

**Figure 13. FY17 Active Commitments: Top 10 Recipient Countries**

Total = \$62.5 million



# Monitoring Results

GFDRR tracks the progress of grant results at the output and outcome level through regular monitoring and reporting activities. GFDRR analyzes grant-level data to assess overall portfolio performance, including on key indicators such as partner demand, current and emerging sectoral trends, additional investments mobilized by GFDRR grants, and the level of integration of DRM and climate resilience into broader World Bank operations. This

analysis of GFDRR performance is used for work planning, annual reporting, and learning purposes. Table 1 outlines a summary of indicators monitored across GFDRR's portfolio as measured against the targets set out under each Area of Engagement within the FY18–21 Strategy. It includes the contribution of GFDRR's Areas of Engagement to the Sendai Framework's four Priorities for Action.

In FY18, GFDRR will update its monitoring and reporting systems to entirely align with its new Strategy and better-track outcome-level performance and targets. This includes the development of a new Logical Framework and Results Framework, as well strengthened M&E processes to improve the harmonization, efficiency, and quality of monitoring and reporting throughout the Facility.

**Table 1: Monitoring and reporting summary by Areas of Engagement and Sendai Priorities**

Contribution to Sendai Framework Priorities for Action	Areas of Engagement	Results Indicators	FY17	Target (FY21)
<b>Priority 1</b> Understanding Risk	Promoting open access to risk information	Hazard, exposure, and risk datasets and/or geospatial layers developed (#)	1,500	2,500
		People trained to use risk tools for decision making (#)	746	2,000
		Countries with safer school engagements (#)	20	30
<b>Priority 2</b> Strengthening disaster risk governance to manage disaster risk	Promoting resilient infrastructure	Classrooms made safer from disasters (#) <sup>7</sup>	78,300 classrooms	200,000 classrooms
		Expected student beneficiaries (#) <sup>7</sup>	1,96 million	7 million
	Scaling up the resilience of cities	Cities with deeper engagements (#)	> 10	30
<b>Priority 3</b> Investing in disaster risk reduction for resilience	Deepening financial protection	Government officials trained in financial protection and direct and indirect insurance programs (#)	250	500
	Building resilience at community level	People that have coverage of social protection (#)	4 million	15 million
<b>Priority 4</b> Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation, and reconstruction	Strengthening hydromet services and early warning systems	Expected beneficiaries (#)	40 million	100 million
	Enabling resilient recovery	Government officials trained on PDNA and/or recovery planning and coordination (#)	490	1,000
<b>All</b>	Deeper engagements in designing climate resilient investments in countries	Total amount of climate resilience investments enabled by development partners (\$)	1.5 billion	3 billion
		Countries with climate resilience investments enabled (#)	20	25

<sup>7</sup> GFDRR has supported 5,460 schools. The estimate for classroom and student beneficiary calculations are based on a World Bank average of 11-18 classrooms/school (so 14.5) and an OECD average of 25 students/classroom (most recent #s - 2012 data).

## Gender and Climate Resilience

GFDRR monitors its grants to assess their contribution to integrating gender and women's empowerment within the portfolio of activities, a core operating principle for the Facility. In FY17, 70 percent of approved grants were gender-informed, an 11 percent increase over FY16 (see Table 2). Of these, 55 percent of grants were found to have undertaken gender analysis or considered existing analysis

within the grant's design and/or implementation stage. Additionally, 39 percent of new grants act on their findings, and 32 percent include indicators to measure the results of the proposed actions.

GFDRR also assesses every grant to determine whether it includes specific actions aimed at building resilience to climate change, another core operating principle for the Facility. In

FY17, 77 percent of approved grants were found to consider climate-resilience, 61 percent undertook some analysis or considered existing analysis within the grant's design and/or implementation stage. Furthermore, 69 percent had specific actions on climate change resilience, and 32 percent included indicators to measure results.

**Table 2: Summary of indicators monitoring cross-cutting areas of Climate Resilience and Gender**

Operating Principle	Results Indicators	FY16	FY17	FY18 Target
<b>Gender</b>	Percentage of approved gender-informed grants (%)	63	70	100
	Percentage of approved grants that include gender actions (%)	42	39	50
<b>Deepening engagements in resilience to climate change</b>	Percentage of approved grants considering climate resilience (%)	62	77	80
	Percentage of approved grants that include actions to build resilience to climate change (%)	52	69	55



# Mobilizing Development Financing

GFDRR strategically focuses its investments in areas where there is high likelihood to mobilize additional resources for scaling up disaster and climate resilience programs. In FY17, GFDRR's financial or /and technical assistance mobilized nearly \$4.7 billion in additional investments (see Table 3).<sup>8</sup> Of this financing, \$2.6 billion (56 percent) was leveraged through GFDRR's partnership with the World Bank, and over \$2 billion (49 percent) was leveraged from national governments, other multilateral institutions (for example, African Development Bank and European Investment Bank), bilateral donors, or

other partners (for example, Global Environment Fund).

GFDRR's capacity to leverage additional investments typically occur in three ways, namely: (i) informing; (ii) enabling, and /or (iii) co-financing investments. In FY17, GFDRR activities directly informed World Bank investments worth \$768 million, with an additional \$27.3 million from other sources (17.1 percent of total leveraging). Of this, most financing informed projects in Haiti, Kenya, and Malawi. Additionally, GFDRR's financial or /and technical assistance directly enabled the design and/or

implementation of DRM investments by the World Bank valued at \$1.8 billion, as well as national governments or development partners valued at \$2 billion, (83 percent of total leveraging). Of this, most financing was enabled in East Asia Pacific, including \$1.8 billion in Indonesia. In FY17, GFDRR's ACP–EU NDRR and CREWS Initiative also co-financed DRM operations with the GEF that resulted in over \$11 million in investments in the Democratic Republic of Congo.

**Table 3: Summary of Development Finance Informed, Enabled, Co-financed**

Region	Informing		Enabling		Co-financing		REGION TOTAL	
	WB	non-WB	WB	non-WB	WB	non-WB	WB	non-WB
<b>AFR</b>	470.3		435.5			11.0	<b>905.8</b>	<b>11.0</b>
<b>EAP</b>			1,248.3	1,575.4			<b>1,248.3</b>	<b>1,575.4</b>
<b>ECA</b>	70.0		75.0	166.2			<b>145.0</b>	<b>166.0</b>
<b>LAC</b>	138.3	27.3	45.0	50.0			<b>183.3</b>	<b>77.3</b>
<b>MNA</b>	59.3						<b>59.3</b>	
<b>SAR</b>	30.3		48.0	202.7			<b>78.0</b>	<b>203.0</b>
							<b>4,652.7</b>	

<sup>8</sup> Please see page xviii–xix for details on GFDRR's methodology.

Table 4: Development finance mobilized across GFDRR's portfolio by region and leveraging type

Leveraging Type	Country	Project Name	Funding source (\$M)			
			Amount \$	WB	Amount \$	Non-WB
<b>Africa</b>						
<b>Informing</b>	Kenya	Kenya Climate Smart Agriculture Project (P154784)	250	IDA		
	Malawi	Malawi Drought Recovery and Resilience Project (P161392)	104	IDA		
	Mali	Safety Nets project (P157892)	10	AFRH		
	Malawi	Second AF for Strengthening Safety Nets Systems Project MASAF IV (P160519)	70	IDA		
	Rwanda	Rwanda Pilot Program for Climate Resilience (P160268)	1.29	PPCR		
	Madagascar	AF Social Safety Net Drought Response (P160554)	35	IDA		
<b>Enabling</b>	Zambia	Zambia Improved Rural Connectivity Project (P159330)	200	IDA		
	Botswana	Emergency Water Security and Efficiency (P160911)	145.5	IBRD		
	Somalia	Somalia Emergency Drought Response and Recovery Project (P163830)	50	IDA		
	Mozambique	AF for the Emergency Resilient Recovery Project (P161559)	20	IDA		
	Lesotho	Additional Financing to Social Assistance Project (P160934)	20	IDA		
<b>Co-financing</b>	Congo, Democratic Republic of	Strengthening Hydro-Meteorological and Climate Services (P159217)			5.3 / 3.09	GEF / CREWS / GFDRR
<b>Sub-Total</b>			<b>905.8</b>		<b>11</b>	
<b>Region Total</b>					<b>916.9</b>	

Table 4: (cont.)

Leveraging Type	Country	Project Name	Funding source (\$M)			
			Amount \$	WB	Amount \$	Non-WB
<b>East Asia and Pacific</b>						
<b>Enabling</b>	Vietnam	Emergency Natural Disaster Reconstruction Project (P163146)	118	IDA		
	Vietnam	Vietnam Scaling up Urban Upgrading Project (P159397)	240	IDA		
	Cambodia	Cambodia Southeast Asia DRM Project (P160929)	60	IDA		
	Myanmar	Myanmar Southeast Asia DRM Project (P160931)	116	IDA		
	Myanmar	Myanmar Flood and Landslide Emergency Recovery Project (P158194)	200	IDA		
	Marshall Islands	Pacific Resilience Project II Under the Pacific Resilience Program (P160096)	19.63	IDA		
	China	Lushan Earthquake Reconstruction and Risk Reduction Project (P153548)	274.2	IBRD		
	Pacific Islands	Pacific Resilience Project II under the Pacific Resilience Program (P163699)	4	IDA		
	Lao People's Democratic Republic	Lao Road Sector Project 2 (P158504)			10 / 12.4	Government / NDF
	Indonesia	Indonesia National Slum Upgrading Project (P154782)	216.5	IBRD	1,310 / 216.5	Government / AIIB
	Marshall Islands	Pacific Resilience Project II Under the Pacific Resilience Program (P160096)			25	Government
	Cambodia	Southeast Asia Disaster Risk Management Project (P149149)			1.5	Government
<b>Sub-Total</b>			<b>1,248.3</b>		<b>1,575.4</b>	
<b>Region Total</b>					<b>2,823.7</b>	
<b>Europe and Central Asia</b>						
<b>Informing</b>	Serbia	DRM DPL-CAT DDO (P157489)	70	IBRD		
<b>Enabling</b>	Tajikistan	Strengthening Critical Infrastructure against Natural Hazards (P158298)	50	IDA		
	Moldova	Climate Adaptation Project (P155968)	13 / 12	IDA / IBRD	2 / 1.2	GEF / UNDP
	Serbia	DRM DPL-CAT DDO (P157489)			1 / 4	SDC / EU
	Turkey	Education Infrastructure for Resilience (P162004)			158	EU
<b>Sub-Total</b>			<b>145</b>		<b>166.2</b>	
<b>Region Total</b>					<b>311</b>	

Table 4: (cont.)

Leveraging Type	Country	Project Name	Funding source (\$M)			
			Amount \$	WB	Amount \$	Non-WB
<b>Latin America and the Caribbean</b>						
<b>Informing</b>	Haiti	Municipal Development and Urban Resilience Project (P155201)	48.4	IDA		
	Haiti	Relaunching Agriculture: Strengthening Agriculture Public Services II Project Additional Financing (P163081)	35	IDA		
	Haiti	Sustainable Rural and Small Town Water Supply and Sanitation Additional Financing (P163194)	20	IDA		
	Haiti	AF Disaster Risk Management and Reconstruction (163199)	20	IDA		
	Saint Lucia	AF Disaster Vulnerability Reduction Project (P155324)	1.6 / 6.5	IDA / EC Development Fund		
	Saint Vincent and the Grenadines	St. Vincent and the Grenadines RDVRP AF(P157918)	6.8	EC Development Fund		
	Central America	Central America & Caribbean Catastrophe Risk Insurance Project (149670)			14.8 / 12.5	EU / Germany
<b>Enabling</b>	Guatemala	Guatemala Urban Infrastructure and Violence Prevention (P143495)	45	IBRD		
	Peru	Peru School Infrastructure Program (P152216)			50	Government
<b>Sub-Total</b>			<b>183.3</b>		<b>77.3</b>	
<b>Region Total</b>					<b>260.6</b>	
<b>Middle East and North Africa</b>						
<b>Informing</b>	Tunisia	Integrated Landscapes Management in Lagging Regions Project (P151030)	59.3	IBRD		
<b>Region Total</b>			<b>59.3</b>			
<b>South Asia</b>						
<b>Informing</b>	Bhutan	Hydromet Services and Disaster Resilience Regional project (P154477)	3.8	Japan		
	Bhutan	Preparation of Strategic Program for Climate Resilience (P159600)	1.5	Japan		
	Afghanistan	Citizens' Charter Afghanistan Project (P160567)	25	IDA		
<b>Enabling</b>	Nepal	Additional Finance to Road Sector Development Project (P157607)	48	IDA		
	Mekong	Southeast Asia Disaster Risk Management Project (SEADRIF) (P149149)			2.7	Japan
	Nepal	Nepal Housing Reconstruction (P155659)			10 / 78 / 112*	USAID / ADB / JICA
<b>Sub-Total</b>			<b>78.3</b>		<b>202.7</b>	
<b>Region Total</b>					<b>281</b>	
<b>LEVERAGING TOTAL</b>					<b>4,652.7</b>	

\*NOTE: FY17 donor funding

# Financial Statements

## FINANCIAL SUMMARY OF RECEIPTS, DISBURSEMENTS, AND FUND BALANCE

All dollar amounts expressed in US dollars (\$) unless otherwise indicated.

	Notes*	Fiscal year ending June 30, 2017	Fiscal year ending June 30, 2016	Fiscal year ending June 30, 2015
<b>Opening Balance:</b>		236,581,847	225,683,385	180,745,559
<b>Receipts:</b>				
Donor Contributions	1	103,553,038	76,475,192	98,716,178
Net Investment and Other Incomes	2	1,843,186	690,483	526,675
Transfers-in from Development Grant Facility	3	-	500,000	500,000
<b>Total Receipts</b>		<b>105,396,224</b>	<b>77,665,675</b>	<b>99,742,853</b>
<b>Disbursements:</b>				
Project Disbursements	4	64,715,713	57,119,234	45,791,961
World Bank Administration Fee	5	769,523	1,621,477	2,066,582
Program Management and Administration Expenses	6	4,915,627	4,531,716	5,395,355
Transfers-out from Development Grant Facility	7	-	500,000	500,000
Refund to Donors	8	538,954		1,050,767
Trustee Allocation			3,000,000	
<b>Total Disbursements</b>		<b>70,939,817</b>	<b>66,772,427</b>	<b>54,804,665</b>
Excess of (disbursements over receipts)/receipts over disbursements		34,456,407	10,893,248	44,938,188
<b>Ending Balance:</b>				
Ending Balance		271,038,254	236,576,634	225,683,747
Less: Undisbursed Commitments	9	115,980,261	130,157,949	
Fund Available for New Grants	10	<b>155,057,993</b>	<b>106,418,685</b>	

\*See pages 82–86 for Notes 1–10.

Financial data for trustees with EUR holding currency are converted to US \$ for reporting purposes based on the exchange rate on July 31, 2017 of 1 EUR = US \$1.17.

**NOTE 1: DONOR CONTRIBUTIONS**

GFDRR received \$103,553,038 from 12 donors during the fiscal year that ended June 30, 2017. Commitments yet to be received in the amount of \$30,528,445 were outstanding as of June 30, 2017, which will be transferred to GFDRR as per the payment schedules in the signed Administration Agreements. The following table provides details of contributions received and contributions receivable by donor partner:

Donor	Fiscal year ending June 30, 2017	Fiscal year ending June 30, 2016	Fiscal year ending June 30, 2015	Contributions Receivable*
Australia	3,713,683	2,978,641	3,188,800	5,633,140
Austria			2,445,420	
Belgium	627,088			
Denmark		1,459,641	1,417,354	
European Union	23,362,306	13,873,894	25,377,000	16,983,543
Germany	35,697,500	664,368	2,617,249	4,561,000
India			166,000	
Italy	2,116,840	3,386,796	2,315,200	
Japan	20,000,000	33,000,000	30,000,000	
Luxembourg	315,450	1,320,000	468,000	
Mexico		361,760	138,240	
Nigeria		149,238		350,762
Norway	1,538,680	2,975,128	4,024,663	
Saudi Arabia			500,000	
Sweden	5,406,003	3,538,988		
Switzerland	7,378,694	4,691,350	9,592,628	
United Kingdom	1,196,794	6,545,389	15,965,624	
United States	2,200,000	1,530,000	500,000	3,000,000
<b>Total</b>	<b>103,553,038</b>	<b>76,475,192</b>	<b>98,716,178</b>	<b>30,528,445</b>

The following table provides details on contributions received by main trust fund

Main Fund	Fiscal year ending June 30, 2017	Fiscal year ending June 30, 2016	Fiscal year ending June 30, 2015	Contributions Receivable*
Track II-MDTF (TF070611)	531,250		2,984,937	
Track III-MDTF-Callable (TF070868)		234,000	468,000	
ACP-EU (TF071630)	13,123,206		12,691,000	4,247,431
Japan Program (TF072129)	20,000,000	30,000,000	30,000,000	
Core MDTF (TF072236)	9,876,525	29,388,657	39,886,240	350,762
Africa DRF SDTF (TF072281)	9,707,850		12,686,000	1,140,250
EU-SAR SDTF (TF072458)		4,536,800		6,841,500
EU-SERBIA NDRMP SDTF (TF072528)		5,125,094	-	2,017,761
EU-DRAF SDTF (TF072535)		4,212,000	-	2,736,600
Parallel Core MDTF (TF072584)	24,148,523	2,978,641		4,561,000
Australia Indo-Pacific SDTF (TF072835)	3,713,683			5,633,140
InsuResilience MDTF (TF072858)	22,452,000			
USAID-SDTF (TF072896)				3,000,000
<b>Total</b>	<b>103,553,038</b>	<b>76,475,192</b>	<b>98,716,178</b>	<b>30,528,445</b>

\*Amount in US\$ equivalent. The actual US dollar equivalent will be based on the exchange rate on the date of the transfer of funds.

**NOTE 2: INVESTMENT AND OTHER INCOME**

Net investment and other income in the amount of \$1,843,186 for the fiscal year ending June 30, 2017 consisted of GFDRR's share in the interest income earned by the Bank's trust fund portfolio, including realized gains/losses from the sale of securities and other related income.

**NOTE 3 AND 7: TRANSFER IN AND TRANSFER OUT FROM DEVELOPMENT GRANT FACILITY (DGF)**

In fiscal year ending June 30, 2017, The World Bank's DGF program came to an end and no funding was issued through the facility.

**NOTE 4: PROJECT DISBURSEMENTS**

The following table provides details of the project disbursements by main trust fund. Project disbursements are expenditures incurred in the execution of operational activities. Project disbursements in the amount of \$64,715,713 were made from the Program for the fiscal year ended June 30, 2017.

The following table provides details of the project disbursements by main trust fund:

Main Trust Fund	Fiscal year ending June 30, 2017	Fiscal year ending June 30, 2016	Fiscal year ending June 30, 2015
Track II-MDTF (TF070611)	19,996,741	19,856,999	19,375,189
Track II- SDTF-Spain (TF070806)	356,056	732,052	50,586
Track II-SDTF-Australia (TF070807)	774,305	1,221,418	1,518,116
Track II-SDTF-Japan (TF070809)	942,199	510,200	338,172
Track III-MDTF-Callable (TF070868)	2,571,172	6,414,713	13,739,030
Track III MDTF - TA (TF070948)	545,803	922,118	1,954,389
ACP-EU (TF071630)	9,922,540	10,582,918	6,163,126
Japan Program (TF072129)	13,682,317	8,058,687	1,726,555
Core MDTF (TF072236)	11,796,391	5,755,773	519,148
Africa DRF SDTF (TF072281)	2,884,249	3,062,970	407,650
EU-SAR SDTF (TF072458)	792,522	-	-
EU-SERBIA NDRMP SDTF (TF072528)	74,450	1,387	-
EU-DRFA SDTF (TF072535)	328,332	-	-
Parallel Core MDTF (TF072584)	48,637	-	-
<b>Total</b>	<b>64,715,713</b>	<b>57,119,234</b>	<b>45,791,961</b>

The following table provides details of the project disbursements by region:

Region	Fiscal year ending June 30, 2017	Fiscal year ending June 30, 2016	Fiscal year ending June 30, 2015
Africa	18,905,224	19,358,719	21,343,800
East Asia and Pacific	9,181,869	7,206,277	6,196,241
Europe and Central Asia	4,701,051	2,607,904	2,014,132
Latin America and Caribbean	6,324,919	6,337,795	3,468,427
Middle East and North Africa	2,798,779	1,090,804	1,321,073
South Asia	6,358,924	8,507,984	3,769,769
Global	16,444,945	12,009,750	7,678,520
<b>Total</b>	<b>64,715,713</b>	<b>57,119,234</b>	<b>45,791,961</b>

The following table provides details of project disbursements by implementing partner:

Execution Type	Fiscal year ending June 30, 2017	Fiscal year ending June 30, 2016	Fiscal year ending June 30, 2015
Bank Executed Trust Fund	55,982,138	44,985,495	25,516,482
Recipient Executed Trust Fund	8,733,575	12,133,739	20,275,479*
<b>Total</b>	<b>64,715,713</b>	<b>57,119,234</b>	<b>45,791,961</b>

\* Includes disbursements from the callable fund to support recovery activities in Mozambique

#### NOTE 5: WORLD BANK ADMINISTRATION FEE

In fiscal year ending June 30, 2017, The World Bank charged an administrative fee of \$769,253, as agreed in signed Administration Agreements.

#### NOTE 6: PROGRAM MANAGEMENT AND ADMINISTRATION DISBURSEMENTS

Program management and administration expenses for the year ending June 30, 2017 were in the amount of \$4,915,627.

The following table provides details of the program management and administration disbursement by expense category:

Expense Category		Fiscal year ending June 30, 2017	Fiscal year ending June 30, 2016	Fiscal year ending June 30, 2015
Staff Cost	(1)	3,634,071	3,639,957	4,243,054
Short Term Consultants/Temporary		574,644	350,162	567,940
Travel	(2)	407,839	196,212	313,746
Other Expenses	(3)	299,073	345,385	270,615
<b>Total</b>		<b>4,915,627</b>	<b>4,531,716</b>	<b>5,395,355</b>

(1) Staff Costs included salaries and benefits for GFDRR staff, Extended-term Consultants, and Extended-term Temporaries.

(2) Travel included travel expenses of GFDRR staff, candidates/interviewees for GFDRR positions, and participants in GFDRR-sponsored events.

(3) Other Expenses included overhead expenses, contractual services (e.g. editing, graphic design, translation, publishing and printing), representation, and hospitality.

#### NOTE 8: REFUND TO DONOR

In the fiscal year ending June 30, 2017, an unused fund balance amounting to \$538,954 from TF070806, TF070807 and TF070809 was returned to the Donor Balance Account (DBA) for return to donors.

#### NOTE 9: UNDISBURSED COMMITMENTS

Commitments in the amount of \$115,980,261 were outstanding as of June 30, 2017. These are the remaining balance of the funds that GFDRR has approved and committed to implementing units and recipients. The following table provides details of undisbursed commitments by main fund:

Main Trust Fund	Fiscal year ending June 30, 2017
Track II-MDTF (TF070611)	7,396,047
Track III-MDTF-Callable (TF070868)	970,982
Track III MDTF - TA (TF070948)	707,789
ACP-EU (TF071630)	17,872,880
Japan Program (TF072129)	32,817,243
Core MDTF (TF072236)	34,819,148
Africa DRF SDTF (TF072281)	9,197,124
EU-SAR SDTF (TF072458)	3,306,174
EU-SERBIA NDRMP SDTF (TF072528)	4,744,482
EU-DRAF SDTF (TF072535)	3,647,567
Parallel Core MDTF (TF072584)	500,826
<b>Total</b>	<b>115,980,261</b>



The following table provides details of undisbursed commitments by region:

Region	Fiscal year ending June 30, 2017
Africa	28,389,571
East Asia and Pacific	17,878,122
Europe and Central Asia	15,190,314
Latin America and Caribbean	7,958,350
Middle East and North Africa	3,430,244
South Asia	11,260,823
Global	31,872,837
<b>Total</b>	<b>115,980,261</b>

The following table provides details of undisbursed commitments by type of implementing partner:

Execution Type	Fiscal year ending June 30, 2017
Bank Executed Trust Fund	98,265,394
Recipient Executed Trust Fund	17,714,867
<b>Total</b>	<b>115,980,261</b>

#### NOTE 10: RESOURCES AVAILABLE FOR NEW GRANTS

Resources amounting to \$155,057,993 are outstanding as of June 30, 2017, and can be used to finance new operational grants, and program management and administration activities. The following table provides details of the resources available for new grants by main trust fund:

Main Fund	As of June 30, 2017
Track II-MDTF (TF070611)	519,168
Track III MDTF - TA (TF070948)	595,837
ACP-EU (TF071630)	35,593,138
Japan Program (TF072129)	37,959,454
Core MDTF (TF072236)	21,247,731
Africa DRF SDTF (TF072281)	5,978,400
EU-SAR SDTF (TF072458)	87,276
Parallel Core MDTF (TF072584)	26,803,082
Australia Indo-Pacific SDTF (TF072835)	3,716,394
InsuResilience MDTF (TF072858)	22,460,596
Track III-MDTF-Callable (TF070868)	96,917
<b>Total</b>	<b>155,057,993</b>







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