

2016 - 2018



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# executive summary

The Work Plan 2016-2018 presents a pathway for the Global Facility for Disaster Reduction and Recovery (GFDRR) to scale up efforts to meet the demand of developing countries for enhanced resilience in the face of growing hazards from and exposure to natural disasters and climate change, both well aligned with and supporting the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030.

Guided by the Work Plan 2015-2017, GFDRR has delivered its \$68 million 2015 program, helping countries advance along the Five Pillars of Action – Risk Identification, Risk Reduction, Preparedness, Financial Protection, and Resilient Recovery.¹ Throughout its work, GFDRR systematically targets the most disaster-prone countries, enables large-scale investment programs in disaster risk management (DRM), and ensures support for and coordination with partners.

<sup>1</sup> GFDRR follows the Fiscal Year of the World Bank (July-June). All monetary and results figures are reported on this fiscal year basis throughout the report. FY2016 is July 2015 – June 2016. Note: All figures are in US\$.

GFDRR's structure positions it well to achieve its goals in 2016-2018.

- GFDRR's **Country Operations** leverage large-scale programs and pillar-specific results to meet the demands of disaster-prone countries to scale-up resilience.
- Through its **Thematic Programs**, the Secretariat hosts cross-regional teams delivering technical support, capacity development, and knowledge management in specialized areas: Innovation Lab, Hydromet, Disaster Risk Financing and Insurance (DRFI), Resilient Recovery, Inclusive Community Resilience, Resilience to Climate Change, Resilient Cities, and Safer Schools Programs.
- GFDRR's **Special Programs** with support and partnership from Japan and the European Union (EU) provide the Secretariat key financial support and unique knowledge and expertise to advance resilience.
- Finally, **partnerships** promote a collaborative approach and support implementers on-the-ground and internationally to deliver planned activities, disseminate lessons learned, and mobilize and coordinate resources.

Harnessing this structure, this Work Plan sets out two scenarios of resources required, prioritization, and results expected: a Base Case and an Investment Case.

- The **Base Case** proposes steady allocations to GFDRR's Country Operations for the whole of the 2016-2018 period using available resources. Thematic Programs would continue with allocations in 2016, but would foresee minimal resources in 2017-2018. (*Proposed total allocations, 2016-2018: \$161 million*)
- The **Investment Case** reflects the increasing demand for DRM activities in both Country and Thematic Programs. It would expand the Country Operations with more stable funding streams, while allowing GFDRR's Thematic Programs to scale-up and provide critical technical support to implementing partners throughout the 2016-2018 period. (*Proposed total allocations, 2016-2018: \$286 million*)

To reach the Investment Case, GFDRR requires an additional \$25.5 million in funding in 2016. For 2017-2018, an additional \$100 million is envisioned.

Table 1 shows the resources committed, prioritization pursued, and results achieved across GFDRR's Five Pillars of Action in 2014 and 2015, along with projections for the 2016-2018 Base and Investment Case scenarios.

Table 1. Resource Allocation, Prioritization, and Results under Base Case and Investment Case

		2014	2015 (Projected)	Base Case 2016-2018	Investment Case 2016-2018
Resources	Grant allocations	\$64 million	\$68 million	\$161 million	\$286 million
Prioritization	Allocation by program		Increased support to country and thematic programs	Minimal but steady support to country programs, falling support to thematic programs	Scaling up support to country and thematic programs to meet growing demand
Results	Enabling large-scale programs in disaster risk management	9 large-scale programs (Over \$1.5 billion in total leverage)	10-15 large-scale programs	35 large-scale programs	55 large-scale programs
Pillar 1: Risk Identification	# of hazard mappings, risk assessments, data platforms conducted or facilitated	29	34	135	189
Pillar 2: Risk Reduction	# of policies / frameworks, building codes, risk-reduction investment strategies, and land-use planning systems strengthened	53	69	150	194
Pillar 3: Preparedness	# of forecasting services, early warning systems, and contingency planning / emergency preparedness services strengthened	18	25	80	121
Pillar 4: Financial Protection	# of sovereign disaster risk financing strategies and catastrophe risk markets strengthened	21	32	93	151
Pillar 5: Resilient Recovery	# of post-disaster assessments conducted and recovery planning strengthened	7	8	28	43

# how does GFDRR work?

The Global Facility for Disaster Reduction and Recovery (GFDRR) is a global partnership program for disaster risk management and climate change adaptation managed by the World Bank on behalf of its members.

Created in 2006 in support of the Hyogo Framework for Action (HFA) 2005-2015, GFDRR supports implementation of HFA's successor, the Sendai Framework for Disaster Risk Reduction 2015-2030, adopted by the Third United Nations Conference on Disaster Risk Reduction, which was held on March 14-18, 2015 in Sendai, Japan.

The mission of GFDRR is well aligned with the goal of the Sendai Framework, which is to "Prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience". GFDRR's Work Plan, organized around its Five Pillars of Action, will support countries to implement the four priorities for action and achieve the seven targets that the Sendai Framework lays out.

GFDRR pursues this mission by supporting developing countries to mainstream disaster reduction management and climate change adaptation in development strategies and investment programs. It also coordinates and scales up technical and financial assistance, and strengthens global, regional, and country partnerships.

The Sendai Framework for Disaster Risk Reduction 2015-2030, A/CONF.224/CRP.1 (March 18, 2015), available from www.unisdr.org

# Integrating the Sendai Framework in GFDRR's Program

The Sendai Framework 2015-2030 marks the progress in practice, cooperation, and support that disaster risk management and climate change adaptation have made since the Hyogo Framework 2005-2015. The new Framework articulates four priorities for action:

- 1. Understanding disaster risk;
- 2. Strengthening disaster risk governance to manage disaster risk;
- 3. Investing in disaster risk reduction for resilience; and
- 4. Enhancing disaster preparedness for effective response, and to "Build Back Better" in recovery, rehabilitation and reconstruction)

The Framework also sets seven global targets:

- (a) Substantially reduce global disaster mortality by 2030, aiming to lower average per 100,000 global mortality between 2020-2030 compared to 2005-2015.
- (b) Substantially reduce the number of affected people globally by 2030, aiming to lower the average global figure per 100,000 between 2020-2030 compared to 2005-2015.<sup>3</sup>
- (c) Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030.
- (d) Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030.
- (e) Substantially increase thae number of countries with national and local disaster risk reduction strategies by 2020.
- (f) Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of this framework by 2030.
- (g) Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to the people by 2030.

At the CG Meeting held in Washington in May 2015, the Secretariat recognized the importance of integrating key aspects of the Framework into GFDRR's structure, while noting that the Framework's specific indicators are still to be formulated by the open-ended intergovernmental Working Group, supported by UNISDR. At the CG meeting to be held in May 2016, GFDRR will present the Work Plan 2017-19, which will outline GFDRR's path to align its objectives with the Framework, indicate the areas where the Work Plan will contribute to the expected outcomes and goals of the Framework, and identify gaps that require additional knowledge and potential modifications to GFDRR's work program. This will give the Secretariat an opportunity to fully engage implementing partners on the Framework and its implications.

<sup>3</sup> Categories of affected people will be elaborated in the process for post Sendai work decided by the Conference. The GFDRR Secretariat is hosted in the World Bank, which acts as trustee of resources contributed by donors. The Secretariat is responsible for awarding and managing grants, reporting on results, and outreach and partnership development. GFDRR also acts as the support hub for a decentralized network of disaster risk management expert focal points in the World Bank. These specialists play a leading role in locally managing the GFDRR program and in developing relationships with governments and other in-country partners.

GFDRR is a grant-making facility – not a direct implementer – and delivers its Work Plan through the results and leveraging achieved by its implementing partners with GFDRR's financial and technical support. Annual grant making across all GFDRR's trust funds has increased from \$6.4 million in 2007 to \$63.6 million in 2014, and demand for support from GFDRR continues to grow. These financial resources are administered as grants to government agencies, development partners, and civil society organizations (CSOs), with projects that are typically one to three years in duration.<sup>4</sup> Throughout, the Secretariat assesses each grant proposal on its potential to leverage investment or behavior change for improved management of disaster risks.<sup>5</sup>

GFDRR maintains a collaborative dialogue with donors on how best to prioritize resources geographically and thematically. Since its creation in 2006, GFDRR has allocated resources through a demand-driven approach based on strategic objectives and the application of grant allocation criteria as defined by the Consultative Group (CG), GFDRR's decision-making, oversight, and advisory body.

Throughout its activities, GFDRR strives for concentration, coherence, and complementarity. In any given country, GFDRR adopts a number of criteria to help in allocating resources, including: established vulnerability indicators, past evaluations of impact, political context (including existing relations with governments), and donor priorities. Across the program, GFDRR also commits to ensuring that its projects are gender-informed, in terms of analysis, actions, monitoring and evaluation, and results assessments. This includes addressing differential vulnerabilities to hazard risks, in addition to identifying and utilizing opportunities to promote gender equality and empowering women and marginalized communities as key agents of resilience. GFDRR's projects include special considerations of vulnerable populations, including the elderly, children, and the disabled. Starting in 2014, GFDRR began applying a climate change filter to its projects to verify that country operations also contribute to building resilience to long-term climate change risks.

- <sup>4</sup> GFDRR Annual Report 2014: https://www. gfdrr.org/gfdrr-annualreport-2014-bringingresilience-scale
- 5 GFDRR on Leveraging: https://www.gfdrr.org/ gfdrr-thematic-notesleveraging

# **GFDRR's Five Pillars of Action and Program Structure**

The Secretariat supports countries making advances in resilience along GFDRR's Five Pillars of Action:

#### Risk Identification

Improving access to disaster and climate risk information and capacity to create, manage, and use this information.

#### Risk Reduction

Improving planning, building practices, policies, and investments to manage and reduce disaster and climate risk.

#### Prenaredness

Strengthening the effectiveness of early warning, forecasting, contingency planning, and emergency preparedness services for disaster response.

#### Financial Protection

Developing disaster risk financing strategies and catastrophe risk insurance markets to improve post-disaster financial response capacity.

#### Resilient Recovery

Enhancing capacity for post-disaster assessments and planning to improve the quality and timeliness of recovery and reconstruction.

In support of these five pillars, GFDRR is organized under the following Program Structure:

## **Country Operations**

Activities that promote the mainstreaming of DRM and Climate Change Adaptation (CCA) in country development policies, planning, and investment programs.

### **Thematic Programs**

Activities that provide technical support, capacity development, and knowledge management in specialized areas of DRM and CCA.

## **Special Programs**

Activities that are designated by a member and provide large-scale financial support.

#### **Partnerships**

Activities that complement the Country, Thematic, and Special Programs by promoting coordination and collaboration with partners.

# **Country Operations**

Under regionally-focused country operations, GFDRR supports activities that promote the mainstreaming of disaster risk management and climate change adaptation in development policies, planning, and investment in Sub-Saharan Africa (AFR), East Asia and the Pacific (EAP), Europe and Central Asia (ECA), Latin America and Caribbean (LCR), Middle East and North Africa (MNA), and South Asia (SAR).

# **Thematic Programs**

GFDRR, its implementing partners, and donors have also identified particular needs for focused technical support. GFDRR's thematic programs allow the Secretariat to provide tailored support to implementing partners through hosted cross-regional teams.

Thematic Initiatives	Description and Pillar Focus
Innovation Lab	Supporting the use of science, technology, open data, and innovation to empower decision-makers to increase resilience. ( <i>Primarily Pillar 1 – Risk Identification</i> )
Hydromet	Working closely with the World Meteorological Organization (WMO) and other partners to help countries modernize their weather, climate, and hydrological information systems. ( <i>Primarily Pillar 3 – Preparedness</i> )
Disaster Risk Financing and Insurance (DRFI)	Increasing financial resilience of governments, businesses, and households against the economic burden of disasters. ( <i>Primarily Pillar 4 – Financial Protection</i> )
Resilient Recovery	Supporting post-disaster assessments and recovery frameworks to mainstream disaster risk management and recovery readiness into development policy. (Primarily Pillar 5 – Resilient Recovery)
Inclusive Community Resilience	Generating and sharing knowledge, and promoting community driven development, along with gender equality and women's empowerment, and increasing civil society engagement in policy dialogue. ( <i>Cross-cutting</i> )
Resilience to Climate Change	Helping countries, including Small Island States and mountainous countries, formulate enabling policies and investment programs for integrating climate and disaster risk into development strategies. ( <i>Cross-cutting</i> )
Resilient Cities	Strengthening cities' ability to prepare and adapt to changing conditions, and to withstand and recover rapidly from disruptions related to climate change, natural disasters, and other systemic shocks. ( <i>Cross-cutting</i> )
Safer Schools	Leveraging long-established relationships with ministries of finance, public works, and education to integrate risk into existing education sector investments. (Cross-cutting)

# **Special Programs**

GFDRR manages two donor-supported special programs: the Japan-World Bank Program for Mainstreaming Disaster Risk Management in Developing Countries – financed by the Government of Japan – and the Initiative of the Africa, Caribbean, and Pacific (ACP) Group of States – financed by the EU.

# **Partnerships**

GFDRR supports activities that complement the country, thematic, and special programs through coordination and collaboration with partners to build technical and operational exchange, and share lessons learned from country-level work. Close cooperation with the UN system is a cornerstone of this work.

# how does GFDRR prioritize its resources?

In the Work Plan 2015-2017, GFDRR set forth three criteria by which it prioritizes its grant selection to maximize the impact of donor contributions, and support activities that address countries':

- (i) underlying risk to natural hazards;
- (ii) potential to enable large-scale investment programs for resilience; and
- (iii) opportunities to coordinate activities that enable investments and programs supported by other development partners on the ground.

The Work Plan 2016-18 builds on this approach.

# **Underlying Risk**

GFDRR supports countries facing significant disaster and climate risk. The Index for Risk Management (INFORM) is a global, open-source risk assessment for humanitarian crises and disasters, meant to support decisions about prevention, preparedness, and response. While a wide variety of indicators are currently available to measure risk, the INFORM index is particularly adept at capturing – in a simple and straightforward way – the sources and potential impacts of shocks and stresses countries must take on.

GFDRR benchmarks its prioritization against INFORM and its component sub-indicators. The results of this analysis indicate that GFDRR's support is strongly aligned with countries facing the greatest natural hazards and overall risks of crisis.

<sup>6</sup> Developed by the Inter-Agency Standing Committee (IASC) Task Team for Preparedness and Resilience and the European Commission (EC). www.informindex.org Figure 1 shows the average risk rating of countries considered in GFDRR's Work Plan 2015-2017 – both under the Base and Investment Cases. They have a higher overall INFORM risk rating (4.7 and 4.6, respectively, compared to 3.1 for all other countries, on a scale of 0-10), but also show particularly significant risk ratings on lack of coping capacity and vulnerability, as well as hazard and exposure.

Figure 1. INFORM risk index (overall and natural hazard) of GFDRR's prioritization (*Average of country ratings by grouping*)

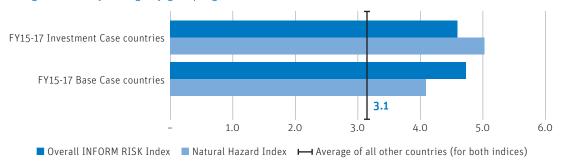


Figure 2 shows how the countries that GFDRR has supported so far in 2015 rank on the INFORM index, indicating that countries that have received significant GFDRR support are highly disaster-prone and demonstrate significant overall risk.

Figure 2. INFORM risk index (overall and natural hazard) of GFDRR's 2015 prioritization



GFDRR will continue its focus on at-risk countries with an eye toward least developed countries, small island developing States, landlocked developing countries and African countries, as well as middle-income countries facing specific disaster risk challenges.

# **Supporting Large-Scale Investment for Resilience**

Through its partnerships, GFDRR's targeted grants and technical assistance helped developing countries secure \$1.5 billion in World Bank investment programs alone in 2014—up 50 percent from 2013.<sup>7</sup> GFDRR's support and advocacy also contributed to an increase in World Bank financing for disaster risk management, which totaled \$5.3 billion in FY14—40 percent higher than in FY13.

This does not include the additional support that developing countries were able to leverage from other sources using GFDRR-supported capacity building, analytical products, and technical assistance.

Moreover, the Development Committee—the joint ministerial-level forum of the World Bank Group and the International Monetary Fund—noted that "GFDRR's support has proven critical in informing the design and supporting the implementation of larger operations," helping mainstream disaster risk management and climate change adaptation in development.<sup>8</sup>

Since July 2014, GFDRR's engagements have helped support at least nine investment programs, with at least two more expected before June 30, 2015. For example, the \$173 million Bangladesh Urban Resilience Project, approved in March 2015, is helping to strengthen that country's emergency response capacity and reduce the vulnerability of building construction.

Project Title	Country	Overall Program Size
Bangladesh Urban Resilience Project and Multipurpose Disaster Shelter Project	Bangladesh	\$450 million
Floods Emergency Recovery Project	Serbia	\$300 million
Floods Emergency Recovery Project	Bosnia and Herzegovina	\$100 million
Climate Resilient Infrastructure	Belize	\$30 million
Grenada First Programmatic Resilience Building Development Policy Credit Program	Grenada	\$15 million
Disaster Risk Management Development Policy Loan with a Deferred Drawdown Option	Seychelles	\$7 million
Building Climate and Disaster Resilience Along Dili-Aianoro and Linked Road Corridors in Timor-Leste	Timor-Leste	\$3 million
Metro Manila Flood Management Project	Philippines	\$3 million

- GFDRR Annual Report 2014: https://www. gfdrr.org/gfdrr-annualreport-2014-bringingresilience-scale
- 8 "Progress Report on Mainstreaming Disaster Risk Management in World Bank Group Operations," prepared by the staff of the World Bank Group as background for the April 12, 2014 Development Committee meeting. http://siteresources. worldbank.org/ **DEVCOMMINT/** Documentation/ 23554309/DC2014-0003(E)DRM.pdf

# **Enabling Partners**

GFDRR reaches out and develops partnerships to mobilize resources, increase opportunities for technical and operational collaboration, and to share lessons learned from country-level work at the regional and global level. Close cooperation with UN agencies is a cornerstone of this agenda, as GFDRR promotes and supports the goals of the Sendai Framework for Disaster Risk Reduction 2015-2030.

Table 2 presents partners that GFDRR has worked with or is working with in selected countries that have received support in 2015.

#### Table 2. Partners in selected countries

## AFR Mozambique

Partners: UN-Habitat, UK Department for International Development (DFID), Japan International Cooperation Agency (JICA), German Federal Enterprise for International Cooperation (GIZ), U.S. Agency for International Development (USAID), European Union (EU), Ministry of Finance, Ministry of Social Protection, National Directorate for Water, Regional Water Authority for the South, National Meteorological Institute, National Institute for Disaster Management, River Basin organization LIMCOM

#### Ghana

Partners: United Nations Development Programme (UNDP), Ministry of Finance, National River Basin Authorities, Disaster Management Agency, Ministry of Water Resources, Works and Housing, Water Resources Commission, University of Ghana

#### Senegal

Partners: Senegalese Civil Protection Agency, French Civil Protection

## **EAP** The Philippines

Partners: UNDP, EU, JICA, Australian Department of Foreign Affairs and Trade (DFAT), University of the Philippines, Philippine Atmospheric Geophysical and Astronomical Services Administration (PAGASA), Philippine Department of Public Works and Highways, Philippine Metro Manila Development Agency, Philippine Department of Science and Technology (DOST), Philippine Department of Education, Philippine Department of Health, Office of Civil Defense, National Economic and Development Authority, Department of Public Works and Highways, Department of Finance, Department of Agriculture

#### **ECA** Turkey

Partners: Prime Ministry Disaster and Emergency Management Presidency, Undersecretariat of Treasury, Istanbul Governor's Office, JICA, European Investment Bank, Islamic Development Bank, Credit Europe Bank

#### LCR Brazil

Partners: Ministry of Integration, Ministry of Cities

#### Peru

Partners: JICA, Peru's Ministry of Education, National School Infrastructure Program (PRONIED), School Infrastructure Office (OINFE), Pontifical Catholic University of Peru (PUCP), Massachusetts Institute of Technology (MIT), Swiss Federal Institute of Technology (ETH)

#### SAR India

Partners: National Disaster Management Authority (NDMA), Government of Uttarakhand, JICA, Asian Development Bank, Ministry of Home Affairs, Society for Uttaranchal Development & Himalayan Action (SUDHA), India Meteorological Department

#### Sri Lanka

Partners: UNDP, Ministry of Disaster Management, Ministry of Finance and Planning, University of Moratuwa, University of Sarabagamuwa, University of Peradeniya, University of Maryland, Government of Japan (PHRD), Ministry of Defense and Urban Development, OpenStreetMap, MapAction, JICA, Ministry of Irrigation and Water Resources Management

## **Bangladesh**

Partners: German Reconstruction Credit Institute (KfW), JICA, the Provincial Disaster Management Authority (PDMA), Ministry of Housing and Public Works, Ministry of Local Government, Rural Development and Cooperatives, Ministry of Primary and Mass Education (MoPME), Bangladesh University of Engineering and Technology, Center for Environmental and Geographic Information Services (CEGIS), Earthquakes and Megacities Initiative, Department of Environment, Bangladesh Water Development Board, Dhaka City South Corporation, Dhaka City North Corporation, Bangladesh Forest Department, Comprehensive Disaster Management Program, Capital Development Authority of Bangladesh (RAJUK), Space Research and Remote Sensing Organization (SPARRSO), Bangladesh Met Department, Fire Services and Civil Defense, Ministry of Disaster Management, Armed Forces Division, Dhaka Water and Sanitation Agency, Pioneer Insurance Company LTD

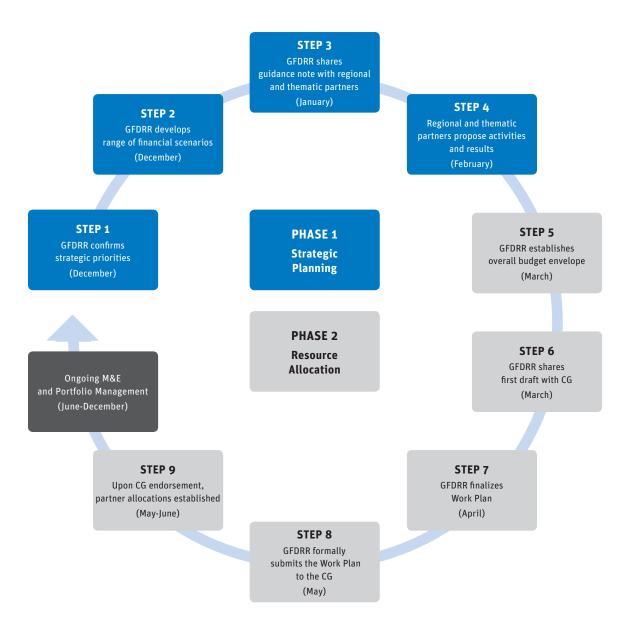
# how does GFDRR build its work plan?

GFDRR develops its Work Plan with its implementing partners to determine country demand. This process consists of two main phases: strategic planning and resource allocation, as summarized in Figure 3.

The Work Plan presents three aspects of GFDRR's proposed activities over the three-year planning period: resources required, geographic prioritization, and results expected.

- Resource requirements are based on indicative annual allocations to implementing partners and are dependent on the activities planned, geographic prioritization, and level of results expected.
- Geographic prioritization is considered in the context of growing and deepening demand for disaster and climate risk management support.
- Expected results are presented through large-scale programs enabled in disaster risk management and climate change adaptation enabled and pillar-based outputs.

Figure 3: GFDRR's Work Planning Process



The Work Plan proposes resource requirements, prioritization, and expected results under two scenarios: a **Base Case** and an **Investment Case**.

- The **Base Case** proposes steady allocations to GFDRR's Country Operations for the whole of the 2016-2018 period using available resources. Thematic Programs would continue with allocations in 2016, but would foresee minimal resources in 2017-2018.
- The **Investment Case** reflects the increasing demand for DRM activities in both Country and Thematic Programs. It would expand the Country Operations with more stable funding streams, while allowing GFDRR's Thematic Programs to scale-up and provide critical technical support to implementing partners throughout the 2016-2018 period.

# what is GFDRR's proposed program?

This section outlines GFDRR's planned resource allocations under Base and Investment Cases, resource requirements, and work planned and results expected under each pillar. The section under each pillar highlights a number of planned activities to illustrate the geographic scope and technical breadth of what will be delivered on the ground under this plan. Each highlighted activity is ready to launch in 2016-18, either as a standalone project or as part of a larger program. More detailed information for individual countries can be found in GFDRR Country Updates.<sup>9</sup>

Ountry Program Updates available at www.gfdrr.org

# **Resource Allocations**

Tables 3 and 4 indicate GFDRR's projected annual allocations under the Base Case and Investment Case scenarios.

Table 3. Projected **Base Case** Work Plan commitments by fiscal year (\$ million)

Category		2015	2016	2017	2018	2016-18
	Sub-Saharan Africa (AFR)	19.1	13.2	13.2	20.9	47.3
	East Asia and Pacific (EAP)	10.1	10.2	10.2	6.9	27.3
Country	Europe and Central Asia (ECA)	4.4	4.6	4.6	3.0	12.2
Operations	Latin America and Caribbean (LCR)	8.3	7.0	7.0	5.0	19.0
	Middle East and North Africa (MNA)	3.0	3.4	3.4	2.3	9.1
	South Asia (SAR)	5.5	9.8	9.8	7.5	27.1
<b>Country Total</b>		50.4	48.2	48.2	45.6	142.0
	Innovation Lab	1.5	3.3	1.4	1.4	6.1
	Hydromet	0.5	1.0	-	-	1.0
	Disaster Risk Financing and Insurance	2.0	1.0	-	-	1.0
Thematic	Resilient Recovery	4.4	-	-	-	-
Programs	Inclusive Community Resilience	0.5	1.5	-	-	1.5
	Resilience to Climate Change	5.1	3.2	2.4	-	6.0
	Resilient Cities	0.5	0.5	-	-	0.5
	Safer Schools	1.0	1.0	-	-	1.0
Thematic Total		15.5	11.5	3.8	1.4	16.7
Partnerships		2.3	2.3	-	-	2.3
GFDRR Total		68.2	62.0	52.0	47.0	161.0

Table 4. Projected **Investment Case** Work Plan commitments by fiscal year (\$ million)

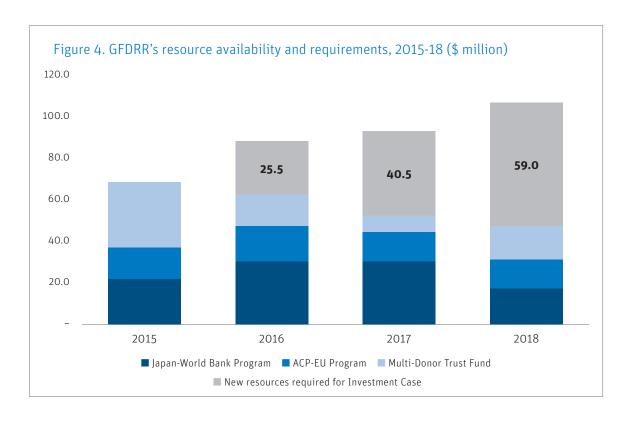
Category		2015	2016	2017	2018	2016-18
	Sub-Saharan Africa (AFR)	19.1	16.5	17.0	30.0	63.5
	East Asia and Pacific (EAP)	10.1	13.0	14.5	14.0	41.5
Country	Europe and Central Asia (ECA)	4.4	5.5	6.5	6.0	18.0
Operations	Latin America And Caribbean (LCR)	8.3	10.5	10.0	9.0	29.5
	Middle East and North Africa (MNA)	3.0	5.5	5.5	6.0	17.0
	South Asia (SAR)	5.5	13.0	14.0	13.5	40.5
	Country Total	50.4	64.0	67.5	78.5	210.0
	Innovation Lab	1.5	4.0	4.5	5.5	14.0
	Hydromet	0.5	1.5	2.0	2.5	6.0
	Disaster Risk Financing and Insurance	2.0	2.0	2.5	3.0	7.5
Thematic	Resilient Recovery	4.4	1.5	1.5	2.0	5.0
Programs	Inclusive Community Resilience	0.5	2.0	2.0	2.0	6.0
	Resilience to Climate Change	5.1	5.5	5.0	4.0	14.5
	Resilient Cities	0.5	0.5	1.0	1.0	2.5
	Safer Schools	1.0	3.0	3.0	4.0	10.0
	Thematic Total	15.5	20.0	21.5	24.0	65.5
Partnerships		2.3	3.5	3.5	3.5	10.5
GFDRR Total		68.2	87.5	92.5	106.0	286.0

# **Resource Requirements**

This section presents GFDRR's indicative resource requirements to carry out the implementation of the Work Plan 2016-18. It also provides an overview of resources expected to be available over the period.

Under the Base Case 2016-18, GFDRR will fully utilize the approximately \$161 million in expected available resources over the period. Under the Investment Case, planned allocations would total to \$286 million.

To fund the Investment Case, an additional \$25.5 million will be required for 2016. Closing the funding gap in 2017 and 2018 would require an annual increase in new contributions of \$40.5 million and \$59 million, respectively. The 2016-18 resource requirement under the Investment Case totals to \$125 million.



New resources raised over the 2016-18 period are required for the program areas indicated in table 5. As noted in the section, "How does GFDRR build its Work Plan?", these additional resource will allow GFDRR to meet the increasing demand for disaster risk management and climate change adaptation activities in both country and thematic programs. It would expand the access of the six regional areas to more stable funding streams, and it would allow GFDRR's thematic programs to continue to provide critical technical support to implementing partners throughout the 2016-18 period.

Table 5. GFDRR's resource requirements by fiscal year (\$ million)

Category		2016	2017	2018	2016-18
	Sub-Saharan Africa (AFR)	3.3	3.8	9.1	16.2
	East Asia and Pacific (EAP)	2.8	4.3	7.1	14.2
Country	Europe and Central Asia (ECA)	0.9	1.9	3.0	5.8
Operations	Latin America and Caribbean (LCR)	3.5	3.0	4.0	10.5
	Middle East and North Africa (MNA)	2.1	2.1	3.7	7.9
	South Asia (SAR)	3.2	4.2	6.0	13.4
<b>Country Total</b>		15.8	19.3	32.9	68.0
	Innovation Lab	0.7	3.1	4.1	7.9
	Hydromet	0.5	2.0	2.5	5.0
	Disaster Risk Financing and Insurance	1.0	2.5	3.0	6.5
Thematic	Resilient Recovery	1.5	1.5	2.0	5.0
Programs	Inclusive Community Resilience	0.5	2.0	2.0	4.5
	Resilience to Climate Change	2.3	2.6	4.0	8.5
	Resilient Cities	-	1.0	1.0	2.0
	Safer Schools	2.0	3.0	4.0	9.0
Thematic Total		8.5	17.7	22.6	48.8
Partnerships		1.2	3.5	3.5	8.2
GFDRR Total		25.5	40.5	59.0	125.0

# country operations

This section outlines specific deliverables and planned work by pillar across GFDRR's country operations.

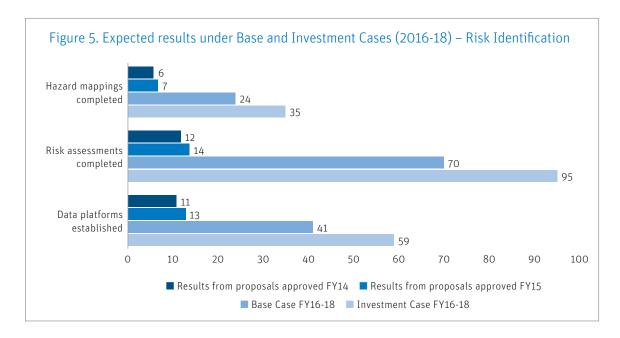
## **Action Pillar One: Risk Identification**

People in vulnerable countries will have improved access to information about disaster and climate risks, and greater capacity to create, manage, and use this information.

GFDRR delivered risk identification products and services in 37 countries in 2014. For example, GFDRR worked with 19 countries, including Malawi, Mozambique, Vietnam, and Nepal, to produce hazard information. Twenty-one countries, including Bangladesh, Djibouti, and Timor-Leste, conducted risk assessments, and 21 countries, such as Ethiopia, Indonesia, and Sri Lanka, implemented or improved their data sharing and communication platforms.

Over the next three years, the Secretariat will continue to support the development of risk identification tools and methodologies to support policymakers, communities and other stakeholders to collaborate, analyze, communicate, and use risk information effectively. The GFDRR Innovation Lab¹º guides GFDRR's Risk Identification work, promoting the use of science, technology, and open data, as well as the development of original tools to empower decision-makers in vulnerable countries to strengthen their resilience.

www.gfdrr.org/ innovation-lab Figure 5 shows the indicative output indicators targeted for Risk Identification under the Base Case and Investment Case scenarios.



### Highlights of Planned Risk Identification Activities

#### AFR Regional

#### Partners: Regional Economic Commissions (RECs)

The lack of institutional capacity to incorporate disaster risk management and climate resilience mechanisms into decision making puts African countries at particular risk from disasters. This activity aims to achieve strengthened capacity to generate, access, and use disaster information orientated towards development of DRM strategies, while strengthening capacity to incorporate disaster and climate risk into decision making. Support will be tailored to the capacity of the country to manage and utilize risk information. *Indicative Cost:* \$0.5 million (Base Case)

#### Africa Disaster Risk Financing initiative – Innovation Lab

#### Partners: Various

The GFDRR Innovation Lab team will lead activities under the EU-funded Risk Financing program to develop multi-risk financing strategies at regional, national, and local levels to help African countries make informed decisions, to improve their financial response capacity post disaster and to mitigate the socio-economic, fiscal, and financial impacts of disasters. *Indicative Cost: \$4.5 million (Base Case)* 

#### Tanzania

#### Partners: Various

This project would allow technical assistance for risk information collection and data management to improve the availability and accessibility of hazard and exposure data. The project would also inform resilient investments in urban development projects. Activities would include analytical and advisory services for the preparation of disaster and climate resilient investment at city level. *Indicative Cost:* \$1.0 million (Investment Case)

## **EAP** Philippines

Partners: Department of Interior and Local Government, National Anti-Poverty Commission, Department of Science and Technology, Department of Budget and Management, Metropolitan Manila Development Authority, JICA, Environmental Science for Social Change

The Government of the Philippines has invested heavily in producing hazard information and risk assessments through its technical agencies in order to facilitate decision-making across sectors and levels of governance. To maximize the results from this investment, tools and capacities need to be built especially among the most vulnerable local governments in the country, including those affected by Typhoon Haiyan and the Bohol Earthquake of 2013. In this context, GFDRR funding would support activities including capacity building in the use of risk information for urban planning and reconstruction. *Indicative Cost:* \$0.3 million (Base Case)

#### Indonesia

Partners: National Disaster Management Agency (BNPB), National Planning Agency (BAPPENAS), Ministry of Public Works (PU), city level counterparts (BPBDs, BAPPEDA)

Building on existing GFDRR investments data and analytics for preparedness applications, this activity aims to ensure that robust risk information is available for key risk reduction investment and planning decisions in Indonesia. The InaSAFE tools will be expanded to support the mandated Detailed Spatial Plans (RDTR) at the city level with both data and spatial analysis on climate and disaster risks. The work conducted under this activity would include extensive technical capacity building for software developers and GIS professionals in order to ensure sustainability. *Indicative Cost: \$0.4 million (Base Case)* 

#### **Vietnam**

# Partners: Ministry of Agriculture and Rural Development, Central Region Provinces, JICA

In the afermath of Typhoon Haiyan in 2014, the Prime Minister of Vietnam issued a directive to focus on "super typhoon" scenarios to better understand their impacts particularly of coastal storm surges. The Central Region Provinces are likely to be the most vulnerable to such events. Investing in the technical capacity to develop such scenarios requires new risk assessment tools to accurately model typhoon related wind, precipitation, and storm surges. This project would fund the adoption of these tools in relevant agencies. *Indicative Cost: \$1.0 million (Investment Case)* 

## **ECA** Regional

#### Partners: National government agencies

Over the last two years, GFDRR has supported the development of national probabilistic risk profiles for 30 countries in the ECA region. The proposed activity will use these risk profiles to build disaster awareness and initiate a dialogue with ministries of finance, particularly on earthquake and flood events. In addition, this activity may also co-finance a detailed risk assessment, which will generate risk information to meet the specific needs of the end-user, such as the design of risk reduction interventions, land-use planning, or financial applications. *Indicative Cost:* \$1.0 million (Investment Case)

#### LCR Saint Lucia

#### Partners: Government of Saint Lucia, Ministry of Finance

To improve risk reduction in Saint Lucia, ministries aim to incorporate science-based risk analysis into national investment and planning activities. This will include the creation of a quantitative risk reduction framework, enabling key stakeholders to measure risk reduction progress at the level of a portfolio of assets, and allowing the government and donors to understand investment decisions relative to their contribution to risk reduction. *Indicative Cost: \$1.5 million (Base Case)* 

### MNA Djibouti, Egypt, Lebanon, Morocco, and Yemen

# Partners: Ministry of Higher Education, Ministry of Interior, Mayor, and Ministry of Public Works and Highways

In order to operationalize and build risk assessment capability, these countries will benefit from establishing risk data sharing mechanisms. This activity will include the provision of risk assessment capacity building, establishment of geo-nodes and digital communication systems to enable efficient utilization of risk information for decision-making. *Indicative Cost:* \$1.5 million (Base Case)

#### Egypt

## Partner: Information and Decision Support Center (IDSC) of the Cabinet of Ministers

Building on the new disaster risk management strategy for the country, which identifies early warning as a key element for risk management and reduction, this project will implement the recommendations of the Multi-Hazard Early Warning System (MHEWS) for Egypt designed in the previous phase of engagement. *Indicative Cost: \$2.0 million (Investment Case)* 

#### Yemen

Partners: National Disaster Management Unit (NDMU), Ministry of Public Works and Highways, University of Sana'a, among others

Building on the activities of the DRM Country Program completed in 2010, this project will assist the Government of Yemen's efforts to improve its understanding of hazard risk, while also improving inter-sectoral coordination and risk management awareness. Planned activities include establishing a national DRM fund to address preparedness and response, creating a DRM lab at the University of Sana'a, and establishing an early warning system. *Indicative Cost: \$1.5 million (Investment Case)* 

### SAR Open City Scale-Up Regional SAR

Partners: DRM agencies and ministries, ICT ministries, urban development ministries, planning ministries, Humanitarian OpenStreetMap Team, IFRC, USAID, local universities

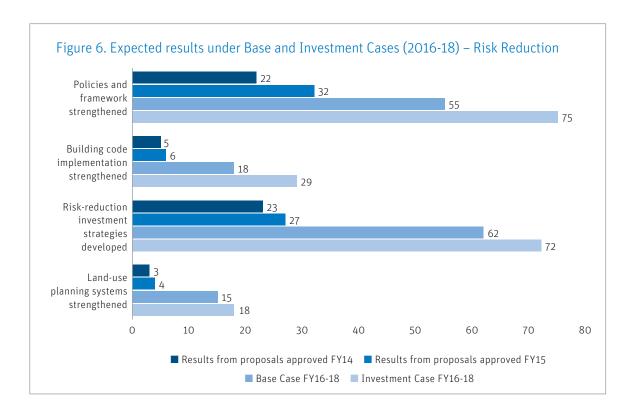
A lack of geo-referenced building specific data hinders the ability of governments to identify structural vulnerability and use proper data for urban planning. The GFDRR Open Cities Initiatives facilitates innovative, data-driven urban planning and disaster risk management in high-risk South Asian cities, such as Batticaloa, Sri Lanka; Dhaka, Bangladesh; and Kathmandu, Nepal. Open Cities has supported the creation of new data while also attending to the cities' broader ecosystems of open data production and use. This scale-up would intend to add two or more cities to this network in order to increase access to open data solutions for resilience, while also continuing the expansion of the Open Cities partner network. http://www.opencitiesproject.org/ Indicative Cost: \$0.5 million (Investment Case)

# **Action Pillar Two: Risk Reduction**

People in vulnerable countries will be better protected through improved planning, better building practices, and increased investments in vulnerability reduction.

Technical advice and financing to GFDRR-supported countries focuses on developing and institutionalizing policies that lead to risk reduction. GFDRR provided product development and advisory services to make disaster risk reduction a central part of national and subnational governmental efforts in 30 countries in 2014. These results strengthened, for example, community building codes and enforcement, land-use planning, and the implementation of investments in resilient infrastructure. GFDRR continues to focus its efforts on investing in activities that will influence and leverage large-scale investments leading to risk reduction in all sectors, as recent investment programs in Bangladesh, India, and Sri Lanka have shown.

Figure 6 shows the indicative output indicators for Risk Reduction under the Base Case and Investment Case scenarios.



### Highlights of Planned Risk Reduction Activities

### AFR Ghana and Togo

## Partners: Ministry of Finance, National River Basin Authorities

Togo and Ghana share several hundred kilometers of border, but they also share trans-boundary flood hazards, including those presented by the Oti and Mo Rivers. All activities will cover Ghana and Togo; they might be extended to neighboring countries to cover specific trans-boundary hazards, vulnerabilities and risks, as well as regional policies, which are relevant for DRM in Ghana. Activities include technical assistance, advisory services, capacity development, and knowledge services will be provided and address the country's policy dialogue, building guidelines, resilient infrastructure investments, early warning systems and community-based activities. *Indicative Cost:* \$0.6 million (Investment Case)

### Madagascar

### Partners: National Disaster Management Agency

Emergency response is centralized in Madagascar, but there is a need to decentralize some responsibilities and mainstream DRM into economic development. Activities support the Government of Madagascar in mainstreaming disaster risk management and climate change adaptation into economic development, and facilitate the support of decentralization of emergency response and resilient recovery. This technical assistance would build on the achievements of a previous GFDRR funded DRM project and the Emergency Infrastructure Preservation & Vulnerability Reduction Project. The activity will include: (i) financing a needs assessment and feasibility study for geographic expansion and harmonization of the country's EWS network, including a sustainable plan for a financing mechanism; and (ii) developing contingency planning for targeted geographic areas. *Indicative Cost:* \$0.4 million (Base Case)

#### **Ethiopia**

#### Partners: Ministry of Finance

Ethiopia is seeking support to operationalize its DRM investment framework. The purpose of this activity is to support the Government of Ethiopia in translating its disaster risk management strategic investment framework into an operational program. The activity will support the development of an operational program in early warning, risk assessment, and monitoring as well as prevention and mitigation. The project will also advance recovery, rehabilitation, and institutional strengthening. *Indicative Cost:* \$0.7 million (Investment Case)

#### Ghana

### Partners: Disaster Management Agency, Ghanaian Universities

This project aims to increase national capacity for key professions in DRM through a training and collaboration program on flood management and disaster risk reduction with Ghanaian Universities. *Indicative Cost: \$0.4 million (Investment Case)* 

#### **EAP** Indonesia

Partners: National Disaster Management Agency (BNPB), Ministry of Education and Culture, Ministry of Religion)

The Government will make significant capital investments in the education sector in order to meet its 12 year mandatory education program. The proposed activity will consist of three technical components to comprehensively cover policy and institutional framework, support to safe school implementation, and a monitoring and recognition system to achieve national safe school targets. *Indicative Cost:* \$0.7 million (Investment Case)

## Mongolia

Partners: Ulaanbaatar City Education Department, Ulaanbaatar City Mayor's Office, National Emergency Management Agency, Ministry of Construction and Urban Development, JICA

The aging public school building stock in Ulaanbaatar (UB) City is vulnerable to disasters. Vulnerabilities also exist in modern school seismic design, in particular the performance of non-structural heavy weight walls as well as how they affect the seismic resilience of the structural frames. Schools built until the 1970s (approx. 30% of UB City schools) are thought to have minimal or no seismic design features and are most vulnerable. Schools built between the 1970s and 1990s (approx. 50% of schools) generally have some limited seismic detailing, and are slightly less vulnerable. Schools built after 1990 to the present (approx. 25% of schools) are built to varied designs, some of which are likely to be vulnerable, including current 'model' school designs. In order to address this risk, further technical assistance activities will be implemented to prioritize the most vulnerable public school buildings for seismic retrofitting and develop credible cost estimates for such an investment. *Indicative Cost:* \$0.3 million (Investment Case)

#### **Vietnam**

## Partners: Ministry of Agriculture and Rural Development, Ministry of Industry and Trade

This activity supports the development of an integrated framework to coordinate financing and implementation of DRM investments and to strengthen DRM aspects of Dam Safety regulations. The stocktaking of DRM investments financed by both government and donors, and an evaluation of international best practices on government implemented investments, will be carried out to support the development of options for national DRM investment framework in Vietnam. The deliverables of dam safety activity will support MARD and MOIT to review the current legal and regulatory framework on dam safety management, discussing key issues and possible areas for improvement, including development of risk and hazard classification methods and procedure for prioritizing rehabilitation needs. Indicative Cost: \$0.8 million (Base Case)

#### **ECA** Central Asia

## Partners: Ministries of Finance, Disaster Management

The proposed project aims to support at least three countries in Central Asia on project formulation for a potential large-scale regional seismic risk mitigation project. This project will be the first phase of a longer term engagement and the second phase will initiate necessary activities proposed by the countries. *Indicative Cost:* \$3.0 million (Investment Case)

#### Albania

## Partners: Government of Albania

The proposed project will provide technical assistance to the Government of Albania to develop its national DRM investment program and update its building codes to international standards. This is envisaged to be a combination of Bank-executed and recipient-executed activities that will mainstream disaster risk management in national development. *Indicative Cost:* \$0.5 million (Investment Case)

#### LCR Colombia

## Partners: Government of Colombia

This project will seek to improve risk reduction and climate adaptation through national systems in Colombia. Technical assistance to the National Adaptation Fund will support the review of quality and effectiveness of risk management interventions. This assistance could help improve the risk reduction impact of \$5 billion of the Colombian government's own money over the next four years. *Indicative Cost:* \$0.7 million (Investment Case)

#### Haiti

Partners: Ministry of Public Works, Ministry of Education, Ministry of Health, Interministerial Committee of Territorial Planning, Municipalities, Ministry of Interior, UNDP, and the Private Engineering and Architect Association

In the aftermath of the 2010 earthquake, GFDRR and the World Bank supported the structural assessment of more than 400,000 buildings and the establishment of a building assessment unit under the Ministry of Public Works. Moving forward, GFDRR will develop a capacity building program for the Ministry of Public Works, architect and engineer associations, and scientific universities. GFDRR will also support the development and dissemination of municipal-based tools for improving land use planning and building codes enforcement, as well as the development of plan for risk prevention and mitigation for a middle-size urban settlement. Indicative Cost: \$1.0 million (Base Case)

## MNA Regional

Partners: Mayors of Cities in MNA, IE Business School, Georgetown University, and private sector entities

Based on the success of the ongoing pilot Women Resilient Cities Entrepreneurship Program, we are expanding the program to 30 other MENA cities, promoting the creation of resilient start ups. This will be accomplished through the delivery of a start-up package including business planning, training, mentoring, and financing. Indicative Cost: \$2.5 million (Investment Case)

## **Egypt**

## Partner: Information and Decision Support Center (IDSC) of the Cabinet of Ministers

Following the design of a tsunami preparedness plan for Egypt's North Coast, the proposed project will facilitate its implementation. It will include the improvement of the identified early warning systems, and will establish drills and mechanisms for evacuation and management plans. *Indicative Cost: \$1.0 million (Base Case)* 

## SAR India

## Partners: NDMA, Government of Uttarakhand, JICA, ADB

Recurring landslides in the Himalayan Valley of Uttarakhand impacts people living in the Valley, disrupting accessibility, damaging infrastructure, and harming economic activity, which is mainly based on tourism. An international workshop on best international practices and technologies for slope stabilization will be held, and a slope stabilization guide for Uttarakhand will be developed. *Indicative Cost:* \$0.2 million (Base Case)

#### India

## Partners: NDMA, Government of Bihar

Recurring floods in the Kosi river basin affect infrastructure and livelihoods. In 2008, 3.3 million people were affected, causing \$1.2 billion in damages. This project will consist of an infrastructure assessment of proposed river bank strengthening infrastructure, operational procedures for embankment asset management, and inputs to the flood master plan incorporating international best practices. *Indicative Cost:* \$0.2 million (Base Case)

#### **Pakistan Safer Schools**

Partners: Sindh Education Department, the Provincial Disaster Management Authority (PDMA)

This project will support the government in Sindh in creating disaster resilient schools through: (i) the development and implementation of a policy framework on disaster resilient schools; (ii) the review and prioritization of school safety measures in highrisk areas; along with (iii) the enhancement of school safety awareness. The proposed project intends to leverage a \$400 million investment in the Sindh Education Reform Program (SERP II) as well as significant multilateral and Government commitments. It would also be complementary to the ongoing governance reforms in the education sector. *Indicative Cost:* \$0.5 million (Investment Case)

## **Bangladesh Safer Schools**

Partners: Ministry of Housing and Public Works, Ministry of Local Government, Rural Development and Cooperatives, Ministry of Primary and Mass Education (MoPME), Ministry of Education (MoE)

Bangladesh faces a challenging risk profile that puts schools in peril: in 2007, Cyclone Sidr fully destroyed over 750 formal primary schools and partially damaged over 3,500 formal primary schools, resulting in \$75 million in direct damages. This proposed project would allow the issuance of explicit policy and procedures for multi-hazard resilient schools, as well as strategies, plans, and budget allocations for investment in improving school safety. It would directly influence the retrofitting of at least 5,000 schools and the construction of around 500 multi-purpose cyclone shelters. *Indicative Cost:* \$0.5 million (*Investment Case*)

## Scaling Up Urban Resilience in India

## Partners: Government Ministries, local stakeholders

Leveraging detailed climate scenario modeling and hazard mapping in the coastal city of Puri, Orissa, this project will complete the exposure and vulnerability mapping and also further strengthen the eco-systems-based analysis to flood risk mitigation. Lessons from the Puri engagement will be scaled up to operationalize urban resilience in other secondary cities in India. The proposed project will (i) support the detailed exposure and vulnerability mapping and eco-systems adaption in Puri; (ii) support preparation of a lessons learnt note and (iii) initiate a similar detailed risk analysis in one other secondary city in India. *Indicative Cost:* \$0.4 million (Investment Case)

## **Action Pillar Three: Preparedness**

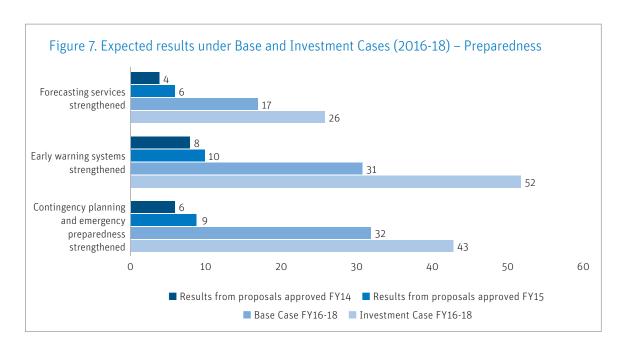
People in vulnerable countries will be better protected through more accurate and timely early warning, and through civil protection agencies capable of mobilizing a quick response in the event of a disaster.

GFDRR supports the modernization and strengthening of national weather, climate, and hydrological services, as well as early warning systems and other disaster preparedness efforts leading to significant investment and reform. GFDRR delivered results in 28 countries in 2014, contributing to improvements in forecasting and early warning systems, contingency and emergency response plans and protocols, and training and simulation exercises.

In the next three years, GFDRR continues to develop capacity and leverage investment in strengthened hydromet services. Activities will focus on a variety of issues, including developing a positive environment for investment in national hydromet services and the identification of opportunities to develop programmatic links between community-based approaches and larger scale investment in provincial and national preparedness plans, systems, and operating procedures. The Hydromet Program provides substantial support to projects focused on Preparedness.<sup>11</sup>

https://www.gfdrr.org/ hydromet

Figure 7 shows the indicative output indicators for Preparedness under the Base Case and Investment Case scenarios.



## Highlights of Planned Preparedness Activities

#### AFR Gambia

## Partners: National Disaster Management Agency (NDMA), UN, EU

Gambian authorities require institutional capacity to respond more effectively to disasters. The purpose of this activity is to support the government to enhance its DRM capacity by strengthening Gambia's NDMA. The project is composed of the following two components: (i) National Risk Assessment and Mapping: Under this component a comprehensive hazard and risk mapping and profiling exercise will be undertaken; (ii) capacity Assessment of NDMA and Partners in Disaster Risk Reduction. The main task under this component includes carrying out a comprehensive study to assess capacities of key partners at the central, regional, and local levels including public, private and NGOs/Community Based Organizations. *Indicative Cost: \$0.6 million (Base Case)* 

#### **EAP** Pacific Island Countries

Partners: NMHs, NDMOs, Physical/Urban Planning agencies, Ministries of Infrastructure, Utilities, Australia, Japan, New Zealand, SPC, UNESCO-IOC, UNOCHA, and WMO

Despite recent progress, the Pacific Island Countries still have limited technical and institutional capacity. Early warning and disaster response systems are constrained by geographical isolation and dispersed populations, limitations of 'last-mile' communication systems to remote outer island communities, and a lack of properly trained and equipped warning and emergency centers. The project will strengthen 'end-to-end' early warning and preparedness systems through (i) detection, forecasting, and warning of natural hazards; (ii) dissemination of timely warnings to the population; (iii) strengthening of emergency preparedness and response mechanisms at national and local/community levels, including strengthening of national and provincial DRM offices and emergency operating centers, installation of emergency communication equipment, preparation and simulation of contingency plans and community emergency plans. *Indicative Cost:* \$2.9 million (Investment Case)

## **Vietnam**

## Partners: Ministry of Natural Resources and Environment (MONRE)

This project will consist of integrated DRM investments in multi hazard monitoring and an early warning system. Investments in comprehensive solutions in hydromet services for disaster early warning will build on the advancements supported under an ongoing World Bank investment project. In accordance with the new DRM Law, MONRE is now tasked with a responsibility for multi-hazard monitoring (both weather-derived and geo-hazard) and flood forecasting and will need to further enhance its technical capacity to fulfill this mandate. *Indicative Cost:* \$0.5 million (Investment Case)

## ECA Moldova

## Partners: State Hydrometeorological Service (SHS) and Ministry Emergency Situations

Building on recent targeted hydromet investments, the State Hydrometeorological Service (SHS) is seeking to enhance service delivery to its users, including ministries, enterprises, and citizens. In order to leverage larger-scale investment and improvements, additional technical assistance is required, particularly in severe weather and seasonal forecasting, as well as early warning systems. This project will also provide technical assistance to the Ministry of Emergencies to continue to build preparedness and response capacities at regional levels. *Indicative Cost:* \$0.4 million (Base Case)

#### Serbia

## Partners: Government of Serbia

The proposed project will support the Government of Serbia to implement its newly launched National Disaster Risk Management Program. The major motivating factor is the devastating floods earlier in 2014. The plan therefore has a strong focus on flood risk management, and the Government of Serbia has requested the Bank's assistance to prepare and implement the plan. *Indicative Cost:* \$0.3 million (Investment Case)

## LCR Nicaragua and Honduras

## Partners: Governments of Nicaragua and Honduras

Adverse hydro-meteorological events are the most frequent disasters generated by natural hazards in Honduras and Nicaragua. From 1990 to 2012, it is estimated that annual economic losses due to weather-related disasters (e.g. hurricanes, tropical storms, floods, and landslides) were equivalent to 2.84% and 1.89% of GDP, for Honduras and Nicaragua respectively. This project would strengthen institutional capacities at the national level to support risk assessment and EWS for meteorological, hydrological, and climate-related hazards in Honduras and Nicaragua. *Indicative Cost:* \$1.0 million (Investment Case)

#### MNA Lebanon

## Partners: Governments of Lebanon, Beirut City

Following the successful launch of the first phase of the Urban Resilience Master Plan, which is focused on seismic and tsunami risk, the proposed project would scale up technical assistance in order to implement the master plan, including developing a micro-zonation system. This will likely leverage a resilient investment operation investment. *Indicative Cost: \$1.0 million (Investment Case)* 

## SAR India

Partners: National Disaster Management Agency (NDMA), Government of Tamil Nadu, Government of Punjab

There is a lack of involvement by communities in managing and operating risk mitigation infrastructure. A two-module training course will focus on the operation of risk mitigation infrastructure and early warning and dissemination systems. *Indicative Cost:* \$0.1 million (Base Case)

## **Bangladesh Hydromet**

Partners: Bangladesh Meteorological Department (BMD), Bangladesh Water Development Board (BWDB)

Bangladesh is part of one of the most dynamic climatic and hydrological systems in the world. Owing to its unique low-lying topography, dense river network, climate, and location, it is exposed to some of the most devastating water and climate-related hazards. While Bangladesh is in the process of modernizing some aspects of its meteorological service, there remains a need to expand its meteorological monitoring network and upgrade its hydrological observation network in order to, for example, improve the quality of flood forecasting. The project will support technical assessments of existing hydromet and climate services in Bangladesh, potentially allowing a larger-scale investment. The project would assess the hydrological and meteorological observation networks, including monitoring mechanisms, early warning systems, climate services, and capacity. Additionally, it will develop the scope for assessment of flood risks and institutional capacity to manage these risks in the northeastern region of Bangladesh. *Indicative Cost: \$0.3 million (Investment Case)* 

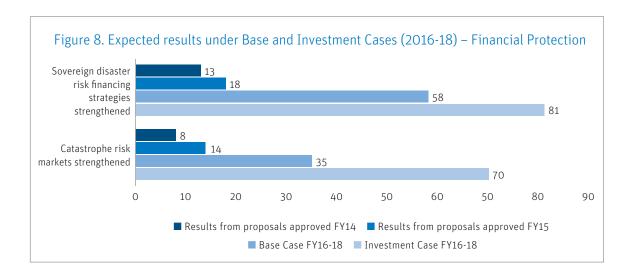
## Action Pillar Four: Financial Protection

Vulnerable countries will have improved financial resilience to the impact of natural disasters, with improved post-disaster financial response capacity and stronger domestic catastrophe insurance markets.

Since its creation, GFDRR has been instrumental in building countries' financial resilience to disaster risk. To date, the Secretariat has helped leverage \$1.4 billion in contingent financing to protect eight countries with immediate liquidity in case of a disaster. GFDRR will continue to partner with countries to increase financial resilience of governments, businesses, agricultural producers, and households against the economic burden of disasters. Activities will support developing and implementing tailor-made sovereign risk financing strategies that increase governments' ability to respond quickly and sufficiently to a disaster while protecting their long-term fiscal balance. The Secretariat will also support activities to promote the development of competitive catastrophic risk insurance markets, including general catastrophe insurance for homeowners and small and medium-sized enterprises, as well as agricultural insurance programs for farmers. The Disaster Risk Financing and Insurance (DRFI) thematic initiative provides substantial support to projects focused on Financial Protection.

The Africa Disaster Risk Financing initiative will support improvements in financial resilience in African countries. Through this program, multi-risk financing strategies are developed at regional, national, and local levels to help African countries make informed decisions, to improve their post-disaster financial response capacity and to mitigate the socio-economic, fiscal, and financial impacts of disasters.

Fgure 8 shows the indicative output indicators for Financial Protection under the Base Case and Investment Case scenarios.



## Highlights of Planned Financial Protection Activities

## AFR Comoros, Madagascar, Mauritius, Seychelles, and Zanzibar

Partners: EU, AFD, UNISDR, ISLANDS, Indian Ocean Commission

Countries in the Indian Ocean islands are not currently able to access a comprehensive package of options to enhance their financial protection from natural disasters. The purpose of this activity is to improve the understanding of disaster risks and provide risk-financing solutions for Comoros, Madagascar, Mauritius, Seychelles, and Zanzibar in order to provide a solid basis for the future implementation of disaster risk financing strategies. The project will make fundamental risk data available, as well as exposure models and country-specific catastrophe risk loss assessments/profiles for each country. It will also provide systematic reviews of existing budgetary arrangements to assess fiscal risk financing gaps in each country. National and regional catastrophe risk financing options will be assessed and recommendations made on preliminary national disaster risk financing strategies. Institutional capacity building would form an essential part of the project. *Indicative Cost: \$0.9 million (Investment Case)* 

## Africa Disaster Risk Financing initiative - DRFI Program

Partners: Ministries of Finance

This EU-funded Risk Financing program will work with a variety of partners to develop multi-risk financing strategies at regional, national, and local levels to help African countries make informed decisions, to improve their financial response capacity post disaster and to mitigate the socio-economic, fiscal, and financial impacts of disasters. The DRFI program will be leading large aspects of this engagement to enable the spread of better management of the financial impact from disasters in Africa by supporting vulnerable countries to develop and implement tailored risk financing strategies. *Indicative Cost:* \$4.5 million (Base Case)

## **EAP** Indonesia

Partners: Ministry of Finance

The project seeks to develop innovative solutions for sovereign risk financing and property catastrophe risk insurance. *Indicative Cost:* \$0.8 million (Investment Case)

#### **Vietnam**

## Partners: Ministry of Finance, Ministry of Agriculture and Rural Development

This project would enhance transparency and discipline in post-disaster budget execution. Currently recovery and reconstruction budget is allocated on a subjective basis with requests from provinces and line ministries sent to MOF without means for verification. Under the new law, MARD is tasked to develop a template to improve the funding request process. However, a complete process should be developed that enhances transparency in each stage: (i) assessment of damages, (ii) proposal of reconstruction need, (iii) assignment of funds, and (iv) monitoring of implementation. *Indicative Cost:* \$0.4 million (Investment Case)

#### Vietnam

# Partners: Ministry of Labor, Invalids and Social Assistance, Ministry of Agriculture and Rural Development

This project would aim to make social protection more responsive to natural disasters and climate change. It would support further development of recommendations provided in an initial stocktaking study, and complement the ongoing Social Assistance System Strengthening Project. The effort would focus on advocacy and preliminary capacity building with the possibility of extending into a pre-feasibility assessment for the design of climate and disaster responsive social protection instruments. *Indicative Cost:* \$0.2 million (Investment Case)

## Regional - East Asia

## Partners: Ministries of Finance

This proposed project component would support the development of property catastrophe risk insurance markets in South East Asia, by: i) assessing disaster-related contingent liabilities, including the development of catastrophe risk models for multiple hazards for Myanmar, Cambodia, and Lao DPR, ii) analyzing opportunities in disaster risk financing, proposing options for risk transfer mechanisms to mitigate catastrophe risk, and iii) enhancing the capacity in the areas of DRFI. *Indicative Cost:* \$1.5 million (Base Case)

## **ECA** Bosnia and Herzegovina

## Partners: Ministry of Finance, Europa Re

Since 2010, catastrophe insurance and weather insurance is growing in Southeast Europe. Similar to Albania, Serbia, and Macedonia, the Government of Bosnia recognizes the importance of providing affordable catastrophe coverage for homeowners and businesses. Building on GFDRR's existing work with countries in the region, this proposed project will help the government join the Southeast Europe and Caucasus Catastrophe Risk Insurance Facility (SEEC CRIF). This activity will provide technical assistance focused on the pricing of the insurance products that will be offered to the government through this multi-country insurance pool. *Indicative Cost:* \$0.4 million (Base Case)

## Georgia

## Partners: Ministry of Finance

The proposed activity will finance a stocktaking of existing DRF policies and financing mechanisms. In addition, it will conduct a fiscal impact diagnostic. The ECA DRM team will use this analytical work to initiate discussions with the Ministry of Finance and other stakeholders on the impacts of disasters, the necessity to invest in DRM to ensure sustained economic growth; and discuss financial protection options such as a CAT-DDO. *Indicative Cost:* \$0.5 million (Base Case)

## LCR Bolivia

Partners: Partners: Ministry of the Economy and Public Finances, Ministry of Planning and Development, Ministry of Autonomies, departmental and municipal governments, private insurance providers involved in exposure data collection, purchase of insurance coverage, and risk modelling, as well as the banking sector

Bolivia's decentralization law, which came into effect in 2009, requires departmental and municipal governments to put in place financial protection norms and mechanisms to ensure appropriate preparation to natural disasters, as well as recovery and reconstruction measures. As these policies have not yet been developed and previous experiences include agricultural insurance in small-scale production, the country would greatly benefit from technical assistance in the area of risk financing. GFDRR support would include an assessment of the economic and fiscal impact of disasters with a sectoral and territorial approach, given the decentralized legal framework. Additional activities would include work to conduct disaster risk assessments for financial uses, design appropriate financial protection and insurance strategies, and implement a pilot program. *Indicative Cost:* \$0.8 million (Investment Case)

#### **Central America**

## (Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama)

Partners: Ministries of Finance of the Central American Countries (COSEFIN), Caribbean Community and Common Market (CARICOM), United States, Canada, Mexico

In Central America, financial protections against disasters have received significant political support, with the 2010 Council of Presidents of the Central America Integration System (SICA) approving the ambitious Comprehensive Central American Disaster Risk Management Policy. The program calls for the integration of disaster risk management and climate adaptation into economic, social, and environmental regional policy frameworks. GFDRR's implementing partners will provide technical and policy support for Central America and the Dominican Republic (COSEFIN countries) to join the Caribbean Catastrophe Risk Insurance Facility (CCRIF) and purchase tropical cyclone and earthquake coverage from it, as well as strengthening the technical capacity of CCRIF members Ministries of Finance to better manage their fiscal vulnerability to disaster events. GFDRR funds would allow counties to improve their DRFI strategies and support the enhancement of fiscal protection and DRM budget execution. *Indicative Cost: \$1.0 million (Investment Case)* 

## MNA Egypt

## Partner: Information and Decision Support Center (IDSC) of the Cabinet of Ministers

Per the request of IDSC, GFDRR will provide capacity training to technical staff on financial protection. Furthermore, GFDRR will facilitate Egypt the access to other disaster risk financing and insurance instruments. *Indicative Cost:* \$0.7 million (Base Case)

## SAR Regional Disaster-Linked Social Protection in Bangladesh, India, and Pakistan

## Partners: Ministries of Social Welfare, Disaster Management, and Finance

Governments in South Asia, as well as in other areas, find it difficult to provide effective assistance during the post-disaster recovery phase, generally 2-8 months after a disaster event, when initial relief efforts slow and reconstruction planning begins, but major works have not commenced. Vulnerable populations that are dependent on government support are usually most impacted by this slowdown. Social protection that incorporates disaster triggers and links to DRM systems can help fill this need. This project will draw on expertise in Disaster Risk Financing and Insurance and the World Bank's Social Protection practice to help countries improve their targeting of vulnerable populations, their transfer mechanisms and their monitoring and evaluation, as well as analytical work for policy design. It will help build the evidence of the impacts of disasters on the poor and vulnerable and improve the resilience of social protection systems to provide services and resources before, during and after hazard events. It also assesses the ability of existing social safety-nets to reduce natural disasters impacts and identifies policies and measures to prevent famines and food insecurity, protect houses, speed up recovery of assets and livelihoods, and protect schools, clinics, and hospitals before and after a disaster. *Indicative Cost:* \$0.5 million (Investment Case)

## **India Urban Disaster Risk Financing and Insurance**

## Partners: Government of India, state and local authorities

This project would build on the disaster risk management engagement with India's states to consider options for disaster risk financing and insurance strategies and the possibilities of risk pooling among cities in India. *Indicative Cost:* \$0.3 million (Investment Case)

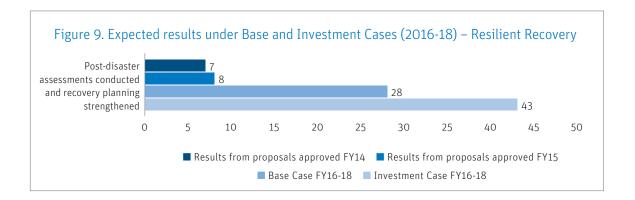
## **Action Pillar Five: Resilient Recovery**

# Disaster-hit countries seeking GFDRR support will improve the quality and timeliness of recovery and reconstruction.

GFDRR-supported post-disaster assessments are a critical way for countries to access large-scale recovery support. GFDRR has also gradually expanded and broadened its post-disaster efforts, with a special focus on rapid needs assessments, detailed recovery planning, and pre-disaster activities that allow for quicker and more effective disaster recovery. The partnership with the UN and the EU to develop the Disaster Recovery Framework Guide continues to help countries develop comprehensive, integrated recovery plans that prioritize and sequence recovery interventions, and helps governments improve their readiness for future disasters.

Over the next three years, GFDRR aims to continue to deepen and widen its engagement in disaster-affected countries in order to support and catalyze sustainable recovery that leverages longer-term risk reduction and leads to resilient development. It is worth noting that specific Resilient Recovery activities are dependent on event-specific circumstances and, therefore, implementing partners have generally not been able to highlight the activities planned under this pillar.

Figure 9 shows the indicative output indicators for Resilient Recovery under the Base Case and Investment Case scenarios.



## Highlights of Planned Resilient Recovery Activities

## **ECA** Bosnia and Herzegovina

## Partners: Government of Bosnia and Herzegovina

In May 2014, Bosnia and Herzegovina was hit by massive floods affecting 1.5 million people and resulting in estimated damages of over \$1 billion. The proposed activity will support the implementation of ongoing recovery process, including the rehabilitation of local and regional public infrastructure across the most affected municipalities. *Indicative Cost: \$0.2 million (Base Case)* 

# thematic programs

GFDRR has identified a particular need for focused technical support in a series of core areas. In order to assure the quality of GFDRR grants in these fields, the Secretariat hosts and supports a number of cross-regional teams that provide technical support to implementing partners, and lead capacity development and knowledge management.

Some of GFDRR's thematic programs are primarily involved with a specific pillar of action, such as the Innovation Lab with Pillar 1 – Risk Identification. Others, such as Inclusive Community Resilience, cut across the pillars.

Action Pillar Focus	Thematic Programs
Primarily Pillar 1 — Risk Identification	Innovation Lab
Primarily Pillar 3 — Preparedness	Hydromet
Primarily Pillar 4 — Financial Protection	Disaster Risk Financing and Insurance (DRFI)
Primarily Pillar 5 — Resilient Recovery	Resilient Recovery
Cross-cutting	Inclusive Community Resilience, Resilience to Climate Change, Resilient Cities, Safer Schools

## **Innovation Lab Program**

## www.gfdrr.org/innovation-lab

The GFDRR Innovation Lab guides GFDRR's Risk Identification work and supports the use of science, technology, and open data in promoting new ideas and the development of original tools to empower decision-makers in vulnerable countries to strengthen their resilience. The Program is organized under the following initiatives:

- Open Data for Resilience Initiative (OpenDRI) helps apply the concepts of the global open data movement to DRM, often using its suite of complementary tools, including free and open-source risk data sharing platform GeoNode, OpenStreet-Map community mapping, and realistic disaster scenarios tool InaSAFE.
- **Understanding Risk (UR)** is an open and global community of 3,300 experts and practitioners interested and active in disaster risk assessment.
- Code for Resilience partners local technologists with disaster risk management experts to create digital and hardware solutions for DRM and other civic-minded activities.
- The Spatial Impact Assessment team uses satellite imagery and local spatial data sets to efficiently evaluate the entire extent of damage from a disaster and facilitate the development of a financial estimate for a country's recovery, supporting GFDRR's Resilient Recovery efforts.

## **Key Facts**

80+ countries	Over 1,400
Supported by the Innovation Lab	Geospatial data sets provided to the public
41,000+	3,300+ experts & practitioners
Buildings mapped by OpenDRI	Members of the Understanding Risk community
10,000+ downloads	Publications
of InaSAFE, an OpenDRI program	Open Data for Resilience Field Guide <sup>12</sup>
	Understanding Disaster Risk in an Evolving World <sup>13</sup>
	Open Data for Resilience Initiative: Planning an Open Cities Mapping Project <sup>14</sup>
	2014 Understanding Risk Proceedings: Producing Actionable Information <sup>15</sup>
	Understanding Risk – Review of Open Source and Open Access Software Packages Available to Quantify Risk from Natural Hazards <sup>16</sup>

- 12 www.gfdrr.org/ODRIFG
- <sup>13</sup> https://www.gfdrr. org/sites/gfdrr/ files/publication/ Understanding\_Risk-Web\_Versionrev\_1.8.0.pdf
- https://www.gfdrr. org/sites/gfdrr/files/ publication/Planning-an-Open-Cities-Mapping-Project\_O.pdf
- http://www.gfdrr. org/sites/gfdrr/files/ publication/UR-Proceedings-2014.pdf
- https://www.gfdrr. org/sites/gfdrr/files/ publication/UR-Software\_Review-Web\_ Version-rev-1.1.pdf

## Highlights of Planned Innovation Lab Program Activities

## **Enhancing Risk Identification Quality through Technical Assistance**

Technical advice to ensure that investments (made by GFDRR, the WB and partners), in the generation and use of risk assessment information, are targeted, robust and aligned with international best practice. *Indicative Cost:* \$0.4 million (Base Case)

## **Risk Information, Partnerships, Training and Communications**

Ensure clear communication of emerging best practices and successful application of new technologies/approaches to challenges through the development of international and local partnerships, new communication and training materials, and workshops. *Indicative Cost:* \$0.4 million (Base Case)

## Think Hazard! A New Tool for Development

This is a new simple and quick, yet robust, analytical tool with underpinning data and analytical systems that enables a development specialist to determine, for a given project location, relevant natural hazards, their potential likelihood of occurrence, and actions that would make their project resilient. *Indicative Cost:* \$0.8 million (Base Case)

## **Open Data for Resilience Technology**

OpenDRI has developed a suite of open-source complementary tools to improve risk information through better access to data (e.g., GeoNode, OpenStreetMap, InaSAFE). Provision of ongoing support to international OpenDRI developer and user community to increase userability and applicability of these tools in developing countries. *Indicative Cost:* \$0.6 million (Base Case)

## Open Data for Resilience Challenge Fund

This activity, funded by DFID, will provide an innovative demand-led toolkit of new open data and tools, through the launch of a small grants program. In addition, a scoping project to determine the feasibility of an Open Data for Resilience Platform will be undertaken, culminating in a high level publication and a pilot project. *Indicative Cost: \$3.5 million (Base Case)* 

## 2016 Understanding Risk Forum

Understanding Risk (UR) is a global community of disaster risk management practitioners that exchange knowledge, collaborate, and share best practices in the field of disaster risk assessment. There are currently 3,200 UR community members from 135 countries around the world. The biennial international forum will be held in 2016. *Indicative Cost: \$0.8 million (Investment Case)* 

## **Post-Disaster Spatial Impact Assessment**

The use of satellite imagery and local spatial datasets to efficiently evaluate the extent of damage from disasters and to facilitate the development of a financial estimate for a country's recovery – in support of GFDRR's Resilient Recovery efforts. *Indicative Cost:* \$0.3 million (Investment Case)

## Code for Resilience 2016 & 2017

This initiative partners local technologists with disaster risk management experts to create digital and hardware solutions for disaster risk management and other civic-minded activities. *Indicative Cost:* \$0.8 million (Investment Case)

#### Risk Profiles and Risk Data Visualization

Support to international organizations and GFDRR to produce standardized country risk profiles for senior decision makers, based on risk identification efforts funded under other programs. Support to increase the use of online visualization, mapping graphics and user-driven communication tools to ensure risk information is accessible and communicated to a wide range of non-specialists. *Indicative Cost:* \$0.5 million (Investment Case)

## **Hydromet Program**

## www.gfdrr.org/hydromet

The Hydromet Program works with countries to develop modern, sustainable, and service-oriented weather, climate and hydrological services. Launched in 2011, the program works closely with the World Meteorological Organization (WMO), the Global Framework for Climate Services (GFCS), national meteorological and hydrological services (NMHSs), and governments to support countries modernize their weather, climate, and hydrological services as well as early warning systems. In particular, the program seeks to improve service delivery to increase the accuracy and timeliness of weather and hydrological forecasts, introduce impact-based forecasting and improve efficacy of early warning systems.

## **Key Facts**

## GFDRR grants in 25 countries

Are improving the accuracy and timeliness of hydrometeorological services in 2014

## \$400+ million

Leveraged in investments from the Climate Investment Funds, World Bank, and other partners

## 31 countries

Have improved their hydrometeorological services and expertise since the program's inception

## **Publications**

Guidebook on Socio-Economic Benefits of Hydromet Services (Joint WMO-USAID-GFDRR/WB publication, May 2015)

Guide on Impact Based Forecasting (jointly with WMO, June 2015)

Weather and Climate Resilience Effective Preparedness through National Meteorological and Hydrological Services<sup>17</sup>

Improving Weather, Climate and Hydrological Services Delivery in Central Asia (Kyrgyz Republic, Republic of Tajikistan and Turkmenistan)<sup>18</sup>

<sup>&</sup>lt;sup>17</sup> https://www.gfdrr. org/sites/gfdrr/ files/publication/ Weather\_and\_Climate\_ Resilience\_2013.pdf

<sup>&</sup>lt;sup>18</sup> https://www.gfdrr. org/sites/gfdrr/files/ publication/GFDRR\_ ECA\_Hydromet\_Study. pdf

## Highlights of Planned Hydromet Program Activities

## Modernizing Hydromet Services to Strengthen Climate Resilience in Africa

Facilitate the development of and contribute to launching a Regional Framework Program to Improve Hydro-Meteorological Services in Africa. *Indicative Cost:* \$1.0 million (Base Case)

## **Strengthening Weather and Climate Information Systems**

Develop capacity and provide assistance to modernize weather and climate information and decision-support systems, which will lead to improvement of early warnings, reduce economic losses, and save lives. *Indicative Cost:* \$0.9 million (Base Case)

## Just-In-Time Project Preparation Facility

Support hydromet investments by facilitating vulnerability and socioeconomic assessments, NMHSs capacity assessment, development of strategies and action plans, among others. Indicative Cost: \$2.1 million (Investment Case)

## **Hydromet Innovation and Technical Support Project**

This activity will support: (i) a range of knowledge products; (ii) documentation of lessons learned; (iii) tools that support practitioner-based knowledge sharing; and (iv) innovation through research, pilot projects, and business development. *Indicative Cost: \$1.1 million (Investment Case)* 

## Modernizing Climate and Hydrological Services in Ethiopia

This sub-project will strengthen resilience to natural hazards in Ethiopia through the development of an integrated modernization program to improve hydromet services and multi-hazard early warning systems. This will include identification of gaps in current warning services, assessment of the capacity of national stakeholders, and potential social and economic benefits of modernization. *Indicative Cost:* \$0.3 million (Investment Case)

## Hydrological Services Assessments and Service Delivery Improvements

This study will evaluate status of the institutions dealing with surface water hydrology and the services provided to national users such as water resources management, agriculture, public health and others. The expected result will be a better understanding of the functionality of these services leading to recommendations for improvement and demand-driven service delivery, including possible investments and capacity building support. *Indicative Cost: \$0.3 million (Investment Case)* 

## Disaster Risk Financing and Insurance (DRFI) Program

www.gfdrr.org/disaster-risk-financing-and-insurance

The DRFI Program, an initiative managed jointly by the World Bank Group's Finance and Markets Global Practice and GFDRR, was established in 2010 to improve the financial resilience of government, businesses, and households against natural disasters. It is the leading partner of developing countries seeking to develop and implement comprehensive financial protection strategies.

Disaster risk finance helps design and implement sustainable and cost-effective financial protection strategies against climate and disaster risks. National and local governments, businesses, and households—including farmers, herders, small and medium enterprises (SMEs), homeowners, and the most vulnerable—can meet the costs from disasters while minimizing threats to development, fiscal stability, or wellbeing. Financial protection complements and can mobilize investments in risk reduction and building resilience.

## **Key Facts**

## More than 40 countries

Where the program has provided advisory services and analytical support or tools to strengthen decision making on disaster risk financing

## 10% of herders covered in Mongolia

The Index-Based Livestock Insurance Pilot in Mongolia in 2014/2015 protects the livelihoods of 15,000 households

## \$1.4 billion

In contingent financing secured with GFDRR support to provide immediate funds to Colombia, Costa Rica, El Salvador, Guatemala, Panama, Peru, the Philippines, the Seychelles, and Sri Lanka in case of disaster

## Panama's financial protection

Supported by the DRFI Program, Panama adopted a National Strategic Framework for Disaster Risk Financing and Insurance in November 2014, becoming the first country in the world to adopt such a framework by law

## **Publications**

The Pacific Disaster Risk Financing and Insurance Program<sup>19</sup>

Financial Protection Against Natural Disasters: An Operational Framework for Disaster Risk Financing and Insurance<sup>20</sup>

PCRAFI 2015: Seven country notes<sup>21</sup>

Panama Strategic Framework for the Financial Management of Disaster Risk<sup>22</sup>

Against%20 Natural%20Disasters. pdf <sup>21</sup> Tonga: www.gfdrr.org/sites/ gfdrr/files/publication/ Country-Note-Tonga.pdf Samoa: www.gfdrr.org/sites/ gfdrr/files/publication/ Country-Note-Samoa. Cook Islands: www.gfdrr.org/sites/ gfdrr/files/publication/ Country-Note-Cook-Islands.pdf Vanuatu: www.gfdrr.org/sites/ gfdrr/files/publication/ Country-Note-Vanuatu. pdf Fiji: www.gfdrr.org/sites/ gfdrr/files/publication/ Country-Note-Fiji.pdf Solomon Islands: www.gfdrr.org/sites/

<sup>19</sup> hwww.gfdrr.org/sites/ gfdrr/files/publication/

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gfdrr/files/publication/

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## Highlights of Planned Disaster Risk Financing and Insurance Program Activities

## DRFI Program - Policy Advisory, Capacity Building, Knowledge Management

Ensuring that countries, partners, and international institutions have access to relevant information on disaster risk financing and insurance to guide actions in support of building financial resilience. *Indicative Cost: \$1.0 million (Base Case)* 

## Support to Implementation of DRFI Strategy in the Philippines

Supporting the Government of the Philippines to develop market-mediated catastrophe risk finance and insurance solutions at national and local levels. This supports the implementation of the national financial protection strategy and action plan, prepared with support of the World Bank. *Indicative Cost:* \$4.4 million (Base Case)

## **Disaster Risk Finance for Agriculture**

Support countries to implement sustainable, cost-effective public-private partnerships in agricultural insurance that increase financial resilience of rural households. *Indicative Cost:* \$4.5 million (Base Case)

## **Impact Appraisal Sovereign Disaster Risk Financing**

The objective of the program is to design, test and finalize a framework for quantitative impact appraisal of Sovereign DRFI instruments to assess their effectiveness, efficiency and impact. *Indicative Cost:* \$3.0 million (Base Case)

#### Disaster Risk Finance for Scalable Social Protection

Exploring new ways to enhance social protection mechanisms to offer rapid and timely assistance to vulnerable households affected by natural disasters, and so increase resilience to shock events. *Indicative Cost:* \$0.7 million (Investment Case)

## **Disaster Risk Finance Analytics**

Enabling national/subnational governments and development partners to have access to improved tools and well-communicated technical information to support risk-informed decisions in disaster risk finance. *Indicative Cost:* \$6.5 million (Investment Case)

## **Pacific DRFI Program**

Support to Pacific Island Countries to institutionalize the lessons learned from the Pacific Catastrophe Risk Insurance Pilot to improve the public financial management of natural disasters, and post-disaster budget execution guidelines, through sustainable mechanisms owned by the countries. *Indicative Cost: \$2.0 million (Investment Case)* 

## **Resilient Recovery Program**

## www.gfdrr.org/area/Pillar5

The Resilient Recovery Program supports government-led post-disaster assessments and recovery frameworks, promotes the exchange and sharing of knowledge, and offers technical assistance to help countries mainstream disaster risk management and recovery readiness into development policy. In 2014, GFDRR - in collaboration with the EU and UNDP - developed the Disaster Recovery Framework Guide to help countries prioritize and sequence recovery interventions, improving their readiness for future disasters.

During 2013-14, GFDRR also provided financial and technical support for post-disaster assessments and recovery planning in 22 countries, including Bosnia and Herzegovina, Burundi, Guatemala, India, Indonesia, and Serbia. To date in 2015, GFDRR has supported post-disaster assessments in India (Cyclone Hudhud, Andhra Pradesh and Jammu & Kashmir floods), Malawi, and Albania and post-conflict assessments in Gaza, Syria, and Ukraine, which are likely to leverage significant recovery, reconstruction and disaster risk management investments by WBG and other partners.

## **Key Facts**

In just the last two years, GFDRR has supported 22 post-disaster engagements	that have informed 21 World Bank investment projects
worth \$1.85 billion	of which, \$1.10 billion

## is directly related to recovery and reconstruction, risk reduction or disaster risk management

## **World Reconstruction Conference 2**

Joint Declaration to Strengthen Resilient Recovery and Reconstruction in the Post-2015 Framework for Disaster Risk Reduction https://www.gfdrr.org/WRC2

## **Publications**

Disaster Recovery Framework Guide<sup>23</sup>

Resilient Recovery: An Imperative for Sustainable Development<sup>24</sup>

Eight Disaster Recovery Country Case Studies (forthcoming)

<sup>23</sup> www.gfdrr.org/sites/ gfdrr/files/publication/ DRF-Guide.pdf

<sup>&</sup>lt;sup>24</sup> https://www.gfdrr. org/sites/gfdrr/ files/publication/ Resilient-Recovery-An-Imperativefor-Sustainable-Development.pdf

## Highlights of Planned Resilient Recovery Program Activities

## **Strengthening Recovery Systems**

This activity aims to strengthen countries' disaster recovery capacity in an ex-ante manner, enabling them to develop and implement resilient post-disaster recovery and reconstruction leading to sustainable development. *Indicative Cost:* \$1.0 million (Base Case)

## **Capacity Development for Disaster Recovery Frameworks**

This activity aims to build capacity for developing DRFs, including training, events, and technical assistance to countries in developing national DRFs. This will complement joint roll-out by the EU, the UN, and the World Bank of the PDNA guide program. *Indicative Cost:* \$1.0 million (Investment Case)

## **Promoting Local Level Resilient Recovery**

This activity aims to engage Civil Society and Academia for the development of knowledge products and toolkits focused on ex-post disaster recovery and ex-ante strengthening of recovery systems at sub-national governance levels. *Indicative Cost:* \$0.5 million (Investment Case)

## Thematic Expansion of DRF Guide

This activity aims to carry out analytical work to deepen the understanding on specific cross-cutting areas of post disaster recovery such as Building Back Better (BBB), disaster recovery in conflict and fragile situations, and droughts. *Indicative Cost:* \$0.4 million (Investment Case)

## **Inclusive Community Resilience Program**

http://www.gfdrr.org/areas/CivilSociety

Through its Inclusive Community Resilience initiative, GFDRR aspires to provide operational knowledge and technical assistance to World Bank task teams, governments, partners and other stakeholders to systematically scale up community-driven resilience through strengthened partnerships and coordination mechanisms. The initiative will leverage country investment programs that put resources directly in the hands of poor households and communities and support civil society and broader citizen engagement in disaster risk management for accountability and the achievement of greater results on-the-ground. The program will also continue to support community level innovations and promote the voice of vulnerable communities in national and global policy dialogue on resilience.

## **Key Facts**

## **Program objectives**

Integrate civil society, citizen engagement, gender, and social inclusion into GFDRR's Portfolio

Mainstream DRM into large-scale country investment operations that provide resources directly to poor households and communities

Generate and share evidence on effective community-driven DRM approaches, and promote community and civil society voices in global DRM policy dialogue

## **Publications**

Elders Leading the Way to Resilience<sup>25</sup>

Community Led Partnerships for Resilience<sup>26</sup>

Protecting and Empowering Those Most at Risk: Building Social Resilience of the Poor to Disaster and Climate Risk<sup>27</sup>

- <sup>25</sup> www.gfdrr.org/sites/ gfdrr/files/publication/ Elders-Leading-the-Way-to-Resilience.pdf
- 26 www.gfdrr.org/sites/
  gfdrr/files/publication/
  Community-Ledpartnership-forResilience.pdf
- www.gfdrr.org/sites/ gfdrr/files/publication/ Building-Social-Resilience-Protectingand-Empowering-Those-Most-at-Risk.pdf

## Highlights of Planned Inclusive Community Resilience Program Activities

## **Protecting Households in Times of Natural Disasters**

The proposed activity will provide technical assistance to the Governments of Tonga and Fiji aimed at introducing and implementing elements of the disaster preparedness/response into their social protection systems. *Indicative Cost*: \$0.7 million (Investment Case)

## **Training on Social Impact Assessment (SIA)**

This project aims to ensure that the social impacts of disasters and recovery efforts are consistently monitored across post-disaster engagements by strengthening the SIA methodology through technical assistance and the provision of training. *Indicative Cost: \$0.3 million (Investment Case)* 

## Capacity Building on Gender and Citizen Engagement in the GFDRR Portfolio

The primary objective of this activity is to mainstream gender and citizen engagement approaches in the GFDRR portfolio. In 2014, a preliminary review of the GFDRR portfolio indicated that only 19% of the grants under implementation considered gender aspects either in their design or during implementation. As a result, GFDRR, through the Inclusive Community Resilience Program, will seek to integrate these key considerations of gender and citizen engagement during the design of projects through targeted trainings and workshops to task teams in GPSURR and GFDRR. The team will also provide on demand, just-in-time support to task teams requiring support in the integration of these elements during project design or implementation. *Indicative Cost: \$0.2 million (Base Case)* 

# Empowering Women as Resilience Champions through National Community Driven Development

This activity will support the government of Philippines in undertaking a community-led multi-hazard mapping initiative to define areas at risk for the construction of public infrastructure and housing. The project will also leverage the ongoing World Bank-financed National Community Driven Development Program (NCDDP) platform that is aiming to improve community access to basic services and participation in local government planning by targeting approximately 800 municipalities (of which 545 are rural Haiyan affected municipalities). This technical assistance will seek to develop risk maps at the community level during the next NCDDP sub-project cycle (2016-2019) and empower women as resilience champions playing a leading role in the mapping process, and investment decision making process. *Indicative Cost: \$0.5 million (Base Case)* 

## Link Community Early Warning and Early Action for Better Social Protection

This activity will develop a mechanism to enable forecast-based financing for preparedness, so that funds are disbursed when thresholds of unusual rainfall conditions are reached. It will help create triggers for early actions that can help reduce losses, such helping move people and assets out of harm's way or distributing high-yield seeds to chronically food insecure farmers in anticipation of expected favorable rains. Additionally, a participatory game will be adapted to engage youth in real-time monitoring of river levels and establishing relationships between rainfall, river flow, and flood risk – supporting both the improvement of hydrological models and the credibility of flood warnings to trigger early action. *Indicative cost:* \$0.4 million (Base Case)

## **Community-Led Partnerships for Resilience**

Building on ongoing activities initiated during the pilot phase of GFDRR's CSO engagement strategy, this activity will scale up support towards documenting and capturing case studies that showcase community-led resilience. Currently, eight case studies are being developed where women-led community-based organizations are working in partnership with their local and/ or national authorities to better manage disaster risk. These case studies demonstrate good practice on how women innovate and lead the way, building partnerships with governments to build broader community resilience. In partnership with other organizations such as National Geographic, the proposed activity will build on these ongoing initiatives and expand to include researching the impacts of climate change on women through film and photographic documentation, for example. *Indicative Cost: \$0.1 million (Base Case)* 

## Community-led DRM in Afghanistan

This project will provide technical assistance focused on hazard mapping, community based risk assessment, early warning systems, and DRM activities identified as priorities by communities to support the implementation of the Ministry for Rural Rehabilitation and Development's (MRRD's) Disaster Management Strategy. *Indicative Cost: \$1.0 million (Investment Case)* 

## Promotion and Training on Disability Inclusive Disaster Risk Reduction

Fifteen percent of the world population is comprised of persons with disabilities and when compared to the general population, they face a higher risk in emergency situations. Working with UNIDSR, WCDRR Disability Caucus, National Governments, and NGOs, this activity will facilitate the strategic dissemination of advancements in Disability Inclusive Disaster Risk Reduction made at the World Conference on Disaster Risk Reduction (WCDRR) and the Sendai framework. A DIDRR guide will be developed – showcasing good practices. In addition, a series of regional training will be organized. *Indicative Cost: \$0.2 million (Investment Case)* 

## **Resilience to Climate Change Program**

## http://www.gfdrr.org/areas/ClimateChange

Building on the Hydromet Program, GFDRR has established the Resilience to Climate Change thematic initiative to respond to increasing demand from countries for technical assistance to help them formulate enabling policies and investment programs for integrating climate and disaster risk into their development strategies. The program focuses specifically on resilience to hydro-meteorological disaster risks, adaptation to climate change, and management of the residual risk of climate-related disasters.

The funded activities help strengthen institutional and capacity building of partner stakeholders, to ensure that they are ready and capable of implementing long-term investment programs.

Activities are positioned to influence policymaking and investment in measures at the required scale, by leveraging both World Bank resources and those of national governments and other partners. It will also develop and test innovative approaches to disaster risk reduction to provide proven and potentially transformative solutions to the challenge of climate and disaster risk management.

Just-in-time technical assistance under this program supports highly-specialized capacity building and advice in response to country demand. Activities address specific issues related to climate resilience or weather-related disaster risk management. This rapid assistance is requested in response to a window of opportunity for critical policy reforms, or where waiting for normal processing of technical assistance grants would not be feasible. The program is already supporting Morocco in its design of a resilience fund and is expected to build capacity with Central Asian national meteorological and hydrological services.

The Secretariat will develop a draft proposal on the scope and approach of the Resilience to Climate Change Initiative to be shared prior to and discussed during the first Climate Advisory Group meeting, during the Fall CG meeting in October 2015.

## **Key Facts**

## Between 1980 and 2012, weatherrelated disasters accounted for 87% of total disasters recorded

They led to reported losses of \$2.6 trillion and 1.4 million lives lost

# Climate change is a risk-multiplier, exacerbating the intensity and frequency of natural hazards

## Adaptation to the forefront

In 2014, GFDRR began applying a climate change filter to its projects to verify whether its DRM country program activities also contribute to building resilience to long-term climate change risks.

## **Publications**

Climate Change and Poverty Report<sup>28</sup>

Disaster risk and poverty: Assessing the global exposure of the poor to floods and droughts<sup>29</sup>

- This report is expected to be published in July 2015 (title subject to change)
- <sup>29</sup> This report is expected to be published in June 2015

## Highlights of Planned Climate Change Program Activities

## AFR Mozambique

Partners: Ministries of Finance, Social Protection, District heads of Gaza and Zambezia provinces, EU, National Institute of Disaster Management (INGC), Ministry of Education, UN-Habitat, University of Educato Mondlane - Architecture Faculty

There is an urgent need to improve the safety and overall structure of education buildings so that they can withstand cyclones and floods. The purpose of this activity is to increase consideration for disaster and climate risks when locating and designing primary schools in Mozambique, with specific support in Gaza and Zambezia provinces. The expected outcome is to improve safety of pupils and sustainability of infrastructures, as well as lower the rate of damage to school buildings in relation to winds, flooding and earthquake. Intermediate outcomes involve improved capacity of stakeholders for planning, designing and building schools. *Indicative Cost:* \$0.7 million (Base Case)

## ECA Central Asia (Kyrgyz Republic, Kazakhstan, Tajikistan and Uzbekistan)

Partners: SDC, WMO, International Fund for Saving the Aral Sea

This cooperative approach will help strengthen trans-boundary climate information generation and sharing in the region through multiple projects including the Central Asia Hydrometeorology Modernization Project, Climate Adaptation and Mitigation Program for Central Asia, Central Asia Water Resources Management Project, and the Central Asia Water and Energy Portal. This project will allow highly specialized assistance to help governments assess and monitor climate risks primarily related to mountain basin water resource management. *Indicative Cost:* \$1.2 million (Base Case)

## Moldova

## Partners: Ministry of Environment

The proposed activity will gather climate risk information. The focus will be on assessing and identifying adaptation measures for climate disaster risk events. The activities will provide understanding of climate adaptation investment priorities across multiple sectors through application of a systematic framework, which will evaluate expected cost-benefit, urgency and robustness in relation to future climate uncertainty. This analytical work will be designed to set the stage for a larger investment operation. *Indicative Cost:* \$0.5 million (Base Case)

## SAR Nepal and Bhutan

Partners: Nepal National Risk Reduction Consortium, Department of Disaster Management, National Environmental Commission

Both Nepal and Bhutan face difficult challenges managing their landslide risks from their challenging terrain and unique natural hazard environments, while also enhancing the overall management of their disaster and climate risks. This proposed project would support (i) expansion of current landslide risk assessments in both Nepal and Bhutan and (ii) an engagement on climate and disaster risk across the two countries. It will allow a review of existing landslide risk data, identification of hotspot areas, early warning systems, relevant mitigation measures, and institutional and organizational arrangements. In Nepal, work will support flood management, national risk assessment, and Champions for Resilience. In Bhutan, the activity will help develop a program of activities on DRM and Climate. *Indicative Cost:* \$0.7 million (Base Case)

## **GLOBAL** Global Climate Change and Poverty Report

The report will discuss how disasters can push vulnerable populations into poverty and reduce the ability of poor people to move out of poverty and explore how well-designed social protection policies can help to reduce welfare losses and consider low-cost options, such as early warning systems and effective land-use policies. The report will attempt to demonstrate how poverty reduction can build more resilient livelihoods and thus also reduce the impacts of climate change.

## **Resilience Results Monitoring & Evaluation**

This project seeks to harmonize frameworks and methodologies for monitoring and evaluating development projects that build climate and disaster resilience. It will develop systematic results monitoring of resilience-building operations through a set of project-level results indicators, targeted technical support to project teams, and a toolkit to apply resilience results indicators. It will also seek to increase the application of impact evaluation studies in resilience-building operations.

## **Resilient Cities Program**

## www.gfdrr.org/resilient-cities

Launched in 2014, the Resilient Cities Program helps cities understand, prepare for, and adapt to the effects of changing conditions, such as climate change and rapid urbanization, and to withstand and recover rapidly from natural disasters and other shocks.

In its first year, the program created the methodology for the CityStrength Diagnostic, following consultations with a number of international organizations including UN-Habitat, UNISDR, the Rockefeller Foundation, and the World Bank. Experts guide city leaders through an investigative process to identify gaps in resilience in city systems and services, as well as risks to critical infrastructure, neighborhoods, and vulnerable groups of people. The process aims to inform policy decisions and build understanding of, demand for, and access to resilience strengthening investment options.

Using the results of the diagnostic, Can Tho, Vietnam is expected to access financing to advance its flood prevention infrastructure, improve important services such as sanitation and transport, and upgrade living conditions, particularly in flood-prone areas.

Across GFDRR's portfolio, there is a wide variety of work on urban resilience, including risk mapping, contingency planning and preparedness, and early warning. In 2014, more than 30 percent of grants supported urban resilience, including projects in Bangladesh, Burundi, Guyana, Sri Lanka, and Vietnam.

## **Key Facts**

# Urbanization can provide pathways out of poverty

Cities are creating new opportunities for livelihoods, education, health, cultural exchange, and green growth

# But urban exposure and vulnerability to disasters are growing

In Dhaka, Bangladesh, for example, potential losses from floods will rise by more than 10 times over the next 40 years due to increased exposure and vulnerability.<sup>30</sup> Climate change will compound this impact by a factor of three

# GFDRR helps cities understand, prepare for, and adapt to the effects of changing conditions

CityStrength Diagnostic Methodology to give cities an urban risk framework

Connection to related efforts – through the Medellin Collaboration – to help them invest in resilience

## **Publications**

Can Tho, Vietnam: Enhancing Urban Resilience<sup>31</sup>

CityStrength Diagnostic Methodology (June 2015)

30 www.gfdrr.org/sites/gfdrr/files/publication/Understanding\_Risk-Web\_Version8rev\_1.8.0.pdf
31 http://documents.worldbank.org/curated/en/2014/06/20406288/can-tho-vietnam-enhancing-urban-resilience

## Highlights of Planned Resilient Cities Program Activities

## CityStrength Diagnostic Roll-Out in Sri Lanka

Building on the program's work in Can Tho, Vietnam and Addis Ababa, Ethiopia, Resilient Cities will work with Colombo, Sri Lanka to assess and prioritize actions and investment to enhance resilience using the new CityStrength Diagnostic Methodology. *Indicative Cost:* \$0.3 million (Base Case)

## **Resilience Finance Symposium and Lessons Learned**

To help explore how different resilience initiatives have been financed, the Program will host the Resilience Finance Symposium with a range of private sector actors, development aid organizations, academic researchers, and civil society group representatives. The event will examine current challenges impeding the flow of resilience finance to cities, how the changing notion of resilience (to include a broader array of shocks and stresses facing a city) may influence the finance picture, and what innovations may help overcome current impediments, and will include case studies on resilience challenges facing Addis Ababa and New Orleans. *Indicative Cost:* \$0.1 million (Base Case)

## Scaling Up the Medellin Collaboration on Urban Resilience

GFDRR joined UN-Habitat, UNISDR, the World Bank, the Inter-American Development Bank, C4O Cities Climate Leadership Group, the Rockefeller Foundation's 10O Resilient Cities initiative, and local government association ICLEI to form the Medellin Collaboration on Urban Resilience, announced at the 7th World Urban Forum in Colombia in April 2014. Additional activities under this initiative are planned to enhance collaboration with partners to harmonize metrics for understanding urban shocks and stresses, as well as help cities access sources of international support and finance to better manage these risks. *Indicative Cost:* \$0.2 million (Investment Case)

## Safer Schools Program

## http://www.gfdrr.org/areas/SafeSchools

In 2014, GFDRR established the Safer Schools Program to leverage the World Bank's longestablished relationships with ministries of finance, ministries of works, and ministries of education to integrate risk considerations into existing sizeable education sector investments. The program:

- Builds an enabling institutional, policy, and regulatory environment for risk reduction
- Improves school construction practices, and
- Monitors global progress on school safety

At the global level, the program is helping quantify the global problem and measure progress towards its solution, as well as enabling global sharing and transfer of knowledge and experiences on school safety. The program is aligned with the global Comprehensive School Safety (CSS) Framework and will support the implementation of the Worldwide Initiative for Safe Schools (WISS), launched in March 2015 at its Third WCDRR in Sendai, Japan. The Program has also formed partnerships with Arup and Save the Children to help ensure that building safer schools is included in the post-2015 Hyogo Framework for Action.

Building on its global work, the Safer Schools Program has country-level projects in Malawi, Mozambique, and Peru.

## **Key Facts**

# Nearly 900 million primary and secondary students worldwide live in high seismic risk zones.

Hundreds of millions more face regular hazards such as floods, landslides, extreme winds, and fires.

# Children spend up to 50 percent of their time in school buildings

All too often, these buildings are not disaster resilient.

# Coordination with UN, NGOs, and the private sector

GFDRR has joined UNICEF, UNESCO, UNISDR, Save the Children, Plan International, Build Change, Arup, and many others to take on this critical development issue.

## **Publications**

Guidance Notes on Safer School Construction<sup>32</sup>

Safer School Construction: A community-based approach (April 2015)

A Roadmap to making schools resilient at scale (July 2015)

32 www.gfdrr.org/sites/ gfdrr/files/publication/ Guidance\_Notes\_Safe\_ Schools.pdf

## Highlights of Planned Safer Schools Program Activities

## Investment planning and construction quality assurance in the Philippines

Activities include: developing a prioritization methodology for risk informed investment planning; a construction of quality assurance system, and development of technical inspection guidelines. *Indicative Cost:* \$0.7 million (Base Case)

#### Safer Schools in Indonesia Phase II

Policy reforms to the delivery of education infrastructure and improving local implementation practices. *Indicative Cost:* \$0.7 million (Base Case)

## Safer Schools in Pacific Island Countries

Providing technical assistance to the construction and/or retrofitting of schools under regional investment program, focusing mostly on Tonga and Samoa. *Indicative Cost: \$0.7 million (Investment Case)* 

## Safer Schools in Jamaica

Ensuring the structural safety of new schools under a planned national investment program. *Indicative Cost:* \$0.8 million (Investment Case)

#### Safer Schools in Armenia

Building the analytical foundation and building the technical capacity for a large-scale school retrofitting program. *Indicative Cost:* \$0.6 million (Investment Case)

# special programs

GFDRR manages special programs designated by members providing large-scale financial support. They are aligned with this Work Plan, use GFDRR's results framework, and operate under GFDRR's common administrative arrangements.

GFDRR manages two special programs: (1) the Japan-World Bank Program for Mainstreaming DRM in Developing Countries, and (2) the Africa Caribbean Pacific (ACP) – European Union (EU) Program. Through their complementarity of geographic and technical approaches, these two programs make GFDRR an effective structure to support DRM and CCA.

In turn, these programs help GFDRR reach the required scale to maintain specialized expertise and reduce the relative administrative costs on the overall partnership.

# Japan-World Bank Program for Mainstreaming Disaster Risk Management in Developing Countries

The Government of Japan and the World Bank launched the \$100 million Japan-World Bank Program for Mainstreaming Disaster Risk Management in Developing Countries, building on the recommendations of the 2012 Sendai Report. With more than \$15 million in grants so far, the program funds technical assistance, pilot projects, knowledge and capacity building, and thematic initiatives mainstreaming disaster risk management in national development planning and investment programs in 63 countries.<sup>33</sup>

The Program to Connect Knowledge, Expertise, and Technology (The DRM Hub, Tokyo Program) includes activities to link developing countries with Japanese expertise and technology through developing knowledge and outreach, fostering partnerships, and providing project support.

A number of indicative priority areas provide a broad framework to guide the activities of the DRM Hub Program, namely hydromet and early warning, community-level resilience and social protection, infrastructure planning and investment, risk financing, flood risk mitigation, seismic resilience, risk assessment and decision support, and safer schools.

## **ACP-EU Program**

Starting in 2011, GFDRR formed a partnership with the EU through the greater than \$100 million million ACP-EU Program to support Disaster Risk Management and Climate Change Adaptation activities in ACP countries through technical assistance, capacity building, and advisory/analytical work. The program also supports ACP countries in the aftermath of a disaster with post-disaster needs assessments (PDNA), rapid-response technical assistance, capacity building, and the development of sustainable recovery frameworks.

The ACP-EU Program supports GFDRR's work across the five pillars in the over 80 ACP group countries. Through its staff presence in Brussels, the program has helped ensure coordination and harmonization with the EU and other donors to enhance development impact. The program has also expanded its impact with its "Building Disaster Resilience to Natural hazards in Sub-Saharan Africa" initiative. This aims to strengthen disaster resilience, particularly with African Regional Economic Communities and Regional Climate Centers, and to support disaster risk assessments and financial protection.

33 www.gfdrr.org/japanworld-bank-programmainstreaming-disasterrisk-managementdeveloping-countries

# how does GFDRR partner with others?

Building on the work and expertise of its country, thematic, and special programs, GFDRR promotes coordination and collaboration with partners – at local, regional, and international levels – to build technical and operational exchange, and share lessons learned from country-level work. In all these efforts, a broad array of cooperating and implementing partners at different levels are involved.

GFDRR works with a wide range of partners to implement its program. This includes work with UN agencies, bilateral, and multilateral development partners, and programs increasingly, collaboration with civil society, foundations, research institutions, and the private sector. GFDRR responds to requests by partners to draw from experience in disaster prone countries to inform international policy processes and facilitate knowledge exchange between countries. These activities are largely organized around GFDRR's thematic programs and relate to issues such as the understanding of risk, resilient reconstruction, climate change resilience and more broadly promoting disaster risk management as a core development priority throughout international frameworks and systems.

By 2018, GFDRR will publish at least nine flagship reports drawing on GFDRR experiences in country and supporting analytical work, for example on measuring the impact of disasters on the poor.

	2014	2015	Base Case 2016-2018	Investment Case 2016-2018
Flagship Reports Published	5	6	10	15

## Highlights of Planned Partnerships Activities

## Evidence-based reports on socio-economic benefits of DRM

# Partners: Overseas Development Institute, London School of Economics, World Bank, and academia

These reports will explore the broader socio-economic benefits of DRM, beyond just avoided disaster loss, to also consider that even before a disaster strikes, investing in DRM yields dividends in the short and long term, firstly by reducing 'background risk' and enabling forward-looking planning, long-term capital investments, and entrepreneurship. Secondly, irrespective of disasters, DRM investments generate other social, economic, and environmental co-benefits from the DRM investments themselves. Consultations on an interim policy note took place at the World Conference on Disaster Risk Reduction in March 2015 and the final report and briefing notes will be launched in July 2015, at the International Conference on Financing for Development. *Indicative Cost:* \$0.6 million (Base Case)

## Harmonize approaches to reporting of DRM mainstreaming in development financing

## Partners: UNISDR, OECD-DAC, DAC members

This activity will support GFDRR's work with the OECD and several donor governments under a Technical Advisory Group to institute a policy marker for DRM in OECD CRS, in partnership with UNISDR. GFDRR presented a proposal at the informal meeting of the Working Party on Development Finance Statistics (WPSTAT) at OECD on April 25, 2014. GFDRR will continue to prepare the ground for approval of the proposal, including through the update of the Disaster Aid Tracking online database and the publication of a report on tracking DRM financing in DRM. The proposal may be reconsidered in 2016, following the agreement on the new post-2015 international DRM and development frameworks. *Indicative Cost:* \$0.2 million (Base Case)

## **Enhancing GFDRR's Capacity Building and Training Strategy**

## Partners: World Bank, the UN, and the donor community

This activity supports the development of GFDRR's new capacity building and training strategy through stock taking of existing activities, external partner consultations, and an assessment of needed capacity for managing emergencies in operations. A specific e-learning course on Management of Emergency in Operation will be designed as well. *Indicative Cost:* \$0.3 million (Base Case)

## **GFDRR Country Evaluation 2015**

## Partners: Implementing partners

This activity aims to provide an evidence base for policy and investment decisions amongst GFDRR donors and partner countries. An independent firm will be contracted to conduct an evaluation in selected countries that will seek to analyze and evaluate the overall impact of GFDRR activities, specifically in terms of leveraging new investments and influencing ongoing programs. *Indicative Cost:* \$0.4 million (Base Case)

## Stories of Impact: Highlighting stories of operational results and lessons

## Partners: Implementing and external partners

The activity will enable a scale-up in the production of the Stories of Impact series to showcase to a broad internal and external audience the results and lessons from GFDRR's grant and technical assistant activities. These stories have been disseminated widely through the GFDRR and World Bank websites, social media, and in hard copy at many GFDRR and regional events. *Indicative Cost:* \$0.1 million (Base Case)

## **Crowdsourcing Data to Accelerate Building Resilience**

## Partners: Humanitarian OpenStreetMap Team, GFDRR Innovation Lab, and the Red Cross

A key challenge in managing risks is the lack of reliable digital maps featuring hazards, vulnerabilities and capacities. This activity aims to strengthen MissingMaps.org (a global initiative that engages remote volunteers to trace satellite imagery into the OpenStreetMap platform and add local detail). Pilot initiatives will include urban settings (e.g., Dhaka in Bangladesh and Leyte in the Philippines), as well as densely populated floodplains in riverine and coastal areas such as the Zambezi river basin. *Indicative Cost:* \$0.6 million (Investment Case)

## **Understanding Risk Community & Global Forum**

Members: Governments, Multilateral Organizations, Academia, NGOs, CSOs, and the private sector

Refer to Innovation Lab Program in Thematic Programs.

## Partnership with UN agencies and the engagement in the post-2015 agenda

Close cooperation with the UN Office for Disaster Risk Reduction (UNISDR) is at the core of GFDRR's partnership. In March 2015, the UN held the World Conference on Disaster Risk Reduction in Sendai, Japan. GFDRR co-organized Ministerial Roundtables on Reducing Disaster Risk in Urban Settings and Resilient Recovery and numerous technical and advocacy events, including the Resilience Dialogue to scale up and sustain funding and implementation of disaster and climate risk programs.

Following the adoption of the Sendai Framework for Disaster Risk Reduction 2015-2030, GFDRR will work closely with UNISDR and international partners to support the development of actionable, measurable and clear indicators to measure progress towards the newly agreed priorities. Additionally, in order to better measure resilience efforts within the World Bank, a new resilience indicator is being developed, which will have a strong focus on building resilience of the poor and most vulnerable segments of the population. In this light it will draw strong ties with both the new post-2015 framework on Disaster Risk Reduction as well as the new Sustainable Development Goal on ending poverty.

GFDRR is working with multiple partners around the Financing for Development Framework and the Sustainable Development Goals. GFDRR provides technical inputs, participates in discussions on indicators, and co-authors papers to highlight the importance of integrating disaster and climate resilience considerations, with a strong focus on poverty reduction. The objective is to promote consistency and coherence between the new Sendai Framework and the new international development frameworks, and highlight the importance of integrating disaster and climate resilience in development planning and financing.

GFDRR will also continue its collaboration with UNISDR and UN-HABITAT, among many other partners, through the Medellin Collaboration to put urban resilience at the center of both sustainable development and the urban agenda.

WMO will continue to be a critical partner in advancing climate and hydrometeorological services for resilience. In particular, there will be further collaboration on practical knowledge development, such as on socioeconomic benefits of hydromet services and impact-based forecasting. GFDRR will also continue to engage closely with GFCS in its efforts to promote climate resilience in development.

## **Highlights of 2015-2016 Events and Publications**

## **Events**

World Meteorological Congress (May/June 2015)

International Conference on Financing for Development (July 2015)

Summit on Sustainable Development and UN General Assembly (September 2015)

World Bank – IMF Annual Meetings and Resilience Dialogue (October 2015)

Fall Consultative Group Meeting (October/November 2015)

UNFCCC Conference of Parties (December 2015)

World Bank-IMF Spring Meetings and Resilience Dialogue (April 2016)

Spring Consultative Group Meeting (April/May 2016)

World Humanitarian Summit (May 2016)

2016 Understanding Risk Forum (June/July 2016)

## **Publications**

Climate Change and Poverty Report

Unlocking the Triple Dividend of Resilience: Why Investing in DRM Pays Off<sup>34</sup>

Tracking International Financing for Disaster Risk Management

Disaster risk and poverty: Assessing the global exposure of the poor to floods and droughts<sup>35</sup>

This report is expected to be published in July 2015 (Title pending)

<sup>35</sup> www.gfdrr.org/sites/ gfdrr/files/publication/ Unlocking-the-Triple-Dividends-of-Resilience.

# how does GFDRR measure results?

GFDRR reports regularly on results to its donors, partner countries, and other stakeholders. GFDRR monitors, evaluates, and reports results at the output, outcome, and impact levels.

GFDRR monitors activities and outputs using the following tools:

- GFDRR uses its grant proposal and progress reporting templates to assess activity proposals, collect data for analysis, and report results across countries;
- The Monitoring Database collects data from the templates and makes real-time information available, allowing GFDRR to monitor and evaluate current and planned activities.

Table 6: GFDRR results at the output, outcome and impact level

Result type	Description	Example from GFDRR M&E Framework
Outputs	- Direct result of GFDRR activities	National and local agencies
	- Short time-lag (1–3 years)	and CSOs' capacities are strengthened, so that they can
	- Achievement fully within GFDRR control	provide better early warning
	<ul> <li>Takes the form of new or improved knowledge, capacity or other enabling factor in vulnerable countries designed to stimulate behavior change, reform or investment in DRM</li> </ul>	of disasters and respond more effectively when they occur
	Verification through GFDRR portfolio monitoring	
Outcomes	- Indirect result of GFDRR activities	Improved warning and
	- Medium time-lag (up to 5 years)	management of disasters at national, local and community
	<ul> <li>Achievement partially within GFDRR control and requires contribution by others</li> </ul>	level
	<ul> <li>Takes the form of a behavior change, institutional reform or investment in DRM made by vulnerable countries themselves</li> </ul>	
	Verification through evaluative activities, including commissioned country-level studies	
Impacts	<ul> <li>Ultimate result of action by vulnerable countries and their development partners (including GFDRR)</li> </ul>	Increased resilience of people to natural hazards
	- Long time-lag (5 years +)	
	<ul> <li>GFDRR is one of many actors, but can make an important contribution</li> </ul>	
	<ul> <li>Takes the form of lives and livelihoods better protected or otherwise resilient through behavior change, institutional reform or investment made</li> </ul>	
	Verification through evaluative activities and long-term monitoring of disaster loss trends	

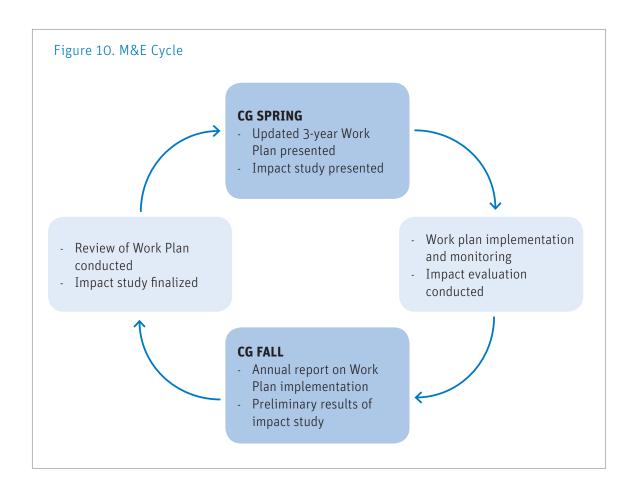
GFDRR will continue to evaluate the contribution of the outputs the program generates to the achievement of outcomes sought according to the indicators set out in the M&E Framework. It will continue to commission independent experts in the M&E and disaster and climate resilience fields to evaluate sample countries where GFDRR works. Research and analysis will continue to be undertaken by conducting studies in countries that possess a range of country contexts and risk profiles for analysis on different geographic, political, and hazard scopes.

These evaluations, including the Country Evaluation 2015, will also continue to develop new findings, recommendations and way forward to build capacity and know-how in order to improve and support resilience-building methodologies, interventions and systems. Wherever possible these evaluations will build upon existing efforts to evaluate and test theories of change in GFDRR assisted projects.

At the global level, GFDRR will continue to contribute to global efforts to measure and understand longer term trends in disaster losses and increased resilience, in support of the Sendai Framework. GFDRR participated in the development of the INFORM index, and will continue to work with a wide variety of partners, including the World Bank, to ensure that effective indicators are available and adopted.

As set out in the Figure 10, GFDRR reports results under an annual M&E cycle:

- This Work Plan sets targets for results to be achieved in the three-year period, including enabling large-scale programs and outputs along the Five Pillars of Action; and
- The Annual Report reports on the implementation of the Work Plan against these targets in the M&E framework.



## annexes

Annex I: Program Logic

Annex II: M&E Framework

Annex III: Results Targets by Large-Scale Program and Pillar

Annex IV: Country Engagement Approach

Annex V: Financial Report

# PILLAR 1 Risk Identification

## **Annex I: Program Logic**

Capacity development in data collection, sharing and management; hazard and exposure modeling/mapping; risk assessment; and risk communication

Assistance to implement risk assessments; open source software; open data practices; remote sensing; and institution building

Knowledge or tools for risk assessment; open source software; data platforms; and remote sensing

- a. People in disaster prone countries have access to comprehensive information about physical and societal exposure to disaster risk
- b. National agencies/cities are equipped with improved means to assess and communicate disaster risks

# PILLAR 2 Risk Reduction

Capacity development in risk reduction policy; land-use planning; building standards; strategy; and planning and investment

Assistance to implement investment or reform in risk reduction policy; land-use planning; building standards; strategy; and planning and investment

New knowledge; policy analysis; sector specific norms; guidelines and tools

Disaster prone countries and their development partners are better able to make decisions on where and how to reduce disaster risks in society

# PILLAR 3

Capacity development in the use of disaster risk information for early warning; search and rescue; and contingency planning

Assistance to implement investment or reform in emergency management; public awareness; early warning systems and national hydromet services

New knowledge; policy analysis; hydromet feasibility studies; and operational guidelines

National and local agencies and CSOs are strengthened to provide better early warning of disasters and respond more effectively when they occur

# PILLAR 4 Financial Protection

Capacity development in sovereign disaster risk financing; property catastrophe risk insurance; agricultural insurance; and disaster micro-insurance

Assistance to implement investment or reform in sovereign disaster risk financing; property catastrophe risk insurance; agricultural insurance; and disaster microinsurance

New knowledge; policy analysis; strategy reviews; feasibility studies; fiscal risk assessments; and financial analysis tools

- a. Disaster prone countries have better access to comprehensive information on their financial exposure to disaster risks
- b. National agencies/cities are equipped with improved means to assess and manage fiscal and other financial risks

# PILLAR 5 Resilient Recovery

Capacity development in the conduct of recovery assessments; good practice recovery planning; and implementation of standards in government systems

Assistance to conduct post-disaster assessments and develop post-disaster recovery frameworks

Disaster affected countries have enhanced capacity and improved plans for financing and implementing resilient recovery

Improved identification and understanding of disaster risks

Avoided creation of new risks and reduced existing risks in society

Improved warning and management of disasters at national, local and community level

Increased resilience of people to natural disasters

A world where resilient societies manage and adapt to emerging disaster risks and the human and economic impacts of disasters are reduced

Increased financial resilience of governments and private sector

Quicker, more resilient recovery

## Annex II: M&E Framework

## Inputs

## Assumptions:

- Financial commitments from donors are sufficient and contributed in a timely manner
- grants are managed effectively, partners maintain their commitments and capacity, and country context (including political environment) remains operationally viable
- global commitments to DRM are maintained and developed, particularly in the post-2015 landscape

**GFDRR** provides grants to generate knowledge, build capacity and implement DRM reforms and investment.

## **Outputs**

People in disaster prone countries have access to comprehensive information about physical and societal exposure to disaster risk b. National agencies/cities are equipped with improved means to assess and communicate disaster risks

- # countries with improved institutional capacity in data collection, sharing and management; hazard and exposure modeling; mapping; risk assessment; and risk communication
- # countries with effective new solutions in risk assessment; open data practices; remote sensing; and institution building in place
- # countries provided with new, useful analytical and technical products and tools to support risk assessment; data platforms; and remote sensing

## Assumptions:

- Consensus and trust on risk information
- national and/or city level resources for maintenance and generation of risk infor-mation are secured - risk information is effectively communit-
- cated to policy makers
   policy makers are responsive to risk
- information

## Disaster prone countries and their development partners are better able to make decisions on where and how to reduce disaster risks in society

### Indicators:

- # countries with improved institutional capacity in risk reduction policy; land-use planning; building standards; strategy; and planning and investment
- # countries with effective new solutions in risk reduction policy; land-use planning; building standards; strategy; and planning and investment in place
- # countries with improved policy analysis; sector specific norms; guidelines and tools
- # countries where GFDRR helped leverage new investments in structural or non-structural risk reduction

## National and local agencies and CSOs are strengthened to provide better early warning of disasters and respond more effectively when they occur

- # countries with improved institutional capacity in the use of disaster risk information for early warning; search and rescue; and contingency planning
- # countries with effective new solutions in emergency management; public awareness; early warning; and service delivery of national hydromet services in place
- # countries with improved policy analysis; hydromet feasibility studies; and operational guidelines
- # countries where GFDRR helped leverage new investments in preparedness or early warning

## Disaster prone countries have better access to comprehensive information on

their financial exposure to disaster risks National agencies/cities are equipped with improved means to assess and manage fiscal and other financial risks

- # countries with improved institutional capacity in sovereign disaster risk financing; property catastrophe risk insurance; agricultural insurance; and disaster microinsurance
- # countries with effective new solutions in sovereign disaster risk financing; property catastrophe risk insurance; agricultural insurance; and disaster microinsurance in place
- # countries with improved policy analysis; strategy reviews; feasibility studies; fiscal risk assessments; and financial analysis tools
- # countries where GFDRR helped leverage new contingent credit or risk financing instruments

## Disaster affected countries have enhanced capacity and improved plans for financing and implementing resilient recovery

- # countries with institutional capacity developed in the conduct of recovery assessments; development and institutionalization of good practice recovery planning; and implementation of standards in government systems
- # post-disaster countries supported in conducting rapid and coordinated post-disaster assessments; developing post disaster recovery frameworks
- # post disaster countries where GFDRR helped leverage large scale investment in resilient recovery and risk reduction

## Assumptions:

- increased understanding of physical risk leads to changes in mindsets amongst
- lead technical agencies on disaster risks are able to convene and influence other line ministries
- informed decision making leads to an increase in, and effective use of, resources for risk reduction
- conflicting market forces are surmount-able with new evidence and policies on risks
- government policies do not conflict in incentivizing/preventing risky behavior, for example on land use or safety nets

## Assumptions:

- national agencies are appropriately resourced and mandated to implement their improved capacity
- preparedness and early warning infrastructure is adequately maintained
- investment in early warning adopts an end-to-end philosophy, with a focus on getting the message to those at risk

## Assumptions:

- An increased understanding of financial risk leads to changes in minsets among finance ministers (that fiscal risk of disasters is relatively unimportant or unmanageable)
- private sector is willing to engage in the development of catastrophe risk insurance
- legislative or regulatory environments do not prohibit the development of risk financing solutions
- counter-incentives such as complacency due to expected international humanitar-ian aid do not outweigh the perceived benefits for partner countries

## Assumptions:

- governments buy into and adopt recommendations and analysis presented in post-disaster assessments
- when disaster strikes, governments are able and willing to apply knowledge, capacity and systems developed during 'peace time' despite the high political and operational pressures a disaster event brings

## Outcomes

## **Impact**

# Improved identification and understanding of disaster risks

## Indicators:

- # national / city agencies that demonstrate improved generation or communication of disaster risk information
- # countries / cities that demonstrate increased application of risk information in public policy and investment planning

# Avoided creation of new risks and reduced existing risks in society

## Indicators:

- # schools and other public infrastructure made safer through retrofitting or resilient construction
- # countries / cities implementing new or revised policies to address disaster risk
- \$ amount of investment made in risk reduction measures that GFDRR has helped leverage

## Improved warning and management of disasters at national, local and community level

## Indicators:

- # countries demonstrating increased accuracy and timeliness of weather forecasts and early warning
- % countries demonstrating improved performance of national / city agencies in the quality and timeliness of emergency response

## Increased financial resilience of governments and private sector

## Indicators:

- # countries with improved financial protection against disasters through reserves, contingency mechanisms or risk transfer
- # countries adopting or improving budgetary mechanisms to appropriate and execute public resources in case of disasters
- # countries with more developed property catastrophe risk insurance markets

## Quicker more resilient recovery

## Indicators

- # disaster affected countries using enhanced capacity and improved planning to implement resilient recovery and risk reduction programs
- \$ amount of financing for resilient recovery that GFDRR has helped leverage through post-disaster assessments and other assistance

## **Assumptions:**

- people respond rationally to the information they receive on risk
- improvements in the resilience of the physical environment are maintained through appropriate, sustained investment
- other shocks do not undermine investments in resilience to disasters

## Indicators:

Indicators:

# vulnerable

people better

risk reduction

measures

taking identifiable

reduce risks in their

community

action to

# people

# population of vulnerable countries demonstrating an understanding of what to do in the event of a disaster to save their life and their assets

## Indicators:

- # people benefitting from the implementation of financial protection strategies at the regional, national or subnational level
- % population insured against catastrophe risk to their property

## Indicators:

# disasteraffected people achieving restored livelihoods through resilient recovery efforts

## Assumptions:

 variability in hazards, exposure and vulnerability (particularly as they relate to the climate, population growth, urbanization and environmental degredation) do not outpace incremental improvements in resilience

Indicator:

Reduction
in people
affected
from
disasters

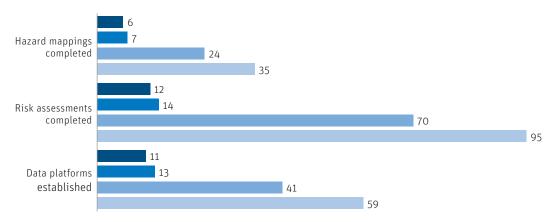
Increased resilience of people to natural hazards A world where resilient societies manage and adapt to emerging disaster risks and the human and economic impacts of disasters are reduced

## Indicator:

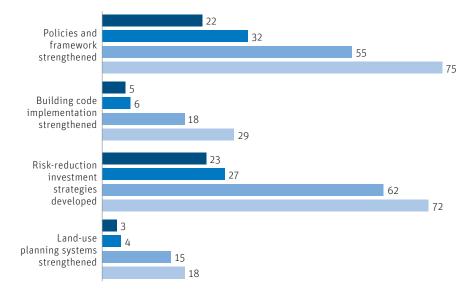
Reduction in economi losses from disasters

## Annex III: Results Targets by Large-Scale Program and Pillar

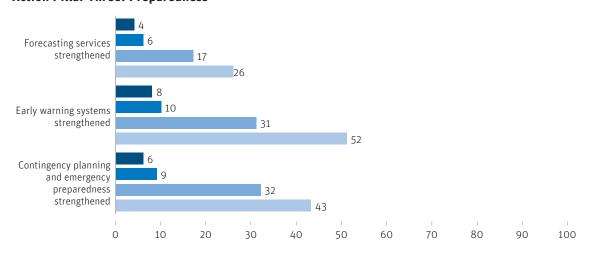
## **Action Pillar One: Risk Identification**



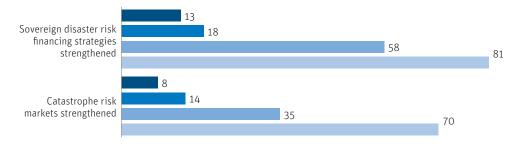
## **Action Pillar Two: Risk Reduction**



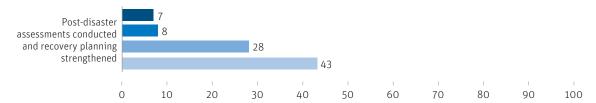
## **Action Pillar Three: Preparedness**



## **Action Pillar Four: Financial Protection**



## **Action Pillar Five: Resilient Recovery**



		2014	2015	2015 (Projected)	Investment Case 2016-2018
Results	Enabling large- scale programs in disaster risk management	9 large-scale programs (Over \$1.5 billion in total leverage)	10-15 large-scale programs	35 large-scale programs	55 large-scale programs

Annex IV: Country Engagement Approach

ACP-EU Eligible (of those included in Base, Investment, and Japan)	•	•	•	•	•	•	•	•	*	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Japan-World Bank Program Eligible	•	•	•	•	•	•										•	•							
Multi-Donor Trust Fund	*	•	•	•	•	•	•	•	•	•	*	•	•	•	*									
Small Island Developing States																						•		
Land-Locked Developing Countries	•		•				•		•			•		•			•			•	•			
Upper- middle Income Countries																		•		•				
Lower- middle Income Countries					•			•		•			•		•									•
Least Developed Countries	•	•	•	•		•	•		•	•	•	•		•	•		•	•	•		•	•		•
Region Country	Ethiopia	Madagascar	Malawi	Mozambique	Nigeria	Tanzania	Burkina Faso	Ghana	Mali	Senegal	Togo	Burundi	Cameroon	Chad	Mauritania	Kenya	Uganda	Angola	Benin	Botswana	Central African Republic	Comoros	Congo (Brazzaville)	Congo (Kinshasa)
Region												Я:	1A											

ACP-EU Eligible (of those included Japan-World in Base, Multi-Donor Bank Program Investment, Trust Fund Eligible and Japan)	*	•	*	*	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Small Island Developing States								•					•	•							
Land-Locked Sm Developing De Countries						•				•		•							•	•	•
Upper- middle Li Income D				•				•	•					•			•				
Lower- middle Income Countries	•					•							•					•	•	•	
Least Developed Countries		•	•		•	•	•			•	•	•	•		•	•		•		•	
Region Country	Cote d'Ivoire	Equatorial Guinea	Eritrea	Gabon	Gambia, The	Lesotho	Liberia	Mauritius	Namibia	Niger	Republic of Guinea	Rwanda	Sao Tomé and Principe	Seychelles	Sierra Leone	Somalia	South Africa	Sudan	Swaziland	Zambia	Zimbabwe
Region												(*;	uog	FR (	IA						

ACP-EU Eligible (of those included in Base, Investment, and Japan)	•	•	•	•	•	•	•	•	•	•									•	•	•
tho Japan-World Bank Program In Eligible	•	•	•	•	•	*	*	*	•	*	•	*	•	•	•	•	*	*			
Multi-Donor Trust Fund	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•					
Small Island Developing States	•	•	•	•	•	•	•	•	•	•									•	•	•
Land-Locked Developing Countries													•			•					
Upper- middle Income Countries			•	•				•										•		•	•
Lower- middle Income Countries	*	•			•	•	•		•	•	•	•	•	•		•					
Least Developed Countries		•			•		•		•				•		•		•				•
ountry	Papua New Guinea	Solomon Islands	Marshall Islands	Fiji	Kiribati	Samoa	Timor-Leste	Tonga	Vanuatu	Micronesia	Indonesia	Vietnam	Lao PDR	Philippines	Cambodia	Mongolia	Myanmar	Thailand	Nauru	Palau	Tuvalu
Region Country	ш	U)	2		<u>×</u>	0)					Е∀Ь	7	7	<u>.</u>	)	~	2		Z	L.	

ACP-EU Eligible (of those included in Base, Investment, and Japan)																							•	
Japan-World Bank Program Eligible	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
Multi-Donor Trust Fund	•	•	•	•	•									•	•	•	•	•	•	•	•	•	•	•
Small Island Developing States																							•	
Land-Locked Developing Countries	•	•		•			<b>*</b>	•	•	•		•						•						
Upper- middle Income Countries			•		•	•		•	•	•	•		•	•	•	•						•		•
Lower- middle Income Countries	•	•		•			•										•	•	•	•	•			
Least Developed Countries																							•	
	٥		vina																					
	Georgia	Uzbekistan	Bosnia Herzegovina	Moldova	Serbia	Albania	Armenia	Azerbaijan	Kazakhstan	Macedonia	Montenegro	Tajikistan	Turkey	Panama	Costa Rica	Ecuador	Guatemala	Bolivia	El Salvador	Honduras	Nicaragua	Peru	Haiti	Colombia
Region		ADE ROLL OF THE STATE OF THE ST																						

ACP-EU Eligible (of those included Japan-World in Base, Multi-Donor Bank Program Investment, Trust Fund Eligible and Japan)	*	•	*	*	*	*	*	*	•	•	•	•	•	•	*	*	*	•
M H																		
Small Island Developing States				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Land-Locked Developing Countries																		
Upper- middle Income Countries	•		•				•	•	•	•	•		•		•	•	•	
Lower- middle Income Countries												•						
Least Developed Countries																		
Region Country	Brazil	Chile	Mexico	Antigua and Barbuda	Bahamas	Barbados	Belize	Cuba	Dominica	Dominican Republic	Grenada	Guyana	Jamaica	St. Kitts and Nevis	St. Lucia	St. Vincent and the Grenadines	Suriname	Trinidad and Tobago
Region									nt.)	0ე)	רכצ							

ACP-EU Eligible (of those included in Base, Investment, and Japan)	•														
the Japan-World Bank Program I.	*	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Multi-Donor Trust Fund	*	•	•	•	•				•	•	•	•	*	•	•
Small Island Developing States									l						
Land-Locked Developing Countries									•				*	*	
Upper- middle Income Countries			•		•	•		•	l						
Lower- middle Income Countries	•	•		•			•		l		•	•		•	•
Least Developed Countries	•	*							•	•			*	*	
untry	Djibouti	Yemen Republic	Algeria	Egypt	Lebanon	Libya	Могоссо	Tunisia	Nepal	Bangladesh	Pakistan	Sri Lanka	Afghanistan	Bhutan	India
Region Country	٥	ANM AAS												B	Ţ

## **Annex V: Financial Report**

## FINANCIAL REPORTING (From inception Fiscal Year 2007 to Fiscal Year 2015 March YTD)

Table 7. Sources and Uses of Funds (\$ millions)

	Cumulative FY07-FY15	FV4F VTD	FV4.	Change
	YTD	FY15 YTD	FY14	FY15 YTD-FY14
Opening Balance		185.5	130.3	
Total Contributions Received	458.6	58.1	95.7	
Track II, Track III, ACP-EU, and Japan-World Bank Trust Funds $^{\scriptscriptstyle{(1)}}$	427.1	57.6	95.2	
World Bank Group-DGF (2)	31.5	0.5	0.5	
World Bank Administration Fees	(16.4)	(1.5)	(3.4)	
Investment Income	4.3	0.3	0.4	
Net Sources of Funds (3)	446.5	56.9	92.8	-39%
Total Project Disbursements	224.9	37.0	33.0	
Secretariat Program Management and Administration	20.3	4.2	4.7	
Total Uses of Funds	245.2	41.1	37.7	9%
Ending Balance	201.2	201.2	185.5	
Cumulative Undisbursed Grant Commitment (4)	113.9	113.9	99.7	
Fund Availability (All tracks) (5)	87.4	87.4	85.8	
ACP-EU SDTF	41.1	41.1	33.2	
ACP-EU - Africa SDTF	12.1	12.1	-	
Japan-World Bank SDTF	6.0	6.0	18.0	
Track II MDTFs	5.1	5.1	23.5	
Track II SDTFs	1.6	1.6	5.2	
Track III MDTFs	3.9	3.9	5.8	
Core MDTF	17.6	17.6	_	

<sup>(</sup>i) Track II Multi-Donor Trust Funds (MDTFs) include: (i) Core Funds and (ii) South-South Cooperation Funds; Track II Single-Donor Trust Funds (SDTFs) include: (i) Australia SDTF, Japan SDTF, and Spain SDTF; and Track III Multi-Donor Trust Funds (MDTFs) include: (i) Technical Assistance (TA) Fund and (ii) Callable Fund.

<sup>(2)</sup> World Bank Group-DGF (Development Grant Facility) grants are received from the World Bank Group and are disbursed directly to partners.

<sup>(3)</sup> Net Sources of Funds = Total Contribution Received – World Bank Administration Fee + Investment Income.

<sup>(4)</sup> Cumulative Undisbursed Grant Commitments is the difference between Total Grant Commitments and Total Grant Disbursements.

<sup>(5)</sup> Fund Availability refers to the uncommitted resources available for GFDRR to finance new grants, and is the difference between the Ending Balance and Cumulative Undisbursed Grant Commitments.

Table 8. Contribution Received and Receivable by Donor, FY07-FY15YTD (\$ millions)

			_			
		YO7-FY15YT ibution Rec				~~~
	FY15	FYO7-	civeu	FY15YTD-FY20 Contribution	Total	%Share of Total
Country	YTD Act	FY14 Act	Total	Receivable (Est)	Contributions (1)	Contributions
European Union	25.4	79.1	104.5	28.2	132.7	24.0%
Japan	-	32.0	32.0	80.0	112.0	20.3%
United Kingdom	9.4	73.0	82.4	5.2	87.6	15.9%
Australia	-	37.2	37.2	-	37.2	6.7%
Sweden	-	32.2	32.2	-	32.2	5.8%
Germany	2.6	24.1	26.7	1.2	27.9	5.0%
Switzerland	9.6	8.5	18.1	8.9	27.0	4.9%
Norway	4.0	14.5	18.6	-	18.6	3.4%
Denmark	1.4	16.3	17.8	-	17.8	3.2%
Spain	-	10.0	10.0	0.3	10.3	1.9%
Italy	2.3	7.5	9.8	-	9.8	1.8%
Luxembourg	0.4	7.8	8.2	-	8.2	1.5%
Netherlands	(1.0)	8.7	7.7	_	7.7	1.4%
United States	0.5	5.0	5.5	0.5	6.1	1.1%
Austria	2.4	3.1	5.5	-	5.5	1.0%
Canada	-	3.1	3.1	_	3.1	0.6%
Ireland	-	2.6	2.6	-	2.6	0.5%
Brazil	-	1.7	1.7	-	1.7	0.3%
France	-	1.6	1.6	-	1.6	0.3%
Korea	-	0.9	0.9	-	0.9	0.2%
Saudi Arabia	0.5	-	0.5	-	0.5	0.1%
India	-	0.3	0.3	0.2	0.5	0.1%
Mexico	0.1	-	0.1	0.4	0.5	0.1%
Nigeria				0.5	0.5	0.1%
Total Member Contributions	57.6	369.5	427.1	125.4	552.5	100.0%
World Bank Group-DGF	0.5	31.0	31.5	-	31.5	
GRANT TOTAL	58.1	400.5	458.6	125.4	584.0	

<sup>(1)</sup> Total Contributions = FY07-FY14 Contributions Received + FY15-FY20 Contribution Receivable.

Table 9. GFDRR Grant Commitments for Program Activities, (1) DGF Grant, and Secretariat Program Management and Administration, FY07-FY15 YTD (\$ millions)

Expense Category	FY07-FY11	FY12	FY13	FY14	FY15 YTD	Cumulative FY07-FY15YTD
Program Activities	111.5	36.1	40.5	61.3	41.9	291.2
ACP/EU SDTF	_	2.2	19.1	10.3	2.8	34.4
Track II MDTFs	85.6	27.2	16.5	21.7	16.2	167.1
Track II SDTFs	7.7	4.7	3.2	0.3	1.5	17.5
Track III MDTFs	15.9	2.2	1.7	29.1	0.4	49.2
Track III SDTF	2.3	(0.2)	-	-	-	2.0
Japan SDTF					12.0	12.0
Core MDTF					8.9	8.9
World Bank Group- DGF Grants	24.3	4.3	2.0	0.5	0.5	31.5
Secretariat Program Management and Administration	6.1	4.6	10.7	1.8	9.2	32.6
TOTAL	141.8	45.0	53.2	63.6	51.6	355.3

<sup>(1)</sup> Grant Commitments for Program Activities refer to grants awarded to GFDRR implementing partners, including World Bank operational task teams and recipient countries, after GFDRR review and subsequent completion of World Bank's grant funding request process.

Table 10. GFDRR Grant Disbursement<sup>(1)</sup> for Program Activities, DGF Grant, and Secretariat Program Management and Administration, FYO7-FY15 YTD (\$ millions)

Expense Category	FY07-FY11	FY12	FY13	FY14	FY15 YTD	Cumulative FYO7-FY15YTD
Program Activities	61.9	33.1	29.4	32.5	36.4	193.4
ACP/EU SDTF	_	0.6	2.9	6.0	4.2	13.7
Track II MDTFs	45.2	25.7	20.7	20.4	13.7	125.6
Track II SDTFs	3.8	1.8	3.2	3.4	1.3	13.6
Track III MDTFs	12.7	3.3	2.5	2.7	15.8	37.0
Track III SDTF	0.2	1.8	-	_	_	2.0
Japan SDTF					1.2	1.2
Core MDTF					0.2	0.2
World Bank Group- DGF Grants	24.3	4.3	2.0	0.5	0.5	31.5
Secretariat Program Management and Administration	5.6	2.2	3.7	4.7	4.2	20.3
TOTAL	91.7	39.6	35.1	37.7	41.1	245.2

<sup>(1)</sup> Grant disbursement refers to the actual expenditure incurred by implementing partners to deliver the agreed output and outcomes.

Table 11. GFDRR Secretariat Expenditures, FY07-FY15YTD (\$ millions)

Expense Type	FY07-FY11	FY12	FY13	FY14	FY15YTD	Total
Staff Cost (1)	4.0	1.8	3.4	3.1	3.2	15.6
Travel (2)	1.0	0.3	0.1	0.5	0.3	2.2
Other						
Expenses (3)	0.5	0.1	0.2	1.0	0.7	2.5
GRAND TOTAL	5.6	2.2	3.7	4.7	4.2	20.3

<sup>(1)</sup> Staff Costs included salaries and benefits for GFDRR staff and Extended Term Consultant and Extended Term Temporary.

<sup>(2)</sup> Travel included travel expenses of GFDRR staff, candidates/interviewees for GFDRR positions, Annual Meeting participants, and other participants in GFDRR- sponsored events.

<sup>(3)</sup> Other Expenses included overhead expenses, the use of short-term consultants and other contractual services (e.g. editing, graphic design, translation, publishing and printing, representation, hospitality).

## **Abbreviations**

ACP African, Caribbean, and Pacific Group of States

ADB Asian Development Bank
AFR Sub-Saharan Africa Region

Cat-DDO Catastrophe Deferred Drawdown Option

CCA Climate Change Adaptation

**CCRIF** Caribbean Catastrophe Risk Insurance Facility

**CG** Consultative Group

CSO Climate Investment Funds
CSO Civil Society Organization
DGF Development Grant Facility

**DRFI** Disaster Risk Financing and Insurance

**DRM** Disaster Risk Management

EAP East Asia and the Pacific Region
ECA Europe and Central Asia Region

**EU** European Union

**EWS** Early Warning Systems

**FY** Fiscal year

GAR Global Assessment Report
GDP Gross domestic product

GFDRR Global Facility for Disaster Reduction and Recovery

GIS Geographic Information System

HFA Hyogo Framework for Action

IDA International Development Association

IMF International Monetary Fund

InaSAFE Indonesia Scenario Assessment for Emergencies

JICA Japan International Cooperation Agency
LCR Latin America and Caribbean Region

M&E Monitoring and EvaluationMDTF Multi-Donor Trust Fund

MIGA Multilateral Investment Guarantee Agency

MNA Middle East and North Africa Region

NGO Non-governmental organization

NMHSs National Meteorological and Hydrological Services

OECD-DAC Organization for Economic Cooperation and Development–Development

Assistance Committee

OpenDRI Open Data for Resilience Initiative

PCRAFI Pacific Catastrophe Risk Assessment and Financing Initiative

PDNA Post Disaster Need Assessment

SAR South Asia Region

SDGs Sustainable Development Goals

SDTF Single-Donor Trust Fund

**UN** United Nations

**UNDP** United Nations Development Programme

**UNFCCC** United Nations Framework Convention on Climate Change

**UN-HABITAT** United Nations Human Settlements Programme

UNICEF United Nations Children's Fund

**UNISDR** United Nations Office for Disaster Risk Reduction

**UR** Understanding Risk

**USAID** United States Agency for International Development

WMO World Meteorological Organization