



## Global Facility For Disaster Reduction And Recovery **ANNUAL REPORT 2012**

A photograph showing two women standing outdoors in a field. They are both wearing hats and holding long wooden poles or shovels. The woman on the left is wearing a light-colored, patterned top and dark pants. The woman on the right is wearing a plaid jacket over a white shirt and dark pants. The background is filled with dense foliage and trees.

Towards a  
**Resilient Future**

# GFDRR Partners

Special thanks and appreciation are extended to the partners who support GFDRR's work to protect livelihoods and improve lives:



# ABOUT GFDRR

This Annual Report assesses the Global Facility for Disaster Reduction and Recovery's (GFDRR) performance in FY 2012 towards its core vision to support vulnerable countries become more resilient to natural hazards. The report provides an overview of progress towards expanding and strengthening global partnerships to coordinate and scale up technical and financial support for national Disaster Risk Management (DRM) and Climate Change Adaptation (CCA); mainstreaming disaster and climate risk management in country development strategies; and assisting countries achieve efficient, effective, and resilient post-disaster recovery.

GFDRR's support to vulnerable countries is centered on three financing tracks. The Global Facility's assistance to implement integrated DRM programs is organized around:

(i) Knowledge, Outreach, and Partnerships; (ii) Mainstreaming DRM in Development Strategies; and (iii) Resilient Reconstruction. These actions are demand-driven by country priorities and post-disaster resilient recovery interventions.

**Knowledge, Outreach and Partnerships:** As a global partnership and focal point for DRM within the World Bank, GFDRR works with a wide range of development partners, bilateral and multilateral donors, as well as civil society and community organizations, to expand and strengthen global partnerships to coordinate and scale up technical and financial support for national DRM and CCA. At the heart of the GFDRR partnership is the close cooperation with the UN Office for Disaster Risk Reduction (UNISDR) as the Secretariat of the ISDR System. In particular GFDRR supports UNISDR to implement the joint Track I annual work program, funded by the World Bank's Development Grant Facility (DGF). As the

focal point for DRM within the World Bank, GFDRR is also a partner to many countries and international policy processes to advance the implementation of projects to build resilience in countries and communities.

**Mainstreaming DRM in Development Strategies:** In the coming decades, trillions of dollars will flow into new public investments in developing countries, much in hazard-prone areas. But arresting the current trend of rising disaster risk will require a major shift in development planning and practice. GFDRR supports vulnerable countries to better understand the risks they face; avoid the creation of new risks while reducing existing risks; be better prepared to respond; and design innovative financial protection strategies to deal with unavoidable disasters.

**Resilient Recovery:** After a disaster, the reconstruction process is an important opportunity to promote resilience. This challenge also presents an opportunity to promote investment in DRM through integrated resilient recovery and reconstruction planning. GFDRR assists disaster-hit countries to conduct PDNAs, post-disaster recovery planning and financing, and building institutional capacities for disaster preparedness and response.

Actions under the different thematic areas combine to form a comprehensive approach to managing disaster and climate risks in GFDRR's priority countries. Risk assessments inform risk avoidance and reduction activities, enable contingency planning, and financial protection strategies. At the same time post-disaster interventions continue to lay the foundation for future risk reduction projects.

# Member Contributions (in US\$)

From its inception in 2006 up to October 31, 2011, the Global Facility for Disaster Reduction and Recovery (GFDRR) has received US\$320 million in pledges and contributions from the following donors:



Australia  
\$29,496,000



Austria  
\$2,499,000



Brazil  
\$1,740,000



Canada  
\$3,113,000



Denmark  
\$9,207,000



European Union  
\$47,135,000



France  
\$1,580,000



Germany  
\$12,619,000



Ireland  
\$1,064,000



Italy  
\$6,843,000



Japan  
\$12,000,000



South Korea  
\$270,000



Luxembourg  
\$6,888,000



The Netherlands  
\$6,600,000



Norway  
\$10,568,000



Spain  
\$10,002,000



Sweden  
\$32,200,000



Switzerland  
\$6,465,000



United Kingdom  
\$23,146,000



United States  
\$3,040,000



The World Bank  
\$28,500,000

Finland, France, Italy, Norway, Sweden and Switzerland are also supporting special assignments of international disaster risk reduction experts in the GFDRR Secretariat in Washington DC and Geneva. The ACP/EU Natural Disaster Risk Reduction Program made a contribution of Euro 59.5 million. Sweden's Ministry of Foreign Affairs made a contribution of SEK 35 million in 2010-11. Dollar conversion varies due to exchange rate fluctuation until funds are booked and deposited into GFDRR accounts.

# Table of Contents

<b>1. A Year in Review</b>	8
GFDRR 2012	10
GFDRR Portfolio	12
Impact on the Ground	14
<b>2. GFDRR Results by Tracks and Focus Areas</b>	16
Knowledge, Outreach and Partnerships	
<i>Track I Work Plan implemented by UNISDR</i>	17
<i>GFDRR Outreach and Partnerships</i>	18
<i>Civil Society Partnership</i>	
Mainstreaming Disaster Risk Management in Development Strategies	21
<i>Focus Area: Risk Identification</i>	26
<i>Focus Area: Risk Reduction</i>	30
<i>Focus Area: Preparedness</i>	32
<i>Focus Area: Financial Protection</i>	36
Resilient Reconstruction	41
<b>3. Looking Ahead</b>	46
<b>4. Annexes</b>	48
Annex 1: Resource Management	49
Annex 2: FY-12 Global Knowledge and Learning Products	53
Glossary	57
Acronyms	59

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Notes: Fiscal Year (FY) runs from July 1 to June 30; the financial contributions and expenditures reported are reflected up to June 30, 2012; all dollar amounts are in US dollars (\$) unless otherwise indicated.

# Foreword



# Letter from the World Bank



In October 2012, I joined leaders from around the world in Sendai, Japan to call for greater mainstreaming of disaster risk management into development planning. In a field visit to the tsunami-hit coastline, we heard the principal of the Arahama elementary school explain how the school and surrounding community implemented their emergency plans when the earthquake and Tsunami struck. Their preparedness saved many lives.

In 2011 the world experienced the highest disaster losses ever recorded, continuing a trend that has seen economic losses triple over the past 30 years. Trillions of dollars of investments are flowing into high risk areas. At the same time the effects of climate change are exacerbating this trend and threatening to roll back decades of development. Without building resilience our mission of ending poverty and the inclusive, green growth that we need to get there will be so much more difficult.

As a global partnership on disaster risk management, GFDRR is building a culture of disaster and climate resilience worldwide. Over the past year the partnership has continued to grow with new donors and partners. In supporting international discussions, such as the Sendai Dialogue and during the G20, GFDRR is helping to mobilize the development community to invest in resilience. Its work is showing strong results, especially in high-risk, low capacity countries.

GFDRR has been instrumental in integrating disaster and climate risk management into the Bank's lending and non-lending operations. We will continue to support GFDRR's catalytic role both in the Bank and with our partners throughout the world.

A handwritten signature in black ink, appearing to read "hkyt".

Rachel Kyte  
Vice President, Sustainable Development Network  
The World Bank  
Chair of the GFDRR Consultative Group

# Letter from the Co-chair of the Consultative Group



In the Netherlands we know what it means to be exposed to the forces of nature. A quarter of the country, including our capital, lies below sea level. For centuries, the Netherlands has pioneered living with nature to create a sustainable economy from a challenging environment. This experience has also taught us the importance of considering natural hazards in everything we do. Living with water, active water management and particularly flood risk management are a matter of course for us.

As more people move to cities at risk of natural hazards, investing in prevention and risk reduction is becoming ever more important to avoid disasters. After being a part of GFDRR for a number of years, we were pleased, as Co-chair of the Consultative Group, to be able to help advance this agenda even further by supporting the Secretariat through a time of change. After five years of growth, we welcomed a new manager to the Secretariat and GFDRR's Global Partnership Strategy 2009-2012 came to an end.

We recognize the extensive work of GFDRR to consult with all our partners in the Consultative Group in the preparation of the new Strategy to take us to 2015. At the same time we are aware that this is only the beginning of

the work. The implementation of the Strategy will be the real challenge. Building resilience to disasters is part of a wide range of activities that are critical for development more broadly. Ensuring that the work of GFDRR reaches all sectors, guiding the Secretariat towards measurable results under uncertainty, and safeguarding predictable financing in a difficult economic climate is the responsibility of all of us.

The Netherlands is pleased to have been entrusted with the task of being co-chair of GFDRR's Consultative Group and my team and I have enjoyed working with the Secretariat, and all other stakeholders. Disaster Risk Reduction will continue to grow in importance on the international political agenda. Working closely together as donors, with the World Bank, and with our partners in the UN as well as in Civil Society will be the key to increasing the resilience of people to disasters.

A handwritten signature in blue ink, appearing to read 'Jelte van Wieren'.

Jelte van Wieren  
Deputy Director  
Stabilisation and Humanitarian Aid Department  
Netherlands Ministry of Foreign Affairs  
Co-chair Consultative Group, GFDRR, 2011-2012

# Letter from the UN Office for Disaster Risk Reduction



There are just three years left to run of the Hyogo Framework for Action and the Global Facility for Disaster Reduction and Recovery is helping to identify priorities for future action, enriching the consultations now underway on the post-2015 disaster risk reduction agenda.

As a financing mechanism, GFDRR has not only provided valuable support to high-level advocacy

initiatives but has also targeted financed much needed risk reduction measures in high-risk countries, many of which receive considerable humanitarian aid from donors to respond to disasters but comparatively little investment in holistic risk mitigation efforts.

GFDRR's Disaster Aid Trafficking (DAT) initiative is helping to improve our understanding of aid flows into disaster risk management through its analysis of over 55,000 transactions from the last 30 years and aligning them with HFA priorities. This on-going work should influence donors to strike a better balance between response and disaster risk reduction.

One key measure of GFDRR's impact on mainstreaming disaster risk management across World Bank programs is that seven out of ten Country Assistance Strategies now recognize natural hazards as a risk for sustainable development. This is almost double the number prior to the establishment of GFDRR in 2006.

This paradigm shift carries through to the implementation of significant projects such as the Bangladesh Urban Earthquake Resilience Project, which will support improved decision-making for the mitigation of earthquake hazards. Building on GFDRR-funded technical studies, the World Bank has approved an assistance package of \$213m for flood mitigation in Colombo, Sri Lanka, which has experienced regular floods over the last 30 years. A World Bank team is also designing a \$180 m regional project to strengthen the resilience of pastoralists in Ethiopia, Kenya and Uganda following the severe drought in these countries last year.

When it comes to specific support for UNISDR, GFDRR's Track 1 financing has enabled publication of a Mayor's Handbook to support participants in the "Making Cities Resilient" Campaign, which now embraces over 1,000 cities, towns and municipalities. A local government self-assessment tool has also been developed, tested and made available to the Campaign members.

UNISDR's global school safety campaign was boosted by a set of guidance tools for school safety implementation and disaster risk reduction education for governments and local practitioners through Thematic Platform for Knowledge and Education.

Over the last year, UNISDR's outreach at regional level has also been supported with notable results such as the approval by Heads of State in Central America of a new risk management policy; agreement in the Pacific on a roadmap to develop a post-2015 Integrated Regional Framework for Disaster Risk Management and Climate Change; and an Arab Regional Strategy for Disaster Risk Reduction.

It's no coincidence that just as we mark five years of financial support from the World Bank's Development Grant Facility, we are also acting on the outcome of the Fifth Asian Ministerial Conference on Disaster Risk Reduction, the Yogyakarta Declaration, for the most disaster-prone region in the world.

Support through GFDRR Track 1 has helped to ensure that such regional gatherings are now a regular feature on the inter-governmental development calendar and that they result in action plans to build disaster resilience in a world where extreme weather events are on the rise and where a \$380 billion record for economic losses was set last year.

No mention of GFDRR financial support for UNISDR would be complete without acknowledging the influence of the Global Assessment Report on Disaster Risk Reduction (GAR), the third edition of which is now in the final stages of preparation. In a short space of time, it has become hugely influential in raising the level of political commitment to implementing the HFA and making it a central feature of country-level strategies for climate change adaptation and building disaster resilience at community level.

GFDRR's Disaster Risk Financing and Insurance Program has done much to advance the arguments around mitigating economic losses in the GAR, by assisting Ministries of Finance to analyze, understand and manage the fiscal and financial impacts of disasters.

This supports a key tenet of UNISDR thinking. And that is the importance of good governance and political leadership when it comes to making progress on HFA implementation. This is now paying off in the high-level of engagement by Governments and other stakeholders in the consultations underway for a follow-on agreement to the HFA.

On behalf of UNISDR, I would like to thank GFDRR for its contribution towards building disaster resilience in so many areas and look forward to continued good cooperation in tackling the priority areas in the years ahead.



Margareta Wahlström  
Special Representative of the United Nations  
Secretary General for Disaster Risk Reduction

# A YEAR IN REVIEW



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## Strengthening its support to vulnerable countries, GFDRR...

- ... Approved 31 projects worth over US\$ 22 million. Of which 89 percent (US\$ 20.3 million) advanced the mainstreaming of DRM; 11 percent went (US\$ 2.4 million) to resilient recovery;
- ... Dedicated the highest percentage of its funding to Africa (40 percent, US\$ 9 million) followed by East Asia Pacific (27 percent, US\$ 6.1 million);
- ... Supported five Post-Disaster Needs Assessments in response to Government requests.

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## GFDRR contributed to the international policy agenda by...

- ... Continuing to support UNISDR's work through an additional DGF grant of USD 4.25 million;
- ... Supporting the World Bank to position DRM as a priority topic during Mexico's G20 presidency;
- ... Launching the Resilience Dialogues in the margins of the World Bank Annual Meetings;
- ... Co-organizing events to discuss DRM at the 4th High Level Forum for Aid Effectiveness in Busan and the UN Rio+20 Conference on Sustainable Development.

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## 2012 brought changes to the GFDRR partnership...

- ... We welcomed a new manager to the GFDRR Secretariat;
- ... The Netherlands became co-chair of the Consultative Group (CG) for 2012;
- ... Austria joined GFDRR as a new donor contributing to its resilient recovery operations;
- ... Haiti, Togo, and the Solomon Islands supported the CG as developing country members;
- ... The ACP-EU Natural Disaster Risk Reduction Program was launched in October 2011;
- ... The new Civil Society Partnership Strategy was adopted and further development of GFDRR's Disaster Aid Tracking (DAT) initiative was endorsed by the 12th CG Meeting in March 2012;
- ... The GFDRR's new partnership strategy was drafted in consultation with its CG members.

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## Challenges encountered and areas for growth...

- ... GFDRR has made important progress towards aligning the demand driven nature of its business model with long term planning;
- ... Unpredictable long term funding has made long term planning and commitments to new projects very difficult;
- ... In uncertain and complex environments many factors can enable or inhibit building resilience, GFDRR is further focusing on evaluating its work and building evidence to show how we achieve the outcomes we seek.

# GFDRR in 2012

Over the past year the GFDRR continued to evolve as a robust and efficient global disaster risk management and climate change adaptation financing mechanism. This Annual Report presents GFDRR's performance and achievements throughout Fiscal Year 2012 (FY12)<sup>1</sup>, while also providing an overview of its cumulative results since 2007. The key achievements for this year are laid out according to GFDRR's corporate structure – financed under Track I, II, and III. Results are presented in line with the five key focus areas of GFDRR's engagement with its client countries and partners: risk identification, risk reduction, preparedness, financial protection, and resilient reconstruction.

GFDRR contributed to the international policy agenda to mainstream disaster and climate risk management into development. As the World Bank's focal point on DRM, over the course of FY12, GFDRR supported, for example, the Mexican G20 Presidency, participated at the UNFCCC COP17 Meeting in Durban and co-organized events to discuss DRM at the 4th High Level Forum for Aid Effectiveness in Busan, the UN Rio+20 Conference on Sustainable Development as well as organized the Resilience Dialogues in the margins of the World Bank Annual and Spring Meetings. This work is advanced both directly and through the partnership with UNISDR under Track I.

The year has also seen important developments for the GFDRR Partnership both within the World Bank as well as externally. The World Bank is increasingly recognizing the importance of disaster and climate risk management within its overall business model. After five years, the GFDRR Secretariat welcomed a new Manager in May 2012. The new Manager also holds the newly created position of Manager of the World Bank DRM Practice Group.

The GFDRR partnership continued to grow with new donors and partners supporting DRM and CCA activities around the globe. At the 11th Meeting of the Consultative Group in Jakarta, the Netherlands took over as co-chair of the Consultative Group (CG) for 2012. Austria joined GFDRR as a new donor contributing to its resilient recovery operations. Chile, Malaysia, Morocco and the Islamic Development Bank expressed interest in future engagement. Togo and the Solomon Islands joined the Consultative Group as developing country members and the CG invited Haiti to continue as a member for another 2 year term.

**Building disaster resilience in communities and nations is essential, not only for reducing the risks and impact from natural hazards, but for fighting poverty and meeting the Millennium Development Goals.**

- Robert B. Zoellick, 11th President of The World Bank Group (2007-2012)  
2012 G20 DRM Initiative by the Government of Mexico

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Strengthening its support to vulnerable countries, GFDRR approved 31 projects worth over US\$ 22 million<sup>2</sup> in FY12. 89 percent (US\$ 20.3 million) of these relate to mainstreaming DRM, and 11 percent (US\$ 2.4 million) to resilient recovery. With 40 percent or US\$ 9 million of total approved projects, the Africa region received the largest amount of financial support from GFDRR, followed by the East Asia Pacific region at 27 percent or US\$ 6.1 million. The highest share of funding – over 60 percent – was allocated for risk reduction activities. This was followed by 13 percent each for risk identification and financial protection, 9 percent for resilient reconstruction, and 4 percent for preparedness.

GFDRR achieved its highest disbursements-to-approvals ratio to date. A key feature of GFDRR's performance since 2007 has been the steady rise of its financial efficiency, in terms of disbursements of project funds. While the annual disbursements-to-approvals ratio<sup>3</sup> (yearly funds disbursement versus yearly approved project amounts) has steadily increased over the years, to reach an unprecedented 125 percent last year.

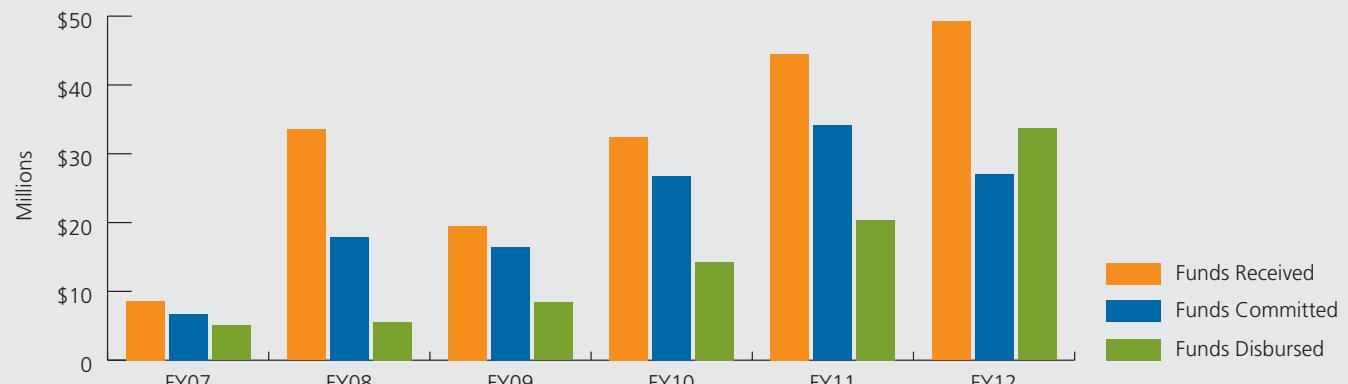
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1. The World Bank's Fiscal Year runs from 1 July 2011 to 30 June 2012.

2. This does not include the \$4.25 million DGF funding to Track I

3. Yearly disbursements are calculated as a function of annual (and not cumulative) disbursements of the entire portfolio, while approved amounts signify the total worth of new projects approved in the same year.

### GFDRR ANNUAL COMMITMENTS - TRACK I, II, III



\* Not including ACP-EU NDRP Funds.

The ACP-EU Natural Disaster Risk Reduction Program was launched in October 2011. This European Union-funded program in partnership with the African, Caribbean and Pacific (ACP) Group and managed by GFDRR, is an example of increasing cooperation on disaster risk reduction and post-disaster response. With signed agreements for EUR 59.5 million, the EU has become GFDRR's largest donor.

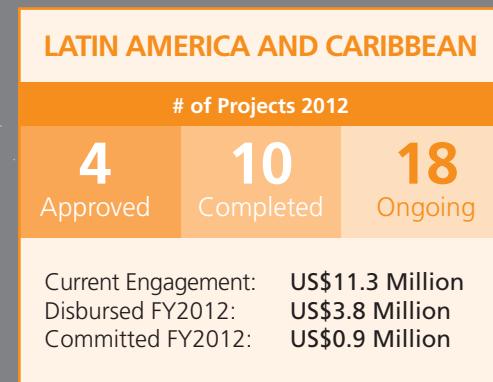
The Consultative Group (CG) adopted a new Civil Society Partnership Strategy at the 12th CG Meeting in Washington D.C., April 2012. The strategy to deepen GFDRR's engagement with Civil Society was informed by an extensive consultation process and a civil society Policy Forum – *Community Action to Build Resilience* –organized alongside the 11th CG Meeting which took place in Jakarta, Indonesia in November 2011. As a follow up, civil society representatives were invited to participate in the priority country teams presenting an overview of impacts on the ground during the 12th CG meeting.

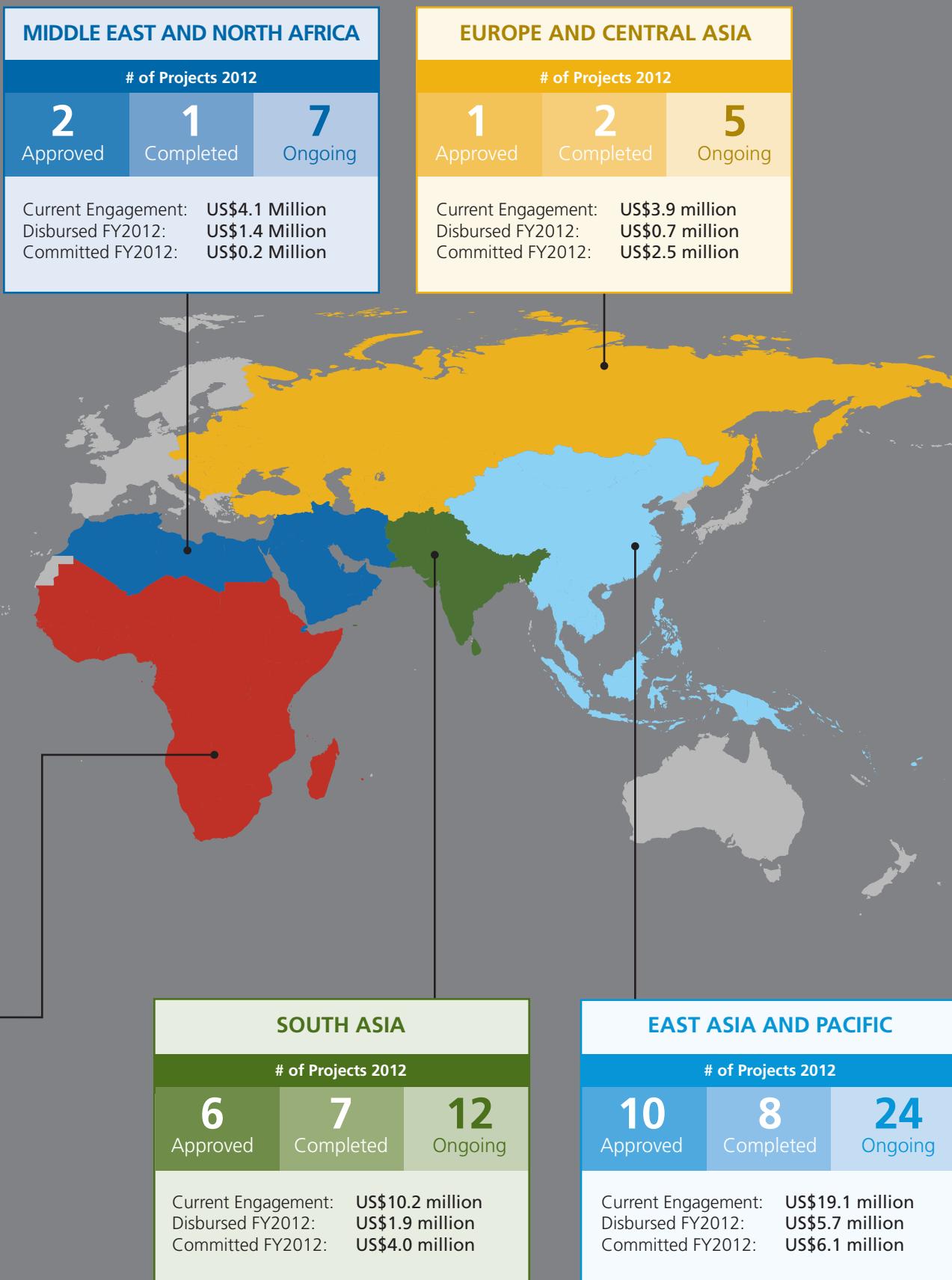
GFDRR has produced many knowledge products on disaster resilience. Building on the long technical experience of the World Bank, GFDRR jointly with the Bank's regional DRM teams produced knowledge products such as on Urban Flood Management and Mexico's Natural Disaster Fund. The 12th CG Meeting also fully endorsed further development of GFDRR's Disaster Aid Tracking (DAT) initiative, which is developing globally accepted norms for classifying and monitoring DRM related development assistance flows in close cooperation with UNISDR, OECD and other partners. Through its partnership with UNISDR, GFDRR also helped to launch the Handbook for Local Governments on Making Cities Resilient to promote urban resilience.

The Secretariat initiated consultations with members of the CG to inform GFDRR's new partnership strategy. GFDRR's Global Partnership Strategy (2009-2012) will come to an end with calendar year 2012. Since the 12th CG Meeting, consultations are ongoing to develop GFDRR's new partnership strategy for the next three years.

# GFDRR Portfolio

Strengthening its support to vulnerable countries, GFDRR approved 31 projects worth over US\$ 22 million in FY12. With 40 percent or US\$ 9 million of total approved projects, the Africa region received the largest amount of financial support from GFDRR.





# Impact on the Ground

BELOW ARE SIX EXAMPLES FROM AROUND THE WORLD



## LATIN AMERICA AND CARIBBEAN

**Issue:** Caribbean countries, such as **Grenada** and **St Vincent** and the Grenadines, are exposed to extreme weather events (hurricanes) that cripple infrastructure.

**Solution:** Build and repair storm-resistant schools and other public buildings and water supply systems.

**Impact:** **200,000 islanders** benefit from security of water supply in case of disruption and safe schools.



## AFRICA

**Issue:** In **Togo**, unsustainable land and forest management in exacerbate erosion and intensify the negative results of climate change, especially flooding.

**Solution:** Reform land and natural resource management, helping to protect livelihoods and reduce the impact of floods in all five regions of Togo.

**Impact:** **3 million Togolese** are better protected from recurrent floods and land degradation.



## MIDDLE EAST AND NORTH AFRICA

**Issue:** In **Djibouti**, drought and flash flooding threatens precarious livelihoods and water resources.

**Solution:** Help national authorities assess their own disaster risks, plan their own investment in mitigation and develop critical functions like weather forecasting.

**Impact:** **750,000 inhabitants** of the country are better protected by national preparedness systems.

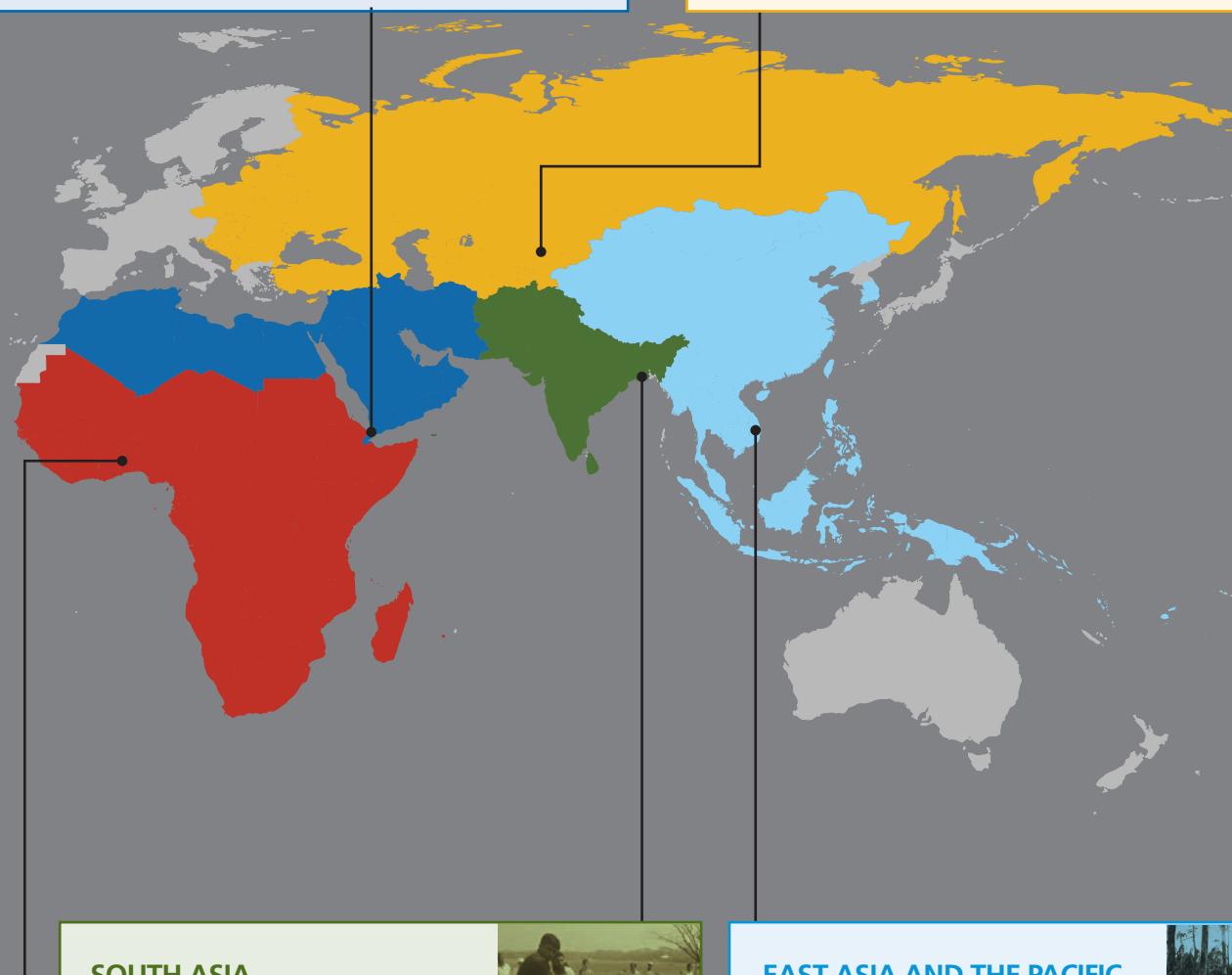


## EUROPE AND CENTRAL ASIA

**Issue:** In **Kyrgyz Republic** and **Tajikistan**, inadequate weather forecasting and hydro-meteorological services.

**Solution:** Improve the efficiency of weather forecasting and other hydro-met services to forecast and plan for extreme weather events.

**Impact:** Increased protection for the lives and assets of more than **12.5 million people**.



## SOUTH ASIA

**Issue:** **Bangladesh's** Cyclone Sidr in 2007 wiped out disaster risk infrastructure across the country.

**Solution:** Construct 50 new shelters, repair another 250, and rehabilitate over 100 kilometers of embankments.

**Impact:** **1.7 million households** are now better protected against severe storms and cyclones.

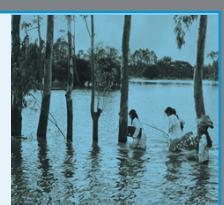


## EAST ASIA AND THE PACIFIC

**Issue:** Rural villages in **Vietnam** suffered repeatedly from flooding and extreme weather.

**Solution:** Provide local early warning systems, 12 new or upgraded storm shelters, and 165 safe schools and health care facilities damaged by recent storms.

**Impact:** Over **210,000 people living in 30 villages** are now better prepared with their own disaster action plans and evacuation systems.



# GFDRR Results by Tracks and Focus Areas



# Knowledge, Outreach and Partnerships

As a global partnership, GFDRR is working closely with many organizations and countries around the world. Established in support of the implementation of the HFA, GFDRR is a partnership of the ISDR system. As the partnership has grown over the years GFDRR is increasingly responding to requests by countries and other partners to support international engagements to advance the global knowledge agenda and advance the implementation of risk reduction measures.

Moreover, as the policy focal point for DRM in the World Bank Group, GFDRR is regularly providing support to regional teams within the World Bank and policy guidance to World Bank clients and partners. GFDRR works with many international partners to expand and strengthening global partnerships to coordinate and scale up technical and financial support for national DRM and CCA. In particular GFDRR supports UNISDR to implement the joint Track I annual work program, funded by the World Bank's Development Grant Facility (DGF).

## Track I Work Plan implemented by UNISDR

GFDRR's Track I consists of financial support to UNISDR, funded from the World Bank DGF - a start-up fund for innovative initiatives. The key objectives of this partnership are to enhance global and regional strategic partnerships, global advocacy and knowledge management for mainstreaming disaster risk reduction (DRR). From FY 07 to FY 12 DGF funding amounted to US\$ 28.25<sup>4</sup> million. Over the FY12 period, UNISDR completed the full implementation of the FY11 Work Plan and commenced the FY12 Work Plan, this section therefore covers the activities under the FY11 Work Plan (January 2011 – June 2012).

Based on a joint work plan, supported activities are implemented by UNISDR aligned with its core strategic focus of leadership and coordination, credible evidence, and advocacy. To ensure complementarity between UNISDR, GFDRR and World Bank programming, activities under UNISDR's Track I annual work plan were developed and agreed together by the UNISDR, World Bank Regional Coordinators and GFDRR. A full overview of Track I activities and achievements over the period from 2007-2011 is set out in the joint UNISDR-GFDRR Report 'Track I Global and Regional Partnerships for Disaster Risk Reduction – A Five Year Perspective 2007-2011'.

The FY11 Track I Work Plan consisted of seven components (six regional and one global) and included 20 projects. 16 projects were spread over the six regions while 4 projects were at the global level. The total budget was USD 4.25 million with more than 75% going to the regions. Key achievements of the Track I partnership over this grant period included:

- a) In **South East Asia and the Pacific**, two road maps were developed: the **ASEAN Disaster Risk Financing and Insurance (DRFI) Roadmap**, which has stimulated commitment and actions for standardized national disaster loss databases across Asia, and the roadmap towards a **Post 2015 Integrated Regional Framework for DRM and Climate Change** for the Pacific which was prepared and endorsed by the key regional inter-governmental bodies, SPC/SOPAC and SPREP. The Asia and Pacific Regional Platform for DRR was also successfully organised in Auckland, New Zealand.
- b) In **South Asia**, the South Asia Disaster Knowledge Network (SADKN) portal was completed and launched at the Global Platform 2011. A toolkit for Integrating Disaster Risk Reduction and Climate Change Adaptation into Ecosystem Management of Coastal and Marine Areas in the SAARC Region was developed as a resource for COP 11 - Convention on Biological Diversity on coastal and marine issues.
- c) In the **Latin Americas and the Caribbean (LAC)**, the second Regional Platform for DRR was organized in Nayarit, Mexico. Its outcome document "**Nayarit Communiqué**"<sup>2</sup> highlighted shifts in DRR legislative frameworks in a number of countries. Sub regional organizations helped to develop sub-regional plans, create new legislation, and monitor progress in regional implementation of HFA commitments. The approval of the PCGIR (The Central American Policy for Integral Risk Management) fostered by the CEPREDENAC as a policy instrument on disaster risk reduction was adopted by member countries. CEPREDENAC was one of the Sasakawa awardees in 2011.
- d) In **Middle East and North Africa (MENA)**, despite changing and challenging political circumstances, this grant period saw the adoption of the Arab Regional Strategy for DRR (ASDRR) 2020.

4. Total DGF funding has been 28.5 million, but 0.25 million of this in FY09 was used for a DGF-required GFDRR external evaluation and therefore did not support the UNISDR work program.

5. <http://eird.org/plataforma-2011/pdf/Comunicado-de-%20Nayarit-en.pdf>



- e) In **Europe**, the South Eastern Europe and Caucasus Catastrophe Risk Insurance Facility (SEEC CRIF) was further developed as recommended in the result assessment of SEEDRMAP in 2010. In **Central Asia and South Caucasus**, the regional seismological and hydro-meteorological platforms were further strengthened as forums for effective DRR in the region.
- f) In **Africa**, technical support was provided to the AUC's Department of Rural Economy to lead the coordination of the DRR sub-working group and accelerate implementation of the Africa Programme of Action on DRR. Two new two sub-regional platforms for DRR were launched – one in Southern Africa led by SADC and another in Western Africa led by ECOWAS.
- g) At **the global level** output included:
  - The production and launch of a "Handbook" for Mayors and other local government leaders participating in the Resilient Cities Campaign. The Handbook identifies "10 Essentials" to make cities resilient. Urban resilience was a major advocacy focus of UNISDR in all regions. A local government self-assessment tool (LG-SAT) tool was developed to align HFA reporting at national and local levels.
  - A set of guidance tools to promote school safety and Disaster Risk Reduction Education produced for governments and local practitioners through UNISDR's support to the Thematic Platform for Knowledge and Education (TPKE).

- The World Water Development Report (WWDR), which guides DRR and water safety.
- A methodology to better assess global earthquake risk
  - developed as part of the partnership between the GEM and the UNISDR Global Assessment Report team.
- Strategic consultations among donor countries and technical institutions to identify gaps in aid tracking systems, including active engagement with the OECD/DAC's program for measuring DRR investments.

## GFDRR Outreach and Partnerships

Throughout FY12 GFDRR contributed to the international policy dialogue to advance the implementation of risk reduction measures in vulnerable developing countries. As the World Bank's focal point on DRM, GFDRR is increasingly called upon to support analytical, outreach and partnership work to advance the implementation of risk reduction measures in high risk countries and support creation and dissemination of new knowledge products. Through contributions to initiatives such as the G-20 Summit, the Resilience Dialogue series, the 5th Islamic Conference of Environment Ministers, Rio +20, the 4th High Level Forum on Aid Effectiveness, COP17, and the Understanding Risk Forum, GFDRR contributed to generate new knowledge and advance support for investments in risk reduction among international institutions, world leaders, ministries of finance, and other stakeholders. Key engagements in this area included:

- **The Resilience Dialogue and Sendai Dialogue:** On the margins of the 2011 World Bank Group-IMF Annual Meeting in October 2011, GFDRR launched the Resilience Dialogue series, co-hosted by Japan, the European Union and the World Bank, as a regular feature of the World Bank Group and IMF Annual and Spring Meetings. The first Resilience Dialogue brought together the World Bank Group President and principals from Japan, EU, UK, USAID, and agencies of the UN system. The second Resilience Dialogue took place during the 2012 IMF-World Bank Group Spring Meetings and focused on the need to link between DRM and CCA to build resilience. Enabling a dialogue on integrated disaster and climate risk management between key bilateral and multilateral development actors during the Annual and Spring Meetings contributed to mainstreaming DRM in the World Bank's policy discussion, including securing DRM on the agenda of the Development Committee meeting of the 2012 IMF-WBG Annual Meetings in Tokyo. The engagement with Japan in preparation for the 2012 IMF-WBG Annual Meetings includes the production of the Sendai Report on mainstreaming DRM, a series of Knowledge Notes on lessons learnt from the Great East Japan Earthquake and Tsunami and Japan's experience with DRM, and the Sendai Dialogue. Part of the IMF-World Bank Group Annual Meetings program, the Dialogue brings together Annual Meetings delegates, disaster experts and other stakeholders to build a global consensus on the need to integrate disaster risk management into development planning. The event's host city, Sendai, is the largest city in the Tohoku Region along the Pacific coast of Japan, which bore the brunt of the 2011 Great East Japan Earthquake and Tsunami.
- **G20:** At the request of the Government of Mexico, GFDRR together with the Latin America Regional DRM team supported the World Bank in their joint efforts to position DRM as a priority topic for the country's G20 presidency. A joint Government of Mexico-World Bank report, '*Improving the Assessment of Disaster Risks to Strengthen Financial Resilience*', brought together the experiences of G20 countries in protecting their populations and assets from disaster events. Presented at the G20 Summit in Los Cabos, this publication and the overall engagement helped sensitize Ministries of Finance to the potential financial and fiscal impacts of disasters. This dialogue introduced finance officials to instruments and tools for risk financing and opened new entry points for discussing risk reduction projects in several countries.
- **Organization of Islamic Cooperation (OIC):** At the request of the 4th Islamic Conference of Environment Ministers, GFDRR supported the OIC in the development of the Work Plan to implement the Islamic Strategy for Disaster Risk Reduction and Management adopted in Tunisia in October 2010. This work plan was endorsed at the 5th Islamic Conference of Environment Ministers on 17-18 May, 2012 in Astana, Kazakhstan, and presented during the Rio+20 Conference in Brazil.
- **World Bank - Japan DRM Knowledge Partnership:** In the wake of the 2011 earthquake and tsunami, Japan and the World Bank initiated collaboration to disseminate the lessons learned from Japan's experience. As part of this partnership, GFDRR provided technical guidance and quality assurance to the World Bank Institute (WBI) in the preparation of a set of Knowledge Notes, recording the experience of Japan across six thematic clusters. GFDRR also supported the World Bank in the preparation of the Sendai Report to advance the global agenda for mainstreaming DRM into development assistance.
- **Inter-Agency Standing Committee (IASC):** GFDRR continues to represent the World Bank as a standing invitee of IASC. National preparedness capacity is a key humanitarian concern which requires a development approach. Therefore, GFDRR together with the United Nations Development Programme (UNDP) drafted the IASC Principals Paper on Preparedness, endorsed in December 2011. GFDRR further supports related efforts including the Good Humanitarian Donorship Initiative, which aims to ease coordination efforts of humanitarian and development donors for supporting preparedness activities.
- **Disaster Aid Tracking Initiative (DAT):** Presented to the 12th CG Meeting in Washington DC the overarching goal of GFDRR's DAT initiative is to establish globally accepted norms for classifying and monitoring DRM related investments and mainstream such norms into the finance tracking systems of all development partners. The DAT has achieved enhanced quality of disaster aid information by identifying more than 55,000 disaster related aid flows over the past 30 years and aligning them with HFA priorities and the Organization for Economic Co-operation and Development's (OECD) Creditor Reporting System (CRS) purpose codes. An interactive web-based dashboard with data visualization tools for effective reporting and decision support is available in beta version at <http://gfdrr.aiddata.org>.

## Civil Society Partnership

In April 2012, the 12th CG Meeting endorsed a Civil Society Partnership Strategy for GFDRR. The outcome of in-depth consultation and dialogue with the World Bank, Civil Society Organizations (CSOs), and national governments, donor agencies, the UN, the International Federation of Red Cross and Red Crescent Societies (IFRC), the strategy aims to achieve tangible progress of immediately accessible entry points for engagement in a two year pilot period and report back to the CG for further guidance.

The strategy commits to create space for constructive cooperation between CSOs and government in DRM. It is designed around two pillars which underscore the importance of engaging with civil society throughout the GFDRR business lines. GFDRR started the implementation of this strategy, is planning a civil society mapping exercise and is in the process of identifying pilot countries for focused engagement.

The GFDRR Civil Society Partnership Strategy is the result of extensive stakeholder consultations. More than 300 representatives from CSOs engaged in DRM participated in an online questionnaire and focus group meetings held in 11 countries. These consultations informed a policy forum focusing on civil society and disaster risk management organized alongside the 11th CG Meeting in November 2011. 120 participants from over 20 countries attended the forum – *Community Action for Resilience* – to showcase activities, encourage knowledge exchange and highlight current challenges in implementing effective DRM at the local level. At the advice of the CG, a joint working group with representatives from civil society, UNISDR, IFRC and national governments was formed. The working group highlighted the key issues they believed the strategy should focus on to support and facilitate civil society engagement with government on disaster risk management.

We must ensure that development strategies and programmes prioritize the building of resilience among people and societies at risk from shocks, especially in highly vulnerable settings, such as small island developing states. Investing in resilience and risk reduction increases the value and sustainability of our development efforts.

- Busan Partnership for Effective Development Co-Operation, Fourth High Level Forum on Aid Effectiveness, Busan, Republic Of Korea, 29 November to 1 December 2011



### CSO ENGAGEMENT ON DRM AND CCA AT COP17

As part of the 17th Conference of the Parties (COP17) to the United Nations Framework Convention on Climate Change (UNFCCC) held in Durban (December 2011), GFDRR organized a session developed in partnership with the Government of South Africa that examined opportunities for strengthening policy dialogue between government and civil society to ensure effective disaster risk management at the local level. Representatives from the Government of South Africa, ActionAid, the Intergovernmental Authority on Development (IGAD) of East Africa, and the Global Network of Civil Society Organisations for Disaster Risk Reduction engaged in dialogue and knowledge exchange. In response to findings that local progress on implementing the HFA revealed a persistent gap existing between national policy and local action, over 80 participants attended the roundtable dialogue.

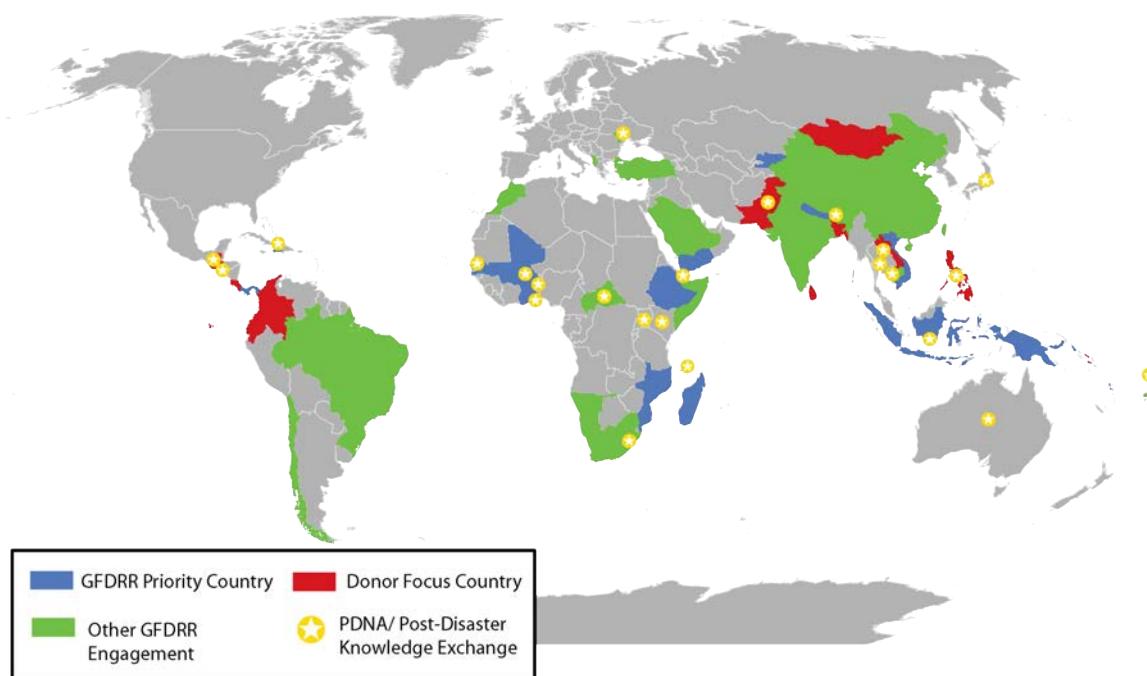
# Mainstreaming Disaster Risk Management in Development Strategies

GFDRR supports risk mitigation activities in vulnerable countries at high risk of multiple natural hazards. Funds are provided to 20 priority countries through the Multi-Donor Trust Fund<sup>6</sup>; 11 additional focus countries through Single-Donor Trust Funds<sup>7</sup>; and to ACP (Africa, Caribbean and Pacific) countries through the ACP-EU Natural Disaster Risk Reduction (NDRR) Program. While the majority of GFDRR's resources are reserved for these priority countries, GFDRR is actually engaged in close to 60 countries around the world.

In FY12, GFDRR approved 22 projects, worth US\$ 20.3 million, and disbursed a total of US\$ 27.5 million through its trust fund to support the integration of DRM in development, provide flexible, targeted grant financing, knowledge products and technical assistance to disaster-prone countries. Of the five thematic areas along which GFDRR's work supports countries to implement a comprehensive DRM framework, This trust fund finances operations in (i) risk identification; (ii) risk reduction; (iii) preparedness; and, (iv) financial protection.

Funds Committed in FY12	Funds Disbursed in FY12
US\$ 20.3 M	US\$ 27.5 M
Projects Approved in FY12	Projects Completed in FY12
22	30

Throughout the past year, GFDRR continued to make progress toward mainstreaming DRM in World Bank programs. This is reflected by the significant increase in the number of World Bank Country Assistance Strategies (CAS) that address disaster risks between 2006 and 2011. On average, 7 out of every 10 CASs now at a minimum recognize natural disasters as a challenge or a risk to sustainable development, compared with 4 out of every 10 in 2006.



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6. 20 percent of the MDTF are allocated to flexible, innovative and strategic activities outside the priority countries.
  7. GFDRR focuses its work on 31 countries in total (focus countries). These include 20 priority countries: Burkina Faso, Djibouti, Ethiopia, Ghana, Haiti, Indonesia, Kyrgyz Republic, Madagascar, Malawi, Mali, Marshall Islands, Mozambique, Nepal, Panama, Papua New Guinea, Senegal, Solomon Islands, Togo, Vietnam and the Republic of Yemen. In addition there are eleven donor focus countries: Bangladesh, Mongolia (Replaced Cambodia in FY12), Philippines, Vanuatu, Lao People's Democratic Republic (Lao PDR), Pakistan and Sri Lanka, Colombia, Costa Rica, Ecuador and Guatemala.



#### **IN COLLABORATION WITH THE GOVERNMENT OF JAPAN, GFDRR ESTABLISHED A MAJOR NEW PARTNERSHIP FOR DRM WITH THE POLICY HUMAN RESOURCE DEVELOPMENT (PHRD) TRUST FUND.**

This collaboration has leveraged \$50 million in financing from the Government of Japan to scale up DRM in GFDRR country programs and other countries in SAR and EAP. The Program provides grant financing to recipients (mostly ministries of finance, planning or disaster management) to implement activities along four priority areas: (i) safe cities in Asia; (ii) reducing vulnerability to climate related hazards in the Pacific; (iii) water and coastal resource management; and (iv) building capacity in emergency preparedness and response. So far, half of the funds have been committed to a total of 10 projects in the two regions. This includes for example climate resilience activities in the Pacific, urban emergency response capacity in Pakistan and a program for seismic safety in schools in the Kathmandu Valley in Nepal. Cooperation with JICA at a country level in each project has been a significant feature of the program. Further projects will be identified during FY13.

# Leveraging impacts for Disaster Risk Management in 2012

The below projects provide examples of how GFDRR's technical and financial assistance has leveraged both large investments, as well as policy reforms for DRM in FY12.

**Central Asia:** GFDRR provided seed funding (US\$ 200,000) to develop an Action Plan for improving weather and climate service delivery in low income countries in Central Asia. Using the results of this study the GFDRR team helped the ECA region to develop and implement of a US\$ 27.7 million investment program on modernization of hydromet agencies funded through IDA and PPCR.

**Costa Rica:** A GFDRR funded pilot project on Early Warning Systems for Hydrometeorological Hazards (\$255,000), implemented with WMO, leveraged significant community support and involvement, as well as the government electric power company, providing key technical information and staff time. The project leveraged additional financial and technical resources from other organizations, including UNDP.

**East Asia and Pacific:** A GFDRR-funded set of guidance notes on Integrating Gender into DRM, led to a follow-up phase with funding from AusAID amounting to US\$250,000, which focuses on making DRM related projects more gender-sensitive in Indonesia, the Philippines, Vietnam and the Solomon Islands.

**El Salvador:** In the aftermath of Tropical Storm Ida, a GFDRR-funded Damage, Loss and Needs Assessment (PDNA) led to the formulation of a DPL with a CAT DDO approved by the Board in February 2011, and disbursed the total of US\$ 50 Million through two requests in October, 2011.

**Horn of Africa:** The Horn of Africa drought crisis and response plan has been substantially supported with technical and financial expertise from GFDRR. The plan supports affected countries through a US\$1.8 billion financing package.

**Malawi:** The US\$125 million Shire River Basin Management Project builds upon GFDRR supported analytical work and provides investments and opportunities for improving climate and disaster resilience as it focuses on flood management issues in the Shire.

**Nigeria:** GFDRR supported a rapid land slide risk assessment together with the Norwegian Geotechnical Institute, which informed the formulation of risk reduction and preparedness measures in the US\$500 million IDA financed Nigeria Erosion and Watershed Management Project (NEWMAP).

**Panama:** With technical assistance from GFDRR, a Development Policy Loan (DPL) with a CAT DDO (US\$66 million) was approved by the Board in October 2011. As part of the DRM program connected to the DPL, Panama has carried out a series of DRM-related policy and legislative reforms.

**Papua New Guinea:** With GFDRR technical assistance to design a project supporting more disaster and climate resilient transport network in Papua New Guinea US\$2.7 million was secured from the Japanese Government for implementation.

**Philippines:** With technical and financial support from GFDRR the Catastrophe Draw Down Option (Cat-DDO) was developed to provide contingent financing up to US\$500 million in case of a disaster. The CAT DDO was triggered and fully disbursed in December 2011 after Tropical Storm Sedong.

**Senegal:** In Dakar, Senegal, a GFDRR-funded dialogue study to assess the risks of flooding, coastal surge, and sea level rise and then a 2009 a Post Disaster Needs Assessment leveraged IDA financing of US\$55 million to support a Flood Prevention and Drainage project.

**Yemen:** GFDRR technical assistance helped leverage US\$19 Million from the Climate Investment Fund (CIF) to modernize the climate data system in Yemen and improving delivery of climate and risk information and services.

# Climate Adaptation

GFDRR continued to foster integrated DRM and CCA in country and donor development strategies. This strengthened capacity at the country level by strategically leveraging just-in-time seed funding, targeted investments, and expertise both within the Bank and while working with external partners. At the strategic level, GFDRR has been actively engaged in promoting the integration of DRM and CCA in Bank policies and operations as well as at the global level.

In 2012 the Intergovernmental Panel on Climate Change (IPCC) Special Report on Extreme Events was an important step advancing the integration of the DRM and climate change agendas. Recognizing the critical importance of the IPCC Special Report on Extreme Events (SREX), a number of GFDRR staff contributed to the report's development, peer review, and its final adoption. More recently, in partnership with the Bank's Global Adaptation Expert Team, GFDRR has contributed to identifying the development—and DRM—implications of a +4°C World.

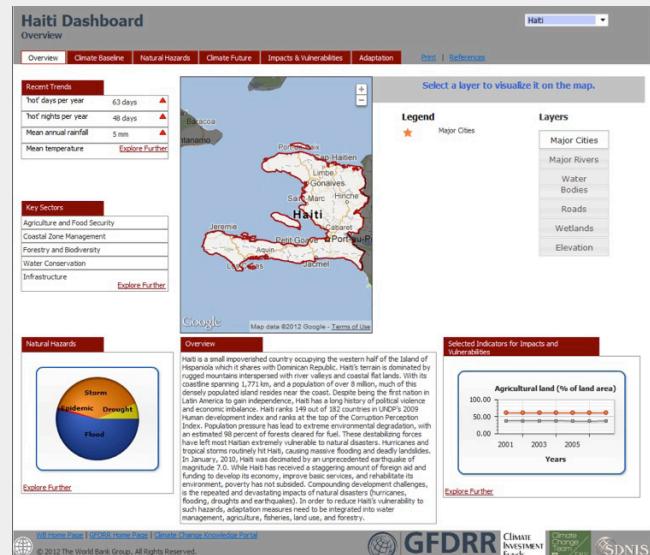
Close cooperation has been developed with the Pilot Program for Climate Resilience (PPCR), which is helping developing countries build resilience to climate change. GFDRR-supported country programs and related analytical and capacity-building work continue to inform specific PPCR investment operations in Bangladesh, Bolivia, Mozambique, Nepal, Tajikistan, Yemen, Zambia, the Caribbean, and the Pacific Islands.

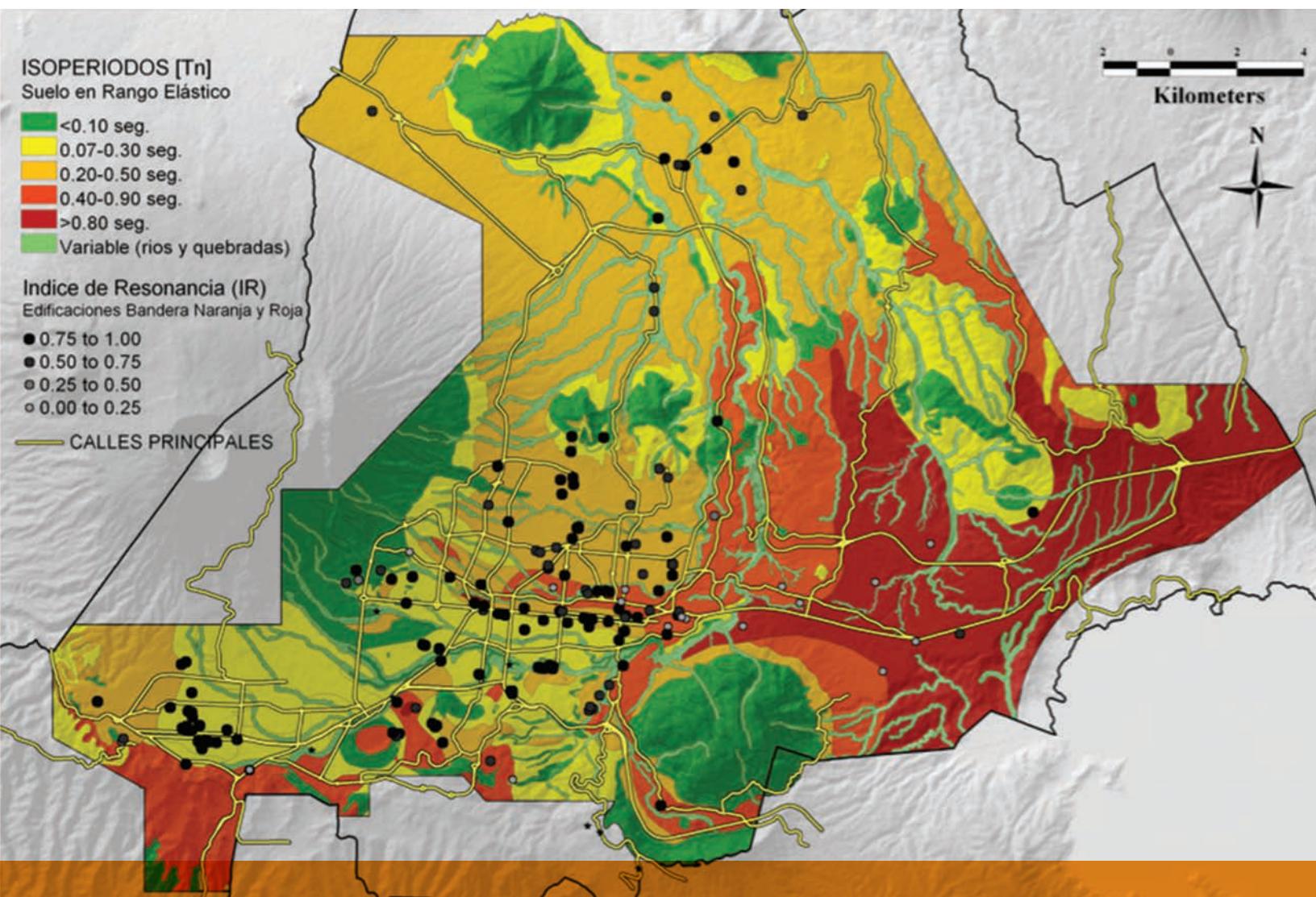
In Nepal, the GFDRR Hydromet Program is helping the regional team to identify and prepare a PPCR US\$ 31 million investment for "Building Resilience to Climate Related Hazards" which is scheduled for approval by the World Bank Board of Executive Director's by the end of 2012. Supporting a wide array of investments in weather, climate and water services in pilot countries, GFDRR Hydromet and PPCR country teams have also jointly explored aspects of hydrometeorological service provision and improvement. The GFDRR Hydromet team also provided primary technical support for identification and preparation of weather, climate and hydrological investments in Mozambique, and Yemen.

GFDRR's investments continue to have strong adaptation co-benefits. At the programmatic and operational level, GFDRR continues to pursue adaptation action as a strategic umbrella function, cutting across all program areas. Close to 75 percent of its active portfolio have adaptation co-benefits. In some regions, such as the Pacific, practically all GFDRR-supported operations address disasters and CCA in an integrated manner. Similarly, close cooperation has been developed with the Pilot Program for Climate Resilience (PPCR).

GFDRR is providing climate information to facilitate 'climate-smart' mainstreaming. In partnership with the Climate Team of the World Bank and the CIF Secretariat, GFDRR has expanded its Climate Risk and Adaptation Country Profiles product to a number of additional countries, including all PPCR beneficiary countries. Under the World Bank Flagship Open Data Initiative, country, regional, and global-level data has been migrated to a new Climate Knowledge Portal, jointly developed and maintained by GFDRR and the Bank, which offers a wealth of climate change and variability information and access to decision-support tools. GFDRR further contributed to the development of the new Little Data Book on Climate Change.

## GFDRR CLIMATE RISK AND ADAPTATION COUNTRY PROFILE FOR HAITI





## THE CAPRA TECHNICAL ASSISTANCE PROGRAM IN EL SALVADOR

The CAPRA Technical Assistance Program (TAP) in El Salvador aimed to provide decision makers with information on the consequences of potential earthquake events in the country. A probabilistic analysis of seismic risk included 257 institutions and close to 25,000 possible scenarios for 1550 buildings of which 1050 (68 percent) were related to education, 352 (23 percent) were health facilities, and 148 (9 percent), were other public buildings. Based on the results, the Government of El Salvador is designing a seismic vulnerability reduction program with an initial focus on the education sector. The program aims not only to define urgent actions for buildings in high risk condition but also establish a long term strategy to improve the structural and functional characteristics of both existing and new buildings.



## MOROCCO INTEGRATED RISK MANAGEMENT PROJECT

The Government of Morocco is adopting an innovative 'integrated' concept to managing commodity price volatility; natural hazards; and risks in the agriculture sector – three key risks which impact the economy and communities. With financial support by GFDRR the country's first national probabilistic hazard risk assessment was completed in 2012 to identify risks and mitigation options. Further achievements include integrating community members into the planning process through a national community risk perception survey and the inclusion of DRM in community development plans, and an assessment of possible insurance mechanisms to provide financial support to the Government and communities in case of a disaster.

## Focus Area: Risk Identification

In FY12, GFDRR continued to support countries to advance their understanding of hazards, exposure, and vulnerability as the first step towards managing disaster and climate risks. By quantifying risks and anticipating the potential negative impacts of natural hazards on society and the economy, disaster and climate risk assessments can help governments, communities, and individuals make informed decisions to manage risk. In addition to grant financing through regional teams, GFDRR supports this work through its Labs team – a distributed network of technical experts in the fields of risk assessment, GIS, remote sensing, and software development.

To assist countries strengthen risk identification capacity, GFDRR supported risk assessment trainings in every region. Risk assessment initiatives include CAPRA, InaSafe, and PCRAFI. In the comprehensive approach to Probabilistic Risk Assessment (CAPRA) initiative World Bank DRM teams work closely with line ministries and other stakeholders to design and implement Technical Assistance Programs (TAPs) to support targeted risk assessment using the CAPRA platform, applied to a specific risk management process.

The Open Data for Resilience Initiative (OpenDRI) helps incorporate open data and community participation strategies into their disaster and climate risk identification programs. Partnering with governments, international organizations, and civil society groups, this initiative develops open systems for creating, sharing, and using disaster risk and climate change information in every-day decision-making processes. This helps ensure that a wide range of actors can participate in the challenge of building resilience to disasters. Through OpenDRI, GFDRR is currently implementing these ideas in 25 countries around the world. In Mozambique, for example, the OpenDRI team has worked with the government to pilot integration between disaster and climate change data from the Climate Change Knowledge Portal (CCKP) to assist the national disaster management agency in contingency planning and disaster risk management.

The example of the National Province of Jakarta is very encouraging where using the OpenStreetMap online platform, detailed neighborhood scale mapping of administrative boundary and disaster response assets for flood preparedness can be mapped in only one week.

- Sugent Triutomo Deputy Chief for Prevention and Preparedness,  
National Agency for Disaster Management (BNPB), Indonesia



## ASSESSING THE SEISMIC RISK OF CRITICAL INFRASTRUCTURE IN BHUTAN

Located along the boundary between the Indian and Eurasian tectonic plates, Bhutan is subject to frequent, high-intensity geological hazards. The collision of the tectonic plates and the rapid shrinking of the Himalayan glaciers due to global warming expose the country to multiple earthquakes, glacial lake outburst floods, landslides, and flash floods, among other threats. Given the country's high exposure to natural hazards, the Royal Government of Bhutan is committed to the development of a robust disaster management strategy. The World Bank and GFDRR are supporting the government by strengthening institutional capacity to conduct risk assessment studies, including hazard mapping, resource assessments, and risk and vulnerability assessments. As part of the project, members of the government and other local agencies will also receive training from World Bank experts on probabilistic risk assessment tools through a workshop on the CAPRA software. The Bank will also assist relevant agencies in Bhutan working in disaster risk management to develop a robust multi-hazard safety action plan. By enhancing their understanding of risk, policymakers can then make informed decisions on how to best leverage resources within the government and through development partners to build risk-resilient critical infrastructure such as schools, hospitals, roads, and bridges going forward.

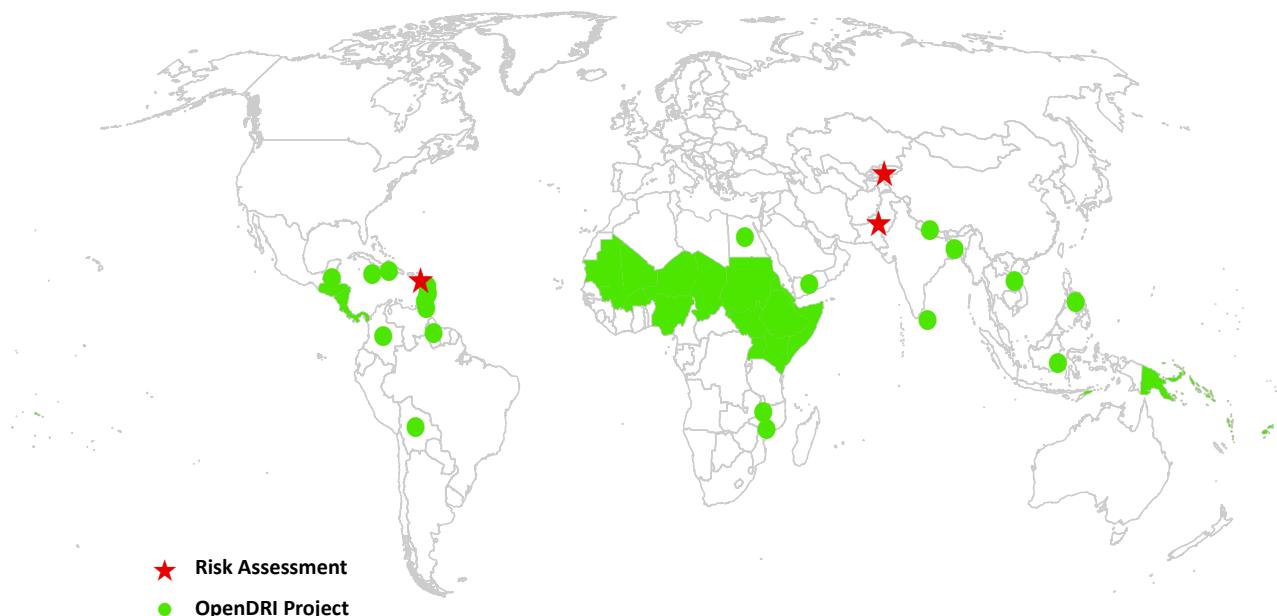
## INTERACTION WORKSHOP (MAY 3, 2012)

An example of GFDRR's strengthened engagement with non-governmental partners, in May 2012 GFDRR and InterAction, a US based NGO network, in partnership with the World Bank Institute (WBI), the information technology unit at the World Bank, and the World Bank Civil Society Team, organized a half-day workshop on free and open source geographic information system — better known as GIS — mapping tools. Mapping experts and development professionals came together under the newly launched "GFDRR Innovation Series". This joint World Bank-InterAction event, *Mapping for Disasters and Development*, was attended by over 200 people from 70 NGOs and provided the opportunity for organizations to share their programs and experience in utilizing open geographic data and mapping tools. Six organizations gave "ignite" talks to briefly speak about the work their mapping teams are doing, and eight other organizations gave hands-on demonstrations and training of free and open tools.

GFDRR is also working with governments to take advantage of new tools and technologies to identify and manage climate and disaster risk. For example, with support from GFDRR Labs and the World Bank through the East Asia and Pacific Infrastructure for Growth Trust Fund (EAAIG), the Indonesian Disaster Risk Management Agency (BNPB), and the Australia-Indonesia Facility for Disaster Reduction (AIFDR) developed InaSAFE (Indonesian Scenario Assessment for Emergencies) a simple, flexible and dynamic open software tool to analyze the potential impacts of disaster events and guide key risk management decisions. GFDRR Labs also promoted the use of participatory mapping using the OpenStreetMap platform to identify critical infrastructure at risk of flooding for preparedness measures and flood contingency planning in the province of Jakarta. GFDRR's OpenDRI Team is working to develop a globally

applicable open source analytics engine with both web-based and offline user interfaces based on InaSAFE.

Together with donors and partners GFDRR provides technical assistance and experts to support and leverage projects and initiatives led by client countries. For example in the East Asia and the Pacific region, the initiatives under the Building Urban Resilience Program, funded by the Australian Agency for International Development (AusAID) and the East Asia Infrastructure Growth Fund (EAAIG), are supported by GFDRR technical experts from the Labs team who help in creating a set of web-based open-source risk assessment tools (such as the InaSAFE) used in decision making by city-level institutions, private investors, communities, and planners of infrastructure services.



# Yemen Data for Resilience Initiative

Yemen Data for Resilience was developed within the framework of RCDRR Data for Resilience Initiative. This initiative was launched by the Regional Centre for Disaster Risk Reduction (RCDRR) in partnership with Global Facility for Disaster Reduction and Recovery (GFDRR) of the World Bank, on the 26th of April, 2012. It focuses on the collaborative use of geospatial data and information to facilitate disaster risk management (DRM), and it's developed on the basis of GeoNode platform. GeoNode is an open source platform for sharing geospatial data and maps.

[Explore Maps](#)[Create Map](#)

Overlays

- Yemen AAL catchment
- Yemen District Average Loss due to Flood
  - 0
  - 0.1 - 10
  - 10 - 50
  - 50 - 100
  - > 100
- World Light
- World Dark
- Natural Earth Hypsometric & Bathymetry
- Blue Marble Topography & Bathymetry (Jul)
  - Blue Marble Topography & Bathymetry (January)
- Wadi Adhanah Catchment
- 

## Maps

GeoNode lets you compose and share maps. Create a map with our cartography tool, or explore maps shared by others.

## Data

GeoNode lets you upload, manage, and browse data. Search for data that is valuable to you, or upload your own data.

[Search](#)[Advanced Search](#)

## THE REGIONAL CENTER FOR DISASTER RISK REDUCTION (RCDRR) IN CAIRO

Supporting Islamic States to build social and economic resilience, one of RCDRR's programs is the Risk Knowledge Initiative which aims to build capacity and enable access to disaster risk and climate change data, knowledge and DRM practices relevant to the region. In partnership with GFDRR Open DRI, RCDRR has launched its Data for Resilience Initiative (RCDRR DRI) in Spring 2012. The RCDRR DRI team implemented a GeoNode platform to share the results of three probabilistic natural hazard risk assessment studies conducted in Yemen. RCDRR is planning to hand over the Geonode and provide the necessary support to the project partners in Yemen to use this data more effectively for increasing the resilience of the communities exposed to disaster risk in Yemen. RCDRR DRI is in the process of organizing a Risk Knowledge Forum to elevate the awareness among national governments about the importance of data management and risk assessments as the fundamental basis for managing disaster risk.



## SUSTAINABLE FLOOD RISK MANAGEMENT IN THE COLOMBO METROPOLITAN AREA

Colombo, Sri Lanka's commercial hub, accounts for almost 50 percent of the country's GDP. However, the city is highly vulnerable to flooding, and has experienced regular floods for the past 30 years, affecting over 1.2 million people annually. After two major floods in 2010 afflicted severe damages on public and private property and cost the city millions of dollars in economic losses, the Government of Sri Lanka launched an ambitious economic and physical regeneration program for the Metro Colombo area, including a sustainable, long term, flood risk management program. Nearly 1.6 million people will benefit from such flood mitigation measures, and the investments will generate multiple economic and social benefits for residents of Colombo and the entire country.

Supporting the Government of Sri Lanka, GFDRR funded initial technical studies including the development of hydraulic and hydrologic models of the macro- and micro- drainage systems of the Colombo basin, surveys of retention areas and the canal network, as well as land use maps and analytical products to determine the impact of short interval rainfall. Building on this work, in March 2012 the World Bank approved a financial assistance package of US\$213 million to provide technical assistance to support this project, invest in urgent flood mitigation infrastructure, and support drainage improvement activities, while also building the institutional capacity of government agencies to enhance long-term flood risk management.

## Focus Area: Risk Reduction

Disaster risk information informs development strategies, plans, and projects that can in turn reduce risks through long term investments. This is done through pro-active action that seeks to avoid the creation of new risks, for example through improved territorial planning or resilient building practice. On the other hand, it is done through investment to address existing risk, such as the retrofitting of critical infrastructure or the construction of embankment systems.

GFDRR continues to leverage risk-sensitive investments in high risk countries to mainstream disaster and climate risk management in national development plans. In response to a request by the Government of Colombia, the World Bank with the support of GFDRR, is assisting the country in defining a methodology for the National Inventory of Settlements in High-Risk Areas which will contribute to a national policy on settlements in high-risk areas and thus further support the country's focus on risk reduction. Since April 2012 the regional DRM team has been providing technical assistance to the Ministry of Housing, Cities and Territory for the formulation and implementation of the methodology, and the definition of the technological platform and information systems needed in order to consolidate the inventory and ensure adequate information exchange between different territorial levels.

GFDRR continued to support proactive action by Governments to avoid the creation of new risk through unplanned development. Projects are leading to the greater integration of risk considerations into investment and planning decisions. In Belize, technical assistance to build government capacity and assist in the development of medium to long-term disaster risk assessment programs helps the country integrate disaster risk and hazard information into the country's policy and decision making process. In Papua New Guinea, a GFDRR project is developing tools for hazard, vulnerability and risk analyses for the agriculture sector and working to build the capacity of the Department of Agriculture and Livestock so it can use these analytical tools to reduce risk from natural disasters and climate change in the agriculture sector.

Engagements to support risk reduction efforts in vulnerable countries are long term investments. GFDRR funded long term engagements on risk reduction often include incorporating knowledge services that complement financial activities and add value to World Bank operations, investments, institutional and policy changes. For example in Brazil the DRM portfolio increased exponentially during FY12 following a decision to adopt a multi-sector approach in response to urgent requests received from the Brazilian Government. Confronted by Brazil's lack of technical and institutional capacity, the World Bank has provided a range



## 'CITIES AND FLOODING: A GUIDE TO INTEGRATED FLOOD RISK MANAGEMENT FOR THE 21ST CENTURY



This World Bank flagship report, funded by GfDRR, can guide countries around the world in selecting and investing in the right balance of prevention that includes structural and non-structural measures. Urban flooding is becoming increasingly costly as low- and middle-income countries transition to largely urban societies. The report argues for a balanced approach to flood risk mitigation, highlighting that restoring natural ecosystems can often be more cost-effective than engineered solutions. Strengthening hazard forecast and hydromet services is a no-regret investment with a high benefit-cost ratio. The report guides and helps leverage World Bank investments in the area of flood risk management. For example, in the Philippines, the World Bank and GfDRR support a program to reduce vulnerability to flooding in metropolitan Manila, including preparation of the flood management master plan for the Greater Metropolitan Manila area.

<http://www.gfdr.org/gfdr/urbanfloods>



## RISK REDUCTION IN NIGERIA AND MALAWI

In response to landslides and heavy gully erosion in September 2011 in South Eastern Nigeria, GFDRR, together with the Norwegian Geotechnical Institute supported a rapid land slide risk assessment in Anambra State. This initial work informed the formulation for a dedicated erosion and landslide risk assessment strategy as part of US\$ 500 million IDA financed Nigeria Erosion and Watershed Management Project (NEWMAP, which finances erosion control and stabilization measures and facilitates sustainable land management and disaster risk reduction initiatives.

The US\$125 million Shire River Basin Management Project in Malawi also builds upon GFDRR supported analytical work. Focusing on flood management issues in the Shire, it provides investments and opportunities for improving climate and disaster resilience. The project is expected to partly finance the implementation of the Action Plan for Integrated Flood Risk Management, and to apply lessons from the assessments from the Climate Change Program to activities related to catchment management and the strengthening of hydro-meteorological systems.

of clients with the expertise and knowledge necessary to drive the DRM agenda. DRM engagement in Brazil needs to be seen as an ambitious and worthwhile long-term exercise capable of producing laudable results if the intended objectives are successfully achieved.

To strengthen DRM at the local level, GFDRR supports community-based and community-driven development (CDD) initiatives across the world. Giving local and affected populations a voice in DRM through community-based DRM approaches has proved successful in engaging communities to encourage self-help efforts of building resilience at the local level in a comprehensive manner. This year GFDRR approved for example a Community Based DRM project in Vietnam to help communities become more resilient to natural hazards.

## Focus Area: Preparedness

Not all disasters can be prevented and GFDRR continues to support countries preparing for the worst. As risk can never be completely eliminated or reduced, adequate preparedness is essential. Early warning systems save lives, protect livelihoods, and are one of the most cost-effective ways to reduce the impact of disasters. To be effective, early warning must lead to action. Preparedness activities therefore

include enhancing the capabilities of local organizations to plan for and respond to the effects of disasters. GFDRR provides assistance in (i) building local and national government as well as regional institutional capacity for strengthened disaster response and recovery planning and implementation; (ii) the improvement of hydrometeorological

We need a culture of prevention.  
No country can fully insulate itself  
from disaster risk, but every country  
can reduce its vulnerability. Better  
planning can help reduce damage –  
and loss of life - from disasters, and  
prevention can be far less costly than  
disaster relief and response.

- Jim Yong Kim, President World Bank Group



### **COMMUNITY-BASED DISASTER RISK MANAGEMENT (CBDRM) IN VIETNAM:**

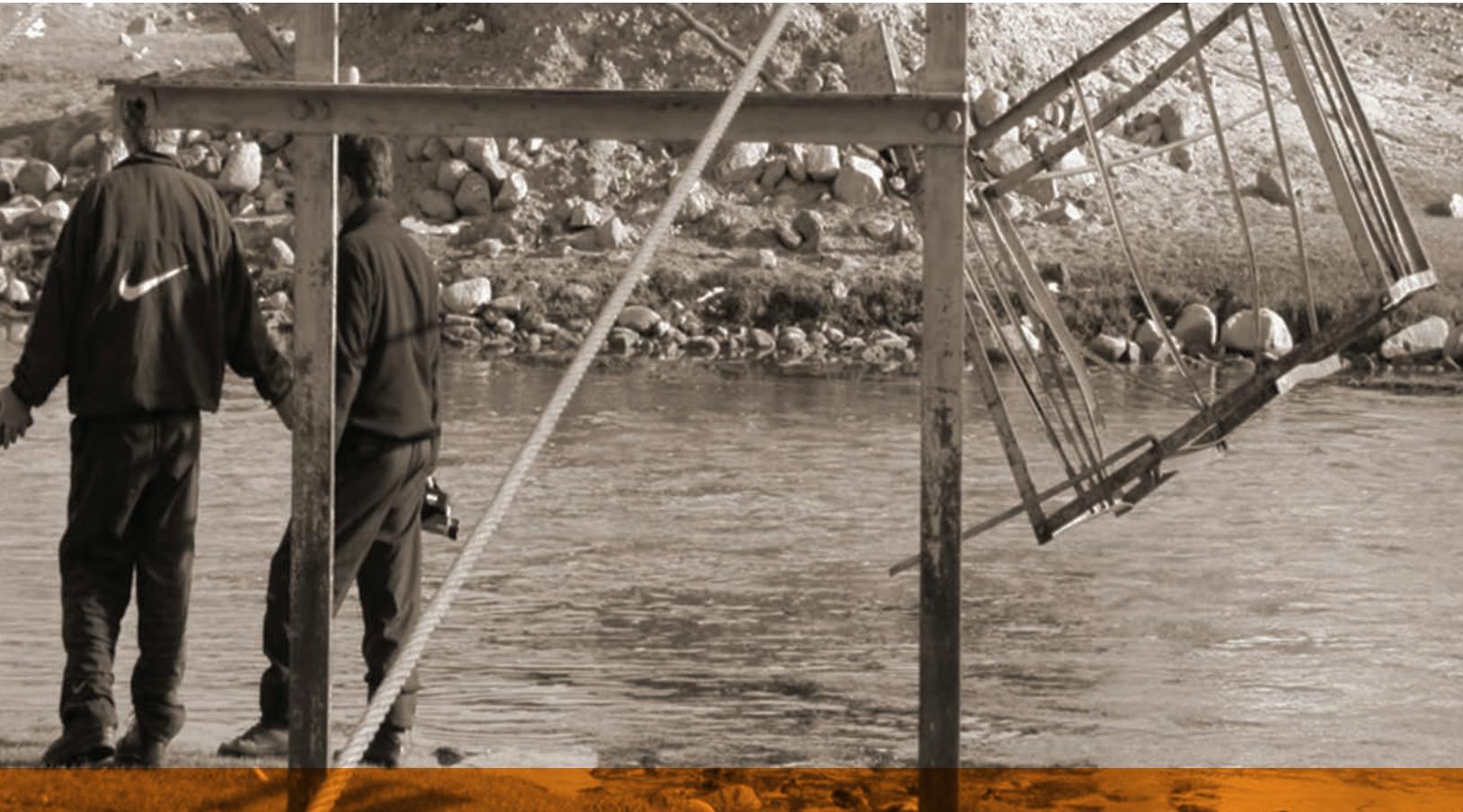
Major storms, flood events and other natural hazards result in annual economic losses equivalent to between 1 and 1.5 percent of gross domestic product (GDP) in Vietnam. 70 percent of the population is exposed to risks, and rural communities are particularly exposed due to inhabitation of hazardous areas, substandard housing and lack of financial resources. To help reduce the burden of disasters on the development of the country, GFDRR and the World Bank provide technical support and funding to the Vietnamese government to implement its strategy on CBDRM. This program has been so successful that the Government based its National CBDRM program on the pilot model and is now replicating the program for a total of 6,000 vulnerable communities.

Communities' awareness and participation are critical for coping efficiently in the case of a disaster. It is important to empower them with the right information and tool to enhance their preparedness.

- Nguyen Huu Phuc, Director of the Disaster Management Centre, Directorate of Water Resources Ministry of Agriculture and Rural Development, Vietnam

### **COSTA RICA PILOT PROJECT ON EARLY WARNING SYSTEMS (EWS) FOR HYDRO METEOROLOGICAL HAZARDS**

This project, supported by GFDRR, implemented together with the World Meteorological Organization (WMO), and intended to be a pilot model for the Central American region, is helping the country to be better prepared against floods by developing an effective framework for operational early warning systems in the country. The Project has a solid focus on community participation. Targeted activities, including workshops and meetings with local community leaders have promoted local ownership of the project. Local stakeholders have publicly recognized their support to the project, in particular their interest in having the EWS and emergency protocols in place. The government electric power company has joined the implementing agencies and has been providing key technical information on the hydrology of the pilot area and staff time to support the development of the watershed's hydrological model. The project has leveraged additional financial and technical resources from other organizations also involved in risk reduction activities, including UNDP which has been working in the pilot area and other at-risk communities in the region.



## STRENGTHENING HYDROMET IN CENTRAL ASIA

GFDRR provided seed grant funding (US\$ 200,000) to develop an Action Plan for improving weather and climate service delivery in low income countries in Central Asia. Using the results of this study the GFDRR team helped the ECA region to develop and start implementation of a US\$ 27.7 million investment program on modernization of hydromet agencies funded through IDA and PPCR. The project was approved by the World Bank's Board in May 2011 and became effective in 2012 after obtaining Parliamentary approvals in the Kyrgyz Republic and Tajikistan. Implementation is progressing on design of regional monitoring and communications networks, identification of key gaps and alternatives to address them. In parallel, training opportunities have been developed to plug key capacity gaps and candidates are being selected and prepared to undertake critically needed training curricula at the WMO training institutes. It is expected that training and network design will run in parallel for the next year, while dialogue with the national agencies of the Kyrgyz Republic and Tajikistan will help formulate agency strategies for long-term financial sustainability. The first three to four years of implementation will be focused on procurement and the installation of basic equipment and capacity building activities and disbursements are expected to increase significantly towards the end of 2013. Key results are expected to be achieved only after much-needed equipment has been installed, becomes operational and relevant staff capacities are improved.

services delivery and early warning systems performance; and (iii) the establishment and/or strengthening of emergency management centers and protocols alongside the development of contingency plans.

GFDRR worked with clients to strengthen regional, national, and local capacity for more effective disaster preparedness. For example in Senegal, GFDRR is supporting a multi-phase engagement for strengthened preparedness through capacity building, the establishment of early warning systems, greater disaster-response capabilities, and better use of data for planning and raising awareness. The first phase – building the capacity of Senegal's Civil Protection Agency – aims to enable the agency to set up coordination mechanisms for early warning, preparedness, and response, and provide it with a state-of-the art headquarters. Phase two will see the development of a functioning early warning system and of Geographic Information Systems (GIS) tools to be used for DRM, and the implementation of a risk awareness campaign.

GFDRR launched a Hydromet Program to support the development of modern, sustainable, service-oriented weather and climate information systems. The importance of weather, climate and hydrological information is growing. During its first year of operations, the GFDRR Hydromet program<sup>8</sup> has established itself as an expert service center providing analytical and advisory support and leveraging World Bank operations related to the improvement of hydrometeorological services delivery and performance of early warning systems. In Lao PDR, the World Bank, with GFDRR's support, is addressing weaknesses in the dissemination of the Early Warning Bulletin to local communities. In the past, the Early Warning Bulletin often stopped at the province level because of lack of further communication mechanisms to the community. In a new project, reliable information and communication technologies are being used to strengthen last-mile warning dissemination mechanisms. Along with the installation of equipment, regulations are being drafted that stipulate emergency communications and community drills. Also, provincial and



### SOUTH-SOUTH KNOWLEDGE EXCHANGE AND LEARNING FROM CLIENT EXPERIENCE

In March 2012 the GFDRR Hydromet team, jointly with the Shanghai Meteorological Service (SMS) of the China Meteorological Administration, organized a workshop on Multi-Hazard Early Warning and Decision Support Systems. The workshop shared the wealth of SMS knowledge and practical experience in the development of early warning systems with World Bank staff whose portfolios include improving early warning systems in Asia. Given the success and overall enthusiasm of the participants, GFDRR plans to develop similar opportunities in the future, and is already facilitating several follow up activities with Brazil and Central Asian countries which are eager to learn from the SMS experience.

**Today, forecasts on spatial scales of a few kilometers can provide timely and accurate warnings of flash floods, river floods, tornadoes, storm surges, hurricane tracks and landfalls, and air-quality emergencies. Effective early warning systems have substantially reduced deaths and injuries from severe weather events.**

8. Previously named WCIDS: Strengthening Weather and Climate Information and Decision-Support Systems

district officials are trained in interpreting the messages contained in the bulleting and in acting upon them. In Moldova, the USD 10 million Disaster and Climate Risk Management Project (DCRMP) project aims to strengthen the State Hydro-meteorological Service's ability to forecast severe weather and improve Moldova's capacity to prepare for and respond to disasters. A GFDRR-funded grant is supporting this project by providing training and technical assistance to the staff of the State Hydro-meteorological Service and the Department of Emergency Situations, the two main implementing agencies.

## Focus Area: Financial Protection

Throughout FY12, the Disaster Risk Financing and Insurance Program (DRFI) was active across all three of its strategic pillars. Together with the World Bank Regional DRM Teams, the DRFI Program works to increase the financial resilience of governments, businesses and households against the economic burden of disasters by providing: (i) technical assistance and operations; (ii) policy advise, knowledge management, and capacity building; and (iii) product development. Financial protection strategies include programs to increase the financial capacity of the state to respond to an emergency whilst



### Better Information for Smarter Investments

PCRAFI is a joint initiative of SOPAC/SPC, World Bank, and the Asian Development Bank with the financial support of the Government of Japan and the Global Facility for Disaster Reduction and Recovery (GFDRR), and technical support from AIR Worldwide, New Zealand GNS Science, Geoscience Australia, Pacific Disaster Center (PDC), OpenGeo and GFDRR Labs.

## PACIFIC CATASTROPHE RISK INSURANCE PILOT – TESTING SOVEREIGN CATASTROPHE RISK INSURANCE FOR REGIONAL FINANCIAL RESILIENCE

The Pacific Islands are highly exposed to large financial losses resulting from tropical cyclones, earthquakes, and secondary perils arising from these events such as tsunami and storm surge. A probabilistic catastrophe risk analysis funded by the GFDRR-supported Pacific Catastrophe Risk Assessment and Financing Initiative estimated that every year on average, Pacific Island countries (PICs) experience damage caused by natural disasters estimated at US\$ 284 million, or 1.7 percent of the region's GDP.

Following a May 2012 workshop in Fiji, and building on earlier engagements with PICs under PCRAFI, the World Bank began preparations in 2012 to structure policies for the Pacific Catastrophe Risk Insurance Pilot (PCRI Pilot). Vanuatu, Tonga, Marshall Islands, Solomon Islands, and Samoa will participate in the pilot which will commence in November 2012. It will offer parametric catastrophe risk insurance policies (against earthquake and tropical cyclones) - the first time ever that catastrophic risk from the Pacific will be transferred to the international reinsurance markets. The PCRI Pilot is part of a broader technical assistance program to improve budget planning of PICs against natural disasters. Participating countries will benefit from quick liquidity for post-disaster response and early recovery activities.

protecting the fiscal balance. They can also promote the deepening of insurance markets at a sovereign and household level, and social protection strategies for the poorest.

The DRFI Program advanced technical assistance projects on sovereign disaster risk financing in ten countries<sup>9</sup>, six of which are GFDRR Priority or Donor-earmarked countries<sup>10</sup>. Assisting Ministries of Finance to analyze, manage, and mitigate the fiscal and broader financial impacts of disasters as part of their overall DRM and fiscal risk management agendas, operations ranged from developing financial protection strategies to technical reviews of insurance of public assets. For example, an analysis of the current approach of the government of Colombia to insuring buildings led to the development of an enhanced strategy using improved risk information. This engagement is expected to significantly improve the insurance coverage of public assets such as roads and bridges, ensuring that damaged infrastructure can be quickly restored following an event.

Technical assistance to countries further advanced on the DRFI agenda provided important lessons to inform future work. Mexico, for example, which has one of the most sophisticated risk financing strategies among middle-income countries, partnered with the DRFI Program to (i) review and further improve its disaster risk financing strategy for more informed decision making through combining historical and simulated loss data; and (ii) work with state governments to explore options for establishing a joint DRFI mechanism to support states' post-disaster liquidity and reconstruction financing needs. Initiated in 2011 this work is expected to conclude in 2013. In FY12, The Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI) started its next phase to develop regional and country-level disaster risk financing solutions.

Over the course of the year, the DRFI Program advanced the international policy dialogue on risk financing through policy documents and contributions to policy agendas. The year saw the implementation of a flagship regional initiative on DRFI with the Association of South East Asian Nations (ASEAN), the promotion of the World Bank's disaster risk financing and insurance approach as part of the DRM agenda of the Mexican G20 Presidency, and publication of new knowledge products. These activities elevate the dialogue on risk financing, promote the DRFI framework developed by the World Bank, and extend support to

## INNOVATIVE AGRICULTURAL RISK INDICES IN INDIA

As part of the programs work to advance the development of catastrophe risk insurance markets in several partner countries, continued support was provided to a technical assistance engagement in India to reform the National Agricultural Insurance Scheme (NAIS) – the largest crop insurance program in the world with more than 25 million farmers insured. Ongoing since 2005, this project is reducing delays in claims payments provided to farmers and providing improved coverage. Considered as 'best practice' at the World Bank this project is being used as a model for agricultural insurance improvement projects around the world.

As part of wide ranging reforms to its crop insurance programs, the Government of India, with technical assistance from the World Bank and GFDRR, has been strengthening the data that underlies the insurance products. Compared to the NAIS, which offered index insurance cover to farmers on a sub district basis, the modified NAIS offers index insurance on a village Panchayat (village cluster) basis. These more localized indices are better for farmers, but they require an increase in the number of crop cutting experiments (CCEs) that underlie the yield indices by a factor of 5-10 times.

To handle this increase while improving the quality of the CCEs, the World Bank has been working with the government to pilot a suite of technological and statistical innovations including: investments in GPS-enabled mobile phones with video recording capabilities; mobile phone software; database management; training of personnel; deploying an auditing function that improves speed, reliability, and cost efficiency of the area yield indices; and use of weather and remote sensing data to better target CCEs. This is resulting in: (a) reduction in basic risk and an increase in reliability of products for farmers; (b) increase in speed of claim settlement for farmers, and; (c) introduction of checks and balances into yield indices to enable private (re)insurers to take on risk previously retained by government at reasonable prices.

9. The DRFI Program was able to mobilize additional resources to support its technical assistance operations. Major donors include Japan for activities in the Pacific and Switzerland for activities in Colombia, Indonesia, and Peru. A fee-based service with Mexico supports its DRFI technical assistance.

10. Non-priority countries receiving technical assistance include Mexico, Peru, Samoa, and Tonga.

When a disaster strikes, we are often confronted with the urgent need to provide emergency assistance to victims and to rebuild roads, hospitals, schools, irrigation systems, electric power and water supply, and other important infrastructure. CAT-DDO provides us with immediate relief, recovery and reconstruction, thus lessening social and economic dislocation, especially on the poor who are the most vulnerable.

- Cesar V. Purisima Secretary of Finance, Philippines

### **ASEAN MEMBER STATES – CREATING A REGIONAL FRAMEWORK AND DIALOGUE ON DISASTER RISK FINANCING AND INSURANCE**

In 2011, the World Bank partnered with the ASEAN Secretariat to carry out a financial risk assessment of disasters in the ASEAN region and to build a framework for disaster risk financing and insurance engagements based on the assessment and substantial research. The results were discussed with delegates from the Ministries of Finance, Insurance Regulators, and Disaster Risk Management Agencies of the ten ASEAN Member States at a Regional Forum on DRFI in November 2011. Key findings and options for recommendations were published in a report, *ASEAN: Advancing Disaster Risk Financing and Insurance in ASEAN Member States: Framework and Options for Implementation*, with the endorsement of the Secretary General of ASEAN and the Vice Presidents of the World Bank East Asia and Pacific Region and the Sustainable Development Network.

As the first-ever regional initiative on DRFI this initiative provides a model that could be replicated in other regions. Outcomes include: (i) preliminary quantitative, probabilistic data set on major catastrophe risks is now available to ASEAN Member States which led to the identification of priority areas for DRFI engagement; and (ii) stimulation of a regional dialogue on DRFI and development of a regional roadmap for the region by delegates at the ASEAN DRFI Forum

financially vulnerable developing countries. For example, the DRFI Program and the LAC DRM Team partnered with Mexico to produce a review of Mexico's Natural Disaster Fund, FONDEN - a first step to share the experience of Mexico in advancing risk financing as an essential component of its DRM approach. Knowledge products and technical tools are being developed that support countries in making informed financial decisions. A suite of actuarial tools to help technical specialists within Ministries of Finance to understand what analysis they should be presenting to decision makers, as well as decision makers to understand the questions they should be asking of their financial analysts are currently being piloted with clients. Disaster Risk Financing Country Notes are being produced to provide a basic stocktaking of DRFI activities in each country and identify prospects for future engagement. During the first phase, priority countries from the Africa Region were targeted, with notes prepared for Ethiopia, Malawi, Mozambique, Senegal, and Togo.



## FROM POST DISASTER INTERVENTION TO RISK FINANCING IN EL SALVADOR

In the aftermath of Tropical Storm Ida, the Government of El Salvador conducted a GFDRR funded Damage, Loss and Needs Assessment (DaLA) for Disaster and Recovery and Reconstruction, which lead to the formulation of a Development Policy Loan with a Catastrophe Deferred Drawdown option (CAT DDO) approved in February 2011. This continent financing instrument disbursed the total of US\$ 50 Million through two requests on October 17 and 27, 2011. The Project enhanced the capacity of the Government to implement its disaster risk management program supporting two key policy areas: (i) strengthening of the institutional and legal framework, and (ii) mainstreaming disaster risk in the National Development and Investment Programs.

# ACP-EU NDRR Program—Highlights

The ACP-EU Natural Disaster Risk Reduction (NDRR) Program, a partnership with the European Union, the African, Caribbean and Pacific (ACP) Group, and the World Bank-managed GFDRR, was launched in October 2011. The EU-funded program aims at **reducing vulnerability and improving resilience of ACP countries to the impact of natural disasters, ensuring better preparedness of the populations in disaster-prone areas and helping reduce the cost of response** in the event of natural disasters.

The **objective of the ACP-EU NDRR Program** is to address prevention, mitigation and preparedness to natural hazards in ACP countries, focusing on mainstreaming disaster risk reduction (DRR), risk identification and assessment, early warning systems and integration of disaster reduction into post-disaster recovery.

The Program has three main components supporting **regional and sub-regional initiatives**, providing **technical assistance** for DRR policy development and establishing a **fast-track recovery instrument** for ACP countries to support post-disaster needs assessments and technical assistance in building-back better.

## EXAMPLES OF PROJECTS INITIATED UNDER THE ACP-EU NDRR PROGRAM IN FY12 INCLUDE:

### AFRICA

**Djibouti:** Post Disaster Needs Assessment - Drought<sup>11</sup>

**Nigeria:** Flood impact scoping and capacity building for disaster preparedness

**Kenya:** Post Disaster Needs Assessment – Drought<sup>12</sup>

**Ethiopia:** Capacity Building in Post Disaster Needs Assessment

**Regional:** Understanding Risk Conference: Risk Assessment tools and Methodology Training

### CARIBBEAN

**Saint Lucia:** Hazard and Disaster Risk Assessment Framework - Preparation of Vulnerability Reduction Project

**Belize:** Hazard and Risk Assessment Framework - Prioritization of Investment Plan

**Regional:** Support to the 6th Caribbean Conference on Comprehensive Disaster Management

### PACIFIC

**Regional:** Pacific Catastrophe Risk Assessment and Financing Initiative - Phase 3 (PCRAFI-3)



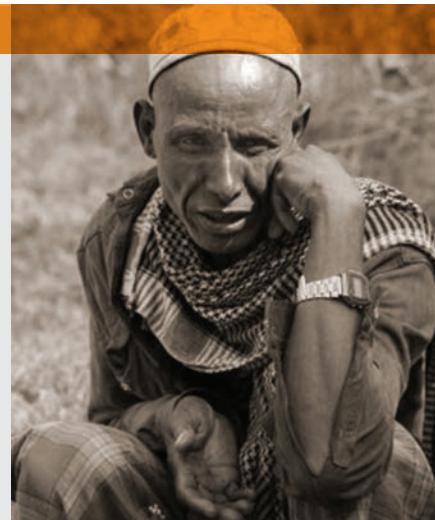
11. Also co-financed by the Government of Luxembourg

12. Id.

# Resilient Reconstruction

## REDUCING VULNERABILITY TO FUTURE DROUGHT THROUGH SUSTAINABLE RECOVERY IN THE HORN OF AFRICA

During the 2011 drought, GFDRR approved the Somalia Drought Management and Livelihood Protection Project (US\$5 million). Funded by GFDRR and implemented by the Food and Agricultural Organization of the UN through its network of local civil society organizations, this project aims to support the recovery of agricultural and livestock productive capacity through the provision of agricultural inputs, treatment and vaccination of animals, targeted cash-for-work programs, and capacity development interventions for building resilience to future droughts. To date, results include the distribution of 80 tons of maize seeds to 4000 households in riverine areas, and 168 households (97,000 people) engaged with cash-for-work activities for the rehabilitation of productive infrastructures.



The GFDRR Standby Recovery Financing Facility, also known as Track III, supports sustainable recovery in high risk, low-and middle-income countries. The objective of Track III is to assist disaster-hit countries in building resilience into the recovery process through (i) support for conducting PDNAs; (ii) technical assistance for post-disaster recovery planning and financing; and (iii) building institutional capacities for disaster preparedness and response through in-person and online trainings and the development of global knowledge products on recovery.

In FY12, Track III approved nine new projects. This included five PDNAs in response to government requests. Since 2007, Track III has funded/co-funded and conducted 32 PDNAs, 22 capacity building projects, 13 Economic Sector Work activities and launched 10 global knowledge events or products. Overall, Track III manages an active grant portfolio of US\$ 12 million that allows it to provide post-disaster assistance to countries that make a formal request; and capacity building services in ex-ante and ex-post settings. Assistance to African, Caribbean, and Pacific countries is also provided through Window 3 of the ACP-EU NDRR Program.

A desk-based analysis of 32 GFDRR supported interventions since 2007 shows that the PDNAs informed at least 61 World Bank-funded medium and long-term recovery projects. These projects include US\$3.36 billion for disaster-specific components, which translates into an average of approximately US\$105 million in World Bank recovery financing per PDNA. Over 71 million people are to benefit from these through disaster-resilient reconstruction of 12,056 km of roads, 982 safe shelters, 5,760 km of coastal embankment rehabilitation, rehabilitation of 19,200 hectares of irrigation area rehabilitated, and livelihood restoration programs.

Funds Committed in FY12	Funds Disbursed in FY12
US\$ 2.4 M	US\$ 5.1 M
Projects Approved in FY12	Projects Completed in FY12
9	18

The PDNA exercise was a crowning exercise that helped the clients but also [World Bank] staff to fully conceptualize the impact of the disaster to every sector of the economy. Since the process involved sector specialists from the government line ministries, department and also the World Bank, the exercise helped to raise awareness of how disaster risk management can reduce sector vulnerability.

- Francis Nkoka, Disaster Risk Management Specialist,  
The World Bank – Malawi Office



## BIHAR KOSI FLOOD RECOVERY PROJECT – OWNER DRIVEN HOUSING RECONSTRUCTION

In response to the 2008 Kosi River floods which affected more than 3 million people living below the poverty line in the Indian state of Bihar, a GFDRR grant of US\$ 400,000 financed technical work to help prepare a US\$ 75 million World Bank operation. The project financed the reconstruction of damaged housing through an Owner Driven Reconstruction approach. The World Bank provided technical assistance and reconstruction grants in three tranches directly to home owners to rebuild their damaged or destroyed houses.

As of January 2012, funds had been issued to over 46,000 home owners. Over 32,000 home owners had withdrawn their first tranche and of those about 23,000 home owners had commenced construction. Of the total houses under construction, approximately 87 percent are brick homes with CGI sheet roofing, 10 percent are brick homes with RCC roof and only 3 percent are bamboo homes. Approximately 2,000 houses have since been completed and owners have moved into their newly constructed homes. This owner driven reconstruction component is part of a greater program which intends to support flood recovery and risk reduction through i) the reconstruction of damaged houses, ii) the construction of road and bridge infrastructure, iii) the strengthening of the flood management capacity in the Kosi basin, iv) the enhancement of livelihood opportunities for all those affected, and v) the improvement of the emergency response capacity for future disasters.

GFDRR responded to Government requests for assistance to conduct a PDNA. In the Horn of Africa, GFDRR implemented a comprehensive regional response to the 2011 drought, with post disaster interventions in Djibouti, Kenya, Ethiopia, Uganda and Somalia. PDNAs in Kenya and Djibouti - the first ever in response to drought - led to new and restructured World Bank investments that focus on drought recovery, mitigation, and social protection systems. Recovery investments for livelihood diversification and resilience-building programs for agro pastoralists, a population especially vulnerable to drought, are now being planned based on the needs identified by the PDNAs. Trainings provided to government staff in Ethiopia and a damage and loss assessment in Uganda have increased the capacities of the national governments to respond to future drought events.

The GFDRR-supported PDNA conducted for the 2011 Thailand floods included for the first time the implementation of a rapid Social Impacts Assessment (SIA). The inclusion of a SIA helped to generate additional data on impacts on livelihoods, social relations and local governance. The focus on social relationships, highlighted varying levels of vulnerability and exposure by women, men, boys and girls due to gender norms and roles. Gender-concerns were introduced into the assessment

and concrete recommendations emerged for gender-sensitive recovery and reconstruction plans. For example, it was found that the government initially did not hold consultations on gender-specific relief needs. Surveyed women in affected villages reported that, with the exception of cooking activities, the government's cash for-work scheme focused on heavy work usually done by men. As a result, women felt they were not able to access these temporary work opportunities or benefit much from them. The PDNA team further noted the agricultural inputs provided, such as seeds and tools, did not appear to take into account women's productive roles or needs.

GFDRR also supported countries with post-disaster recovery planning. For example, the PDNA conducted for the 2011 Thailand floods carefully reviewed options for integrated flood management. The recommendations made in the report have been taken up by the Thai government and are implemented in a multi-billion dollar flood risk reduction program. In Pakistan, the disaster needs assessments conducted for the 2010 and 2011 floods with support from GFDRR reinforced the need to establish institutional structures to support resilient reconstruction. Specifically, the assessments resulted in a greater focus on the need for appropriate institutional setups at the federal, provincial and sub-provincial levels; as well as the need for vertical and horizontal coordination.

## INTEGRATING DISASTER RESPONSE AND LONG-TERM MITIGATION IN THE PHILIPPINES

GFDRR's collaboration with the Philippines illustrates how recovery can build resilience and promote DRM mainstreaming in development. After the 2009 Manila Floods, GFDRR conducted a PDNA which recommended the enactment of a national disaster risk reduction and management policy as well as the fast tracking of strengthened risk financing measures. With the passage of 2010's National Disaster Risk Reduction and Management Law, the Bank's East Asia and Pacific DRM team and GFDRR continued to provide technical support to the Government to develop a risk finance strategy study that outlined the courses of actions the Government could take to reduce its fiscal burden after a disaster. As a result, in mid-2011 the Philippines established the region's first contingent loan facility with the World Bank. The US\$500 million CAT-DDO provided the Government immediate access to liquidity just months later following Tropical Storm Sendong. Soon after, GFDRR worked directly with the Philippine's Office of Civil Defense to deliver a capacity building training to over 50 government staff to enable them to conduct a fully government-led and staffed PDNA.





## HORN OF AFRICA - KENYA: FROM RESPONSE TO RESILIENCE



*Kenya Post-Disaster Needs Assessment (PDNA)*  
2008-2011 Drought



In 2011 countries across the Horn of Africa were responding to the combined impact of drought, loss of crops and livestock, and rising food and deteriorating livestock prices. At the time, 3.7 million people in Kenya were in immediate need of food, clean water, and basic sanitation and urgent short- and long-term interventions were needed to save the lives and livelihoods of millions.

GFDRR and the World Bank's Africa region worked in concert to respond to the drought. GFDRR provided support towards a drought response financing plan that was a part of the response package, as well as supported the capacity development of regional organizations such as IGAD and a Heads of State Summit. A PDNA was conducted with GFDRR's technical support and financing of the ACP-EU program, to understand the impact of the drought on the economy and socio-economic aspects of the country. Informed by the PDNA, a World Bank team is currently preparing a \$180 million regional project, with GFDRR's technical and financial support, to strengthen the resilience of pastoralists in Ethiopia, Kenya and Uganda.

# Capacity Building

Established in 2010, GFDRR's dedicated capacity development team advanced the DRM agenda in each of its strategic pillars. Namely, (i) institutional capacity building and technical assistance, (ii) development of new learning products, and (iii) strategic training and learning events to Bank staff, donors and clients.

With 33 learning events in FY12, the capacity development program continued to provide DRM learning and training activities. So far close to 18,000 professionals benefited through 220 learning events. This work ensures that disaster risk reduction is reflected in national development policies and practices, and the knowledge generated through specific GFDRR interventions reaches development practitioners at a global scale. To implement this work, GFDRR partners with more than 20 entities from 6 regions, including intergovernmental and regional organizations,

donor agencies and international institutions, national disaster management agencies and academia.

GFDRR trainings benefited government officials, its partner agencies, as well as World Bank staff. In partnership with UNDP and EU, PDNA orientation training reached more than 600 government officials. An additional 300 professionals were trained in GFDRR priority countries Ethiopia, Nepal and Bangladesh. GFDRR also responded to training requests of its partners – ADB, EU, GIZ, SDC, ACC – and established a basic pool of almost 200 experts within these agencies ready to be deployed in post-disaster assessments. Furthermore, GFDRR made significant progress in increasing the skills and technical expertise of World Bank staff - more than 1300 Bank staff have been exposed to trainings on the basics of disaster risk management.

## STRENGTHENING DISASTER RISK MANAGEMENT IN EAP - DISTANCE-LEARNING SEMINAR SERIES

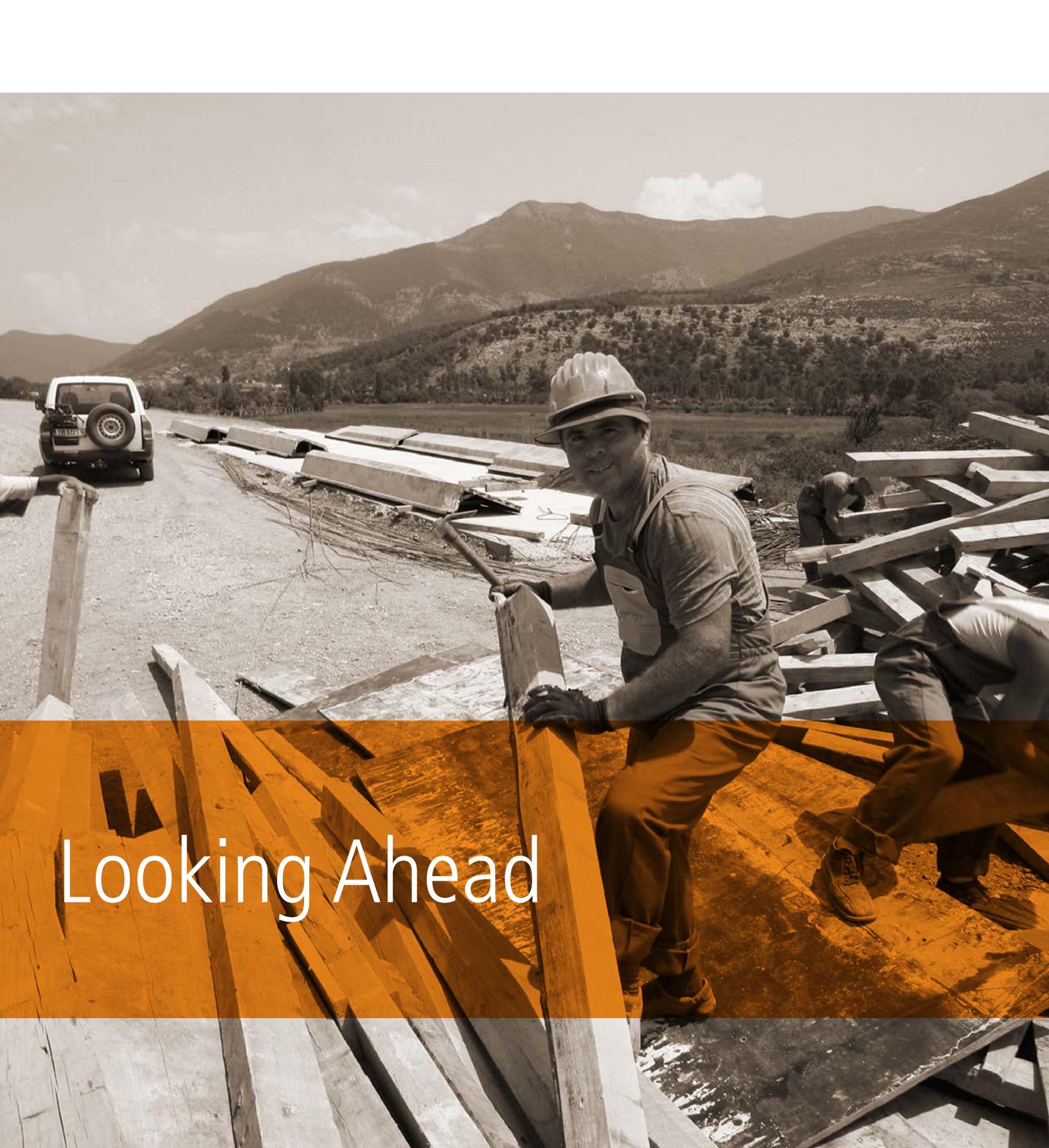
In FY2012, over 760 policy-makers and practitioners across East Asian and the Pacific and other regions benefitted from six long distance learning sessions. Topics focused on gender concerns in DRM programs, scaling up and integration of community knowledge in DRR, modernization of hydro meteorological systems, building resilience in a complex networked world, reforming the DRM framework in the Philippines, and improving climate and disaster resilience by linking social protection, DRM and climate change adaptation. This builds on a popular series of learning events organized in the previous two fiscal years, in cooperation with GFDRR, the Tokyo Development Learning Center and the Global Development Learning Network Asia Pacific ([Web Link](#)).

## PARTNERSHIP WITH UNDP

As part of its program, in February 2012 GFDRR organized a five day PDNA Training of Trainers (TOT) in partnership with UNDP-BCPR to build the capacity of GFDRR partner organizations and regional institutions in conducting PDNA trainings in their respective countries. Participants were introduced to the methodology for (i) assessing damages and losses, (ii) determining the needs for recovery and reconstruction, and (iii) ensuring improved resilience of communities and countries following recovery. Over 30 participants from more than 20 regional and national entities in five regions attended this training. These trainings enable national agencies to lead and conduct PDNAs in their countries. Regional organizations, SOPAC, IGAD and OECS are planning capacity development activities in PDNA for their member states with support from GFDRR. Universities in Turkey, Jamaica and Nigeria decided to mainstream PDNA learning into their DRM Master's program and requested technical support for the implementation from GFDRR.

We are managing very well and have been applying what we learned during the field based courses. Many thanks to you and to all your team!

- Calvens Joseph Civil Engineering Student, Université GOC, Port-au-Prince, Haiti Student at the Haiti Center: Building the next generation of reconstruction and development practitioners to prepare the country and protect communities against future disasters



# Looking Ahead

GFDRR has important decisions and opportunities ahead. GFDRR's current Global Partnership Strategy will come to an end in 2012. This year is an opportunity to revisit GFDRR's strategy for the next three years, review its governance structure, and evaluate strategic and geographic priorities. These reviews are currently ongoing in close collaboration with the members of the GFDRR Consultative Group, and will be further discussed at the 13th CG Meeting in November 2012 at The Hague.

GFDRR will endeavor to design a strategy for scaling up its engagement in areas of risk management and climate adaptation. This strategy will seek to consolidate the gains it has made over the years in promoting and leveraging the disaster and climate risk reduction agenda across national governments and the international development community. The Secretariat will also seek the guidance of its donors to consider expanding its support to other non-priority countries. GFDRR in particular needs to build on the success it has achieved in elevating and mainstreaming the agenda at the World Bank.

GFDRR will build on partnerships to contribute to international policy discourse on DRM. Responding to requests by its partners, GFDRR will build on major events and engagements such as the Resilience Dialogue, engagement at the UNFCCC COP, and continue work with the G20 to advance knowledge creation and the implementation of risk reduction activities.

The principles of GFDRR's strategic engagement for mainstreaming DRM will continue to guide its work. These include: (i) a renewed focus on engagements in priority and donor earmarked countries; (ii) continuation of longer term programmatic engagements and introduction of special thematic initiatives; (iii) preference for interventions with greater transformational effect and leveraging possibilities, and; (iv) achieving an optimal resource allocation to strike the right balance between deepening and broadening impact. GFDRR's demand-driven country programs will continue to focus on five thematic areas including risk identification, risk reduction, financial protection, preparedness, and resilient reconstruction.

GFDRR and UNISDR remain committed to continuing partnership based on comparative advantages and complementarity. DGF financing for Track I is scheduled to

phase out in FY 2013 due to DGF policy, which focuses on launching innovative partnerships with venture financing, while the partners strive to achieve financial sustainability. Work is underway for GFDRR and UNISDR to identify key priorities for future cooperation, based on a strong mutual recognition of respective strengths, resources, and expertise. These include work on the Global Assessment Report, the Global Platform for DRR, Disaster Aid Tracking and Urban Resilience.

GFDRR will also place a renewed emphasis on resilient recovery as a means to mainstream risk reduction. GFDRR will focus on (i) criteria-based prioritization, planning and implementation of recovery, through a recovery framework and; (ii) pursuing strategic initiatives to apply global recovery knowledge in these interventions. The recovery framework will serve as a stakeholder engagement and resource mobilization mechanism to help make recovery more inclusive and increase the likelihood that the gains from recovery lead to resilient development.

GFDRR will work to further align DRM and climate adaptation, particularly in technical assistance work to help lay the analytical groundwork for strengthening the design of climate smart investment operations that encourage anticipatory adaptation to long-term climate change threats. This could include projects to be funded by the CIFs. Through its Open DRI initiative and Climate Change Knowledge Portal, the World Bank will develop an integrated tool that will enhance access to integrated data and advice on managing climate and disaster risks.

GFDRR will continue the implementation of its Civil Society Partnership Strategy. GFDRR will also advance the implementation of its civil society partnership strategy in selected countries, perform a mapping of civil society DRM engagement in priority countries, and promote public sector - civil society collaboration on disaster recovery.

Following the initial work in launching the ACP-EU program throughout FY12, GFDRR will proceed with the implementation of projects. The Program will continue to support ACP countries and Regional Economic Communities on disaster risk reduction mainstreaming, capacity building and post-disaster activities, as well as foster partnerships and donors' coordination in the field.

# Annexes



# Annex 1: Resource Management

**TABLE 1 (IN US\$ THOUSANDS)**

Member Contributions to Track II, III and ACP/EU	Annual Donor Contributions Received						Pledges	Grand Total
	2007	2008	2009	2010	2011	2012		
EC	-	-	332	874	1,597	44,331	47,135	84,322
Sweden	-	3,637	2,467	7,258	9,122	9,717	32,200	32,501
Australia	1,403	2,051	491	4,219	14,925	6,407	29,496	32,200
United Kingdom	1,957	3,649	2,542	1,248	3,714	10,036	23,146	26,262
Germany	-	-	-	8,602	2,703	1,314	12,619	19,251
Japan	-	6,000	-	-	6,000	-	12,000	12,567
Norway	-	2,951	803	3,096	2,359	1,358	10,568	12,000
Spain	-	6,235	-	-	-	3,767	10,002	10,568
Denmark	-	3,051	3,484	1,814	-	859	9,207	10,002
Luxembourg	-	2,936	-	1,627	500	1,825	6,888	7,812
Italy	-	1,397	3,270	-	1,262	914	6,843	6,888
Netherlands	-	-	-	2,200	2,200	2,200	6,600	6,843
Switzerland	850	174	933	725	1,151	2,632	6,465	6,600
Canada	-	1,511	1,602	-	-	-	3,113	5,040
United States	-	-	-	-	-	3,040	3,040	3,113
Austria	-	-	-	-	-	2,499	2,499	2,499
Brazil	-	-	-	50	1,488	203	1,740	1,740
France	-	-	1,149	215	33	183	1,580	1,580
Ireland	-	-	-	357	317	389	1,064	1,064
Korea	-	-	-	-	-	270	270	900
<b>Total</b>	<b>4,210</b>	<b>33,590</b>	<b>17,073</b>	<b>32,284</b>	<b>47,373</b>	<b>91,944</b>	<b>226,475</b>	<b>283,752</b>
<b>World Bank</b>								
DGF (Track I)	5,147	4,853	5,000	5,000	4,250	4,250	28,500	
BB*	112	17	734	872	938	793	3,465	
<b>Total</b>	<b>5,259</b>	<b>4,870</b>	<b>5,734</b>	<b>5,872</b>	<b>5,188</b>	<b>5,043</b>	<b>31,965</b>	
<b>Grand Total</b>	<b>9,469</b>	<b>38,460</b>	<b>22,807</b>	<b>38,156</b>	<b>52,561</b>	<b>96,987</b>	<b>258,440</b>	

\*Other World Bank contributions from the administrative budget, Global Expert Teams Initiative in FY09-12 and DGF financed the impact evaluation in FY10

TABLE 2 (IN US\$ THOUSANDS)

<b>Sources and Uses of Funds</b>			
		Cumulative	FY12
Contributions Received (Track II, III, ACP/EU)		226,475	91,944
World Bank TF admin Fee *		(9,483)	(3,319)
DGF (Track I)		28,500	4,250
WB Administrative Budget**		3,465	1,740
Investment Income		3,133	425
<b>Total Sources of Funds</b>	<b>252,090</b>	<b>95,040</b>	
Project Disbursements (Track I, II, III, ACP/EU)***		115,842	38,842
Secretariat Costs (Administration, Program Management)***		15,411	3,978
<b>Total Uses of Funds</b>	<b>131,253</b>	<b>42,820</b>	
<b>Fund Balance</b>		<b>120,837</b>	
Less: Undisbursed Allocations		45,785	
<b>Funds Available for Allocation excluding ACP/EU funds (as of June 30, 2012)</b>		<b>35,988</b>	
<b>Funds Available for Allocation excluding ACP/EU funds (as of Oct 1, 2012) FY13</b>		<b>34,298</b>	

\* The Funds made available to GFDRR = Funds transferred by Donors - WB Admin fee

\*\*WB Administrative Budget included BB, Global Expert Teams Initiative in FY10-12 and DGF financed the impact evaluation in FY10  
 \*\*\* Project disbursements excluded Program Support for Partnership & Governance, Evaluation of Proposals, Impact Evaluation and Result Framework Monitoring (FY07-FY12) which has been classified as part of Secretariat costs.

TABLE 3

<b>GFDRR Expenditures for Program Activities, Program Management and Support, Trust Funds Administration and Fees from fiscal 2007 to June 30, 2012</b>						
<b>EXPENSE CATEGORY</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>(Jul - June) 2012</b>
Program Activities	5,218	8,748	18,981	24,450	28,733	37,326
o/w Track I	5,000	5,000	5,000	4,250	4,250	123,456
Track II (Core) <sup>2</sup>	218	3,324	10,893	13,710	17,119	28,500
Track II (Non-Core)	0	10	994	1,399	1,396	70,842
ACP/EU (Non-Core)						5,670
Track III	415	2,094	4,341	5,968	5,065	561
Administration/Program Management <sup>1</sup>	347	1,524	957	1,171	1,586	17,883
Administrative Fees	211	1,311	1,217	1,614	1,811	3,319
<b>TOTAL</b>	<b>5,775</b>	<b>11,584</b>	<b>21,154</b>	<b>27,235</b>	<b>32,130</b>	<b>42,857</b>
						<b>140,736</b>

<sup>1</sup> Included Program Management Unit included TF Administration and Management

<sup>2</sup> Included Partnership & Governance, Evaluation of Proposals, Impact Evaluation and Result Framework Monitoring (FY07-FY12) as part of program support

TABLE 4

GFDRR Secretariat Expenditures, fiscal 2007 to June 30, 2012 (included Program Support from Tk2 Core Funds) (In US\$ Thousands)						
EXPENSE CATEGORY		2007	2008	2009	2010	2011 (Jul - June) 2012
Administration & Program Management						
Staff Costs <sup>1</sup>	225	977	601	870	1,247	1,832
Travel <sup>2</sup>	92	282	115	265	267	280
Overhead <sup>3</sup>	4	23	113 <sup>b)</sup>	2	4	15
Other <sup>4</sup>	26	241	128	34	69	85
Administration & Program Management <sup>a)</sup>	347	1,524	957	1,171	1,586	2,212
Program Support <sup>c)</sup>	74	357	1,196	1,885	2,112	1,991
Total Secretariat Expenditures	421	1,881	2,153	3,056	3,698	4,203

a) Secretariat cost varied across 5 years. Higher start-up cost in FY08 and increased scope in regional coordination and trust funds administration support in FY11.

b) FY09 Overhead included the Institutional trust funds indirect rates which are benchmark chargebacks for overhead fixed cost. Other years indirect rates captured under Staff Costs.

1. **Staff Costs** included salaries and benefits of PMU Headquarters staff (including ETC/ETT)

2. Travel included travel expenses of the PMU Headquarters staff, candidates/interviewees for GFDRR positions, Annual Meeting participants, other participants in GFDRR-sponsored events.

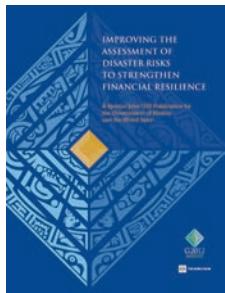
3. Overhead included office space, communications & IT computers, other office equipment of Washington-based PMU and trust funds indirect rates in FY09.

4. Other included the use of short-term consultants and other contractual services (e.g. editing, graphic design, translation, publishing and printing, representation, hospitality, etc.)

	2007	2008	2009	2010	2011 (Jul - June) 2012	TOTAL
Program Support <sup>c)</sup>	74	357	1,196	1,885	2,112	1,991
Total Secretariat Expenditures	421	1,881	2,153	3,056	3,698	4,203

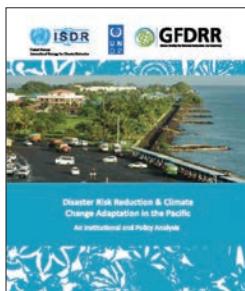
c) Program Support included Partnership & Governance, Evaluation of Proposals, Impact Evaluation and Result Framework Monitoring (FY07-FY12) grouped under Track II Core (Global)  
Note: FY09 Overhead included the Institutional trust funds indirect rates which are benchmark charge-backs for overhead fixed cost. Other years indirect rates captured under Staff Costs.

# Annex 2: FY-12 Global Knowledge and Learning Products



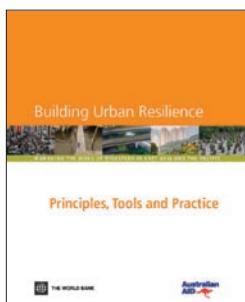
## Improving the Assessment of Disaster Risks to Strengthen Financial Resilience: A Special Joint G20 Publication by the Government of Mexico and the World Bank

Responding to a G20 mandate, this publication brings together the experiences of G20 countries in protecting their populations and assets against natural hazards. It includes contributions by fifteen G20 members and invited countries (Argentina, Australia, Brazil, Chile, China, Colombia, France, Germany, Italy, Japan, Republic of Korea, Mexico, Turkey, United Kingdom, and United States), as well as the OECD. A World Bank paper introduces the country experiences and sets out the challenges and opportunities to address rising disaster losses with more accurate risk data and better informed decision making. A G20 Country Steering Group provided strategic and policy guidance to the Disaster Risk Management initiative.



## Disaster Risk Reduction and Climate Change Adaptation in the Pacific

This study provides an analysis of the current level of integration of DRR and CCA in the region, with an emphasis on the policy and institutional environment. The report outlines some of the barriers to integration and makes recommendations on how they can be addressed. The analysis presented includes seven Pacific island countries (Cook Islands, Federated States of Micronesia, Fiji, Palau, Samoa, Tonga and Vanuatu), however, a more detailed analysis was undertaken of only four of those countries (the Cook Islands, Fiji, Palau and Vanuatu).



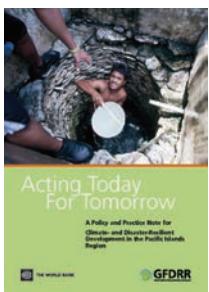
## Building Urban Resilience: Principles, Tools and Practice

This handbook is a resource for enhancing disaster resilience in urban areas. It summarizes the guiding principles, tools and practice in key economic sectors that can facilitate the implementation of resilience concepts into decisions over infrastructure investments and general urban management as integral elements of reducing disaster and climate risks.



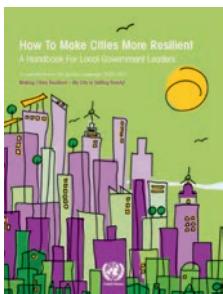
## Building Urban Resilience: Tools for Building Urban Resilience: Integrating Risk Information into Investment Decisions Pilot Cities Report – Jakarta and Can Tho

This report explores practical approaches to building urban resilience. It focuses on tools and methodologies that can facilitate the use of risk information in public infrastructure investment and urban management decisions as integral elements of reducing disaster and climate risks.



### Acting Today for Tomorrow: A Policy and Practice Note for Climate and Disaster Resilient Development in the Pacific Islands Region

Pacific island countries continue to be among the most vulnerable in the world: they combine high exposure to frequent and damaging natural hazards with low capacity to manage the resulting risks. Their vulnerability is exacerbated by poorly planned socioeconomic development, which has increased exposure and disaster losses, and by climate change, which has increased the magnitude of cyclones, droughts, and flooding.



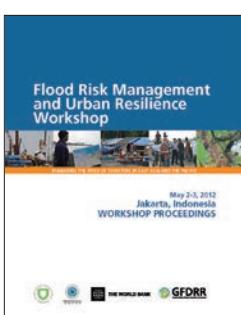
### How To Make Cities More Resilient: A Handbook For Local Government Leaders

The message is: resilience and disaster risk reduction must be part of urban design and strategies to achieve sustainable development. They require strong alliances and broad participation. Applying the guiding principles of the "Making Cities Resilient" Campaign and the information in this Handbook will help cities and local governments to share learning, access information, develop indicators and performance measures and track progress.



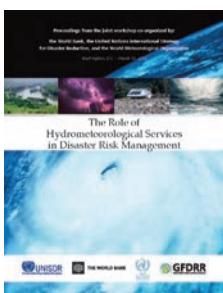
### Cities and Flooding: A Guide to Integrated Urban Flood Risk Management for the 21st Century

*Cities and Flooding: A Guide to Integrated Urban Flood Risk Management for the 21st Century* provides forward-looking operational assistance to policy makers and technical specialists in the rapidly expanding cities and towns of the developing world on how best to manage the risk of floods. It takes a strategic approach, in which appropriate risk management measures are assessed, selected and integrated in a process that both informs and involves the full range of stakeholders.



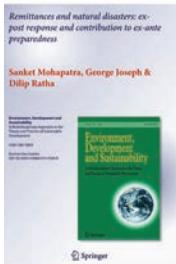
### Flood Risk Management and Urban Resilience Workshop

The "Flood Risk Management and Urban Resilience Workshop," held on May 2-3, 2012 at the Shangri-La Hotel, Jakarta, Indonesia, brought together over 50 policy makers from national and local levels from seven East Asian countries (Indonesia, Laos PDR, the Philippines, Vietnam, Thailand, China and the Republic of Korea), as well as experts, donors and partner organizations. The workshop was held to increase technical knowledge, share good practice from around the region, and foster a community of committed leaders dealing with flood risks.



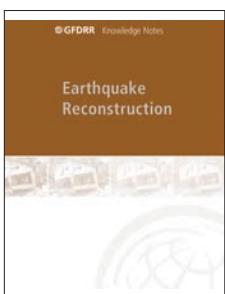
### The Role of Hydrometeorological Services in Disaster Risk Management

Natural hazards cannot be avoided, but timely, accurate prediction of hydro-climate extremes helps societies to prepare for and mitigate disasters and to reduce losses in infrastructure and productive activities. This publication is the proceeding from the joint workshop co-organized by: The World Bank, GFDRR, the United Nations International Strategy for Disaster Reduction (UNISDR), and the World Meteorological Organization in Washington, D.C. on March 12, 2012.



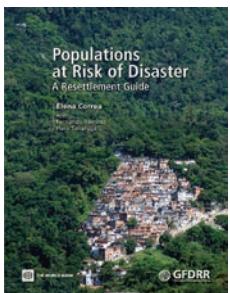
### World Bank / GFDRR - Remittances and Natural Disasters: Ex-post Response and Contribution to Ex-ante Preparedness

Macro- and microeconomic evidence suggests a positive role of remittances in preparing households against natural disasters and in coping with the loss afterward. Analysis of cross-country macroeconomic data shows that remittances increase in the aftermath of natural disasters in countries that have a larger number of migrants abroad. Analysis of household survey data in Bangladesh shows that per capita consumption was higher in remittance-receiving households than in others after the 1998 flood. Ethiopian households that receive international remittances seem to rely more on cash reserves and less on selling household assets or livestock to cope with drought. In Burkina Faso and Ghana, international remittance-receiving households, especially those receiving remittances from high-income developed countries, tend to have housing built of concrete rather than mud and greater access to communication equipment, suggesting that they are better prepared against natural disasters.



### GFDRR Knowledge Note: Earthquake Reconstruction

Based on the proven usefulness of Good Practice Notes in formulating recovery framework, GFDRR has decided to develop Knowledge Notes for different disasters and make them available to policy makers and practitioners potentially facing post-disaster situations. The "Earthquake Reconstruction" is the first piece of the series.

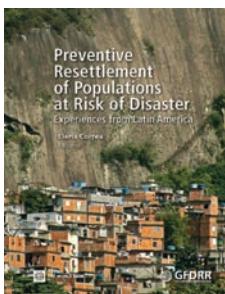


### Populations at Risk of Disaster: A Resettlement Guide (Available in Spanish and English)

This book is designed for governments that make decisions on the application of preventive resettlement programs as disaster risk reduction measures, as well as for institutions and professionals in charge of preparing and implementing these programs, civil society organizations participating in resettlement and risk reduction processes, and at-risk communities.

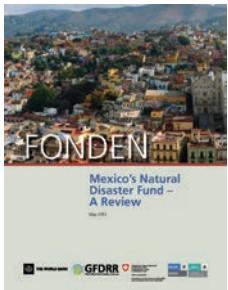
The basic premises of the guide are that resettlement as a preventive measure should be incorporated in comprehensive risk reduction strategies in order to be effective; and that resettlement's objective is to protect the lives and assets of persons at risk and to improve or at least restore their living conditions.

Although in preparing this guide, the goal was to include all relevant aspects of preparing a preventive resettlement program, programs of this type should be tailored to the characteristics of the population involved and the context in which they will be implemented. Resettlement programs should also be implemented with some flexibility so that they can respond to any problems arising during the process.



### Preventive Resettlement of Populations at Risk of Disaster: Experiences from Latin America (Available in Spanish and English)

Rapid and unplanned urbanization have compounded vulnerabilities to natural disasters in the Latin American and the Caribbean Region (LAC). As a preventive measure, resettlement has been carried out in some LAC countries in recent years. The analysis and dissemination of the results of this strategy to countries worldwide is relevant and timely given the millions of people exposed to natural hazards, especially in developing nations. This was the main motivation for preparing the Argentina, Brazil, Colombia and Guatemala case studies presented in this publication.



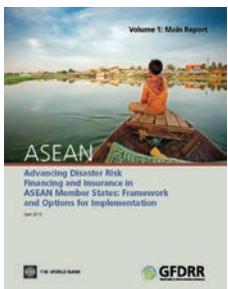
### FONDEN: Mexico's Natural Disaster Fund – A Review

Prepared jointly by the GFDRR Disaster Risk Financing and Insurance Team, the World Bank's Latin America Disaster Risk Management Unit, and the Government of Mexico, this publication shares the experience of Mexico's Fund for Disaster Relief and Reconstruction (FONDEN) to date. It highlights aspects of particular bearing and applicability to other disaster-prone countries.



### Indonesia: Advancing a National Disaster Risk Financing Strategy – Options for Consideration

This study presents options for a national disaster risk financing strategy in Indonesia, drawing heavily on international experience. The study discusses a series of complementary options for a national disaster risk financing strategy, based on a preliminary fiscal risk analysis and a review of the current budget management of natural disasters in Indonesia. It benefits from the international experience of the World Bank, which has assisted several countries in the design and implementation of sovereign catastrophe risk financing strategies (for instance, in Mexico, Colombia, Vietnam, Philippines, and the Caribbean island states) and property catastrophe risk insurance programs (for instance, in Turkey, Romania and Eastern Europe). This experience is tailored to the institutional, social and economic characteristics of Indonesia.



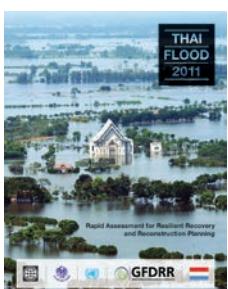
### Advancing Disaster Risk Financing and Insurance in ASEAN Member States: Framework and Options for Implementation

This report is a first collaborative effort to present a comprehensive body of knowledge on the state of disaster risk financing and insurance in ASEAN Member States and share examples of best practice and lessons from international experience.



### Supporting Sustainable Post-Earthquake Recovery in China

In order to summarize China's experience in post-disaster recovery and reconstruction, under the help of the World Bank and the Global Facility for Disaster Reduction and Recovery (GFDRR), the Chinese government organized and implemented the project of *Supporting Sustainable Post-Earthquake Recovery in China*, carried out the deep and meticulous investigations, made the comparative study of the recovery and reconstruction experiences in the main affected disaster areas both at home and abroad, and summarized China's experience in post-disaster recovery and reconstruction for the reference and sharing of the international community.



### Thai Floods: Rapid Assessment for Resilient Recovery and Reconstruction Planning

In response to the prolonged and widespread flooding throughout Thailand in 2011, the Royal Thai Government, in conjunction with the World Bank and other development partners, undertook this rapid assessment of the impact of the floods in 26 of the 66 affected provinces. This report outlines these findings, including damage and loss estimates and social and economic impacts, and proposes strategies for resilient recovery and reconstruction planning.

# Glossary

## Adaptation

The adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.

## Building code

A set of ordinances or regulations and associated standards intended to control aspects of the design, construction, materials, alteration and occupancy of structures that are necessary to ensure human safety and welfare, including resistance to collapse and damage.

## Capacity development

The process by which people, organizations and society systematically stimulate and develop their capacities over time to achieve social and economic goals, including through improvement of knowledge, skills, systems and institutions.

## Climate change

(a) The Inter-governmental Panel on Climate Change (IPCC) defines climate change as a change in the climate that persists for decades or longer, arising from either natural causes or human activity. (b) The United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as “a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods”.

## Disaster

A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.

## Disaster risk

The potential disaster losses, in lives, health status, livelihoods, assets and services, which could occur to a particular community or a society over some specified future time period.

## Disaster risk management

The systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster.

## Disaster risk reduction

The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to

hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.

## Early warning system

The set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss.

## Greenhouse gases

Gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation of thermal infrared radiation emitted by the Earth's surface, the atmosphere itself, and by clouds.

## Natural hazard

Natural process or phenomenon that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

## Non-structural measures

Any measure not involving physical construction that uses knowledge, practice or agreement to reduce risks and impacts, in particular through policies and laws, public awareness raising, training and education.

## Preparedness

The knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions

## Prevention

The outright avoidance of adverse impacts of hazards and related disasters.

## Recovery

The restoration, and improvement where appropriate, of facilities, livelihoods and living conditions of disaster-affected communities, including efforts to reduce disaster risk factors.

## Resilience

The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions.

### **Risk assessment**

A methodology to determine the nature and extent of risk by analysing potential hazards and evaluating existing conditions of vulnerability that together could potentially harm exposed people, property, services, livelihoods and the environment on which they depend.

### **Structural measures**

Any physical construction to reduce or avoid possible impacts of hazards, or application of engineering techniques to achieve hazard-resistance and resilience in structures or systems

### **Sustainable development**

Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

### **Vulnerability**

The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard

# Acronyms

ACP	African, Caribbean and Pacific
ADB	Asian Development Bank
AUSAID	Australian Agency for International Development
CADRI	UN Capacity for Disaster Reduction Initiative
CAPRA	Comprehensive Approach Probabilistic Risk Assessment
CAS	Country Assistance Strategy
CAT-DDO	Catastrophe Deferred Drawdown Option
CCA	Climate Change Adaptation
CG	Consultative Group
DaLA	Damage Loss and Needs Assessment
DRFI	Disaster Risk Financing and Insurance
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
ECCAS	Economic Community of Central African States
ECOWAS	Economic Community of West African States
EU	European Union
GAR	Global Assessment Report
GDLN	Global Development Learning Network
GFDRR	Global Facility for Disaster Reduction and Recovery
GIS	Geographic Information System
HFA	Hyogo Framework for Action
ICLEI	International Council for Local Environmental Initiatives
IGAD	Intergovernmental Authority on Development
MDGs	Millennium Development Goals
MDTF	Multi-Donor Trust Fund
MNAIS	Modified National Agriculture Insurance Scheme
NMHS	National Meteorological and Hydrological Services
OPENDRI	Open Data for Resilience Initiative
PCRAFI	Pacific Catastrophe Risk Assessment and Financing Initiative
PDNA	Post-Disaster Needs Assessment
PRSPs	Poverty Reduction Strategy Papers
SDTF	Single Donor Trust Fund
SRFF	Standby Recovery Financing Facility
TDLC	Tokyo Development Learning Center
UNISDR	United Nations International Strategy for Disaster Reduction
WCIDS	weather and climate information and decision-support systems
WFP	World Food Program
WMO	World Meteorological Organization



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