

GLOBAL FACILITY FOR DISASTER REDUCTION
AND RECOVERY COUNTRY EVALUATION:

TECHNICAL EVALUATION REPORT

SEPTEMBER 2015



BANGLADESH | EASTERN CARIBBEAN | ETHIOPIA | INDONESIA

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ACRONYMS AND ABBREVIATIONS

BCCRF	Bangladesh Climate Change Resilience Fund
BAPPENAS	Ministry of National Development Planning (<i>Badan Perencanaan Pembangunan Nasional</i>)
BIG	Geospatial Information Agency (<i>Badan Informasi Geospasial</i>)
BNPB	National Disaster Management Agency (<i>Badan Nasional Penanggulangan Bencana</i>)
BPBD	Local Disaster Management Agency (<i>Badan Penanggulangan Bencana Daerah</i>)
BUERP	Bangladesh Urban Earthquake Resilience Project
CAFF	Climate Adaptation Finance Facility
CEIP-I	Coastal Embankment Improvement Project
CHaRIM	Caribbean Handbook on Risk Information Management
DaLA	damage and loss assessment
DLNA	damage, loss, and needs assessment
DNCC	Dhaka North City Corporation
DRFI	disaster risk financing and insurance
DRM	disaster risk management
DRMFSS	Disaster Risk Management and Food Security Sector
DRM-SPIF	Disaster Risk Management Strategic Programme and Investment Framework
DRR	disaster risk reduction
DSCC	Dhaka South City Corporation
DVRP	Disaster Vulnerability Reduction Program
ECRRP	Emergency 2007 Cyclone Recovery and Restoration Project
EWS	early warning system
FAO	Food and Agriculture Organization
GFDRR	Global Facility for Disaster Reduction and Recovery
GIS	Geographic Information Systems
GoB	Government of Bangladesh
GoE	Government of Ethiopia
Gol	Government of Indonesia
HFA	Hyogo Framework for Action



ICT	information and communications technology
InaSAFE	Indonesian Scenario Assessment for Emergency
JICA	Japan International Cooperation Agency
JRDNA	Joint Rapid Damage and Needs Assessment
LEAP	Livelihood Early Assessment and Protection
LEDP	Livelihoods and Economic Development Program
LGED	Local Government Engineering Department
LLI	World Bank's Leadership, Learning and Innovation Group
M&E	monitoring and evaluation
MoEC	Ministry of Education and Culture
MoSSaiC	Management of Slope Stability in Communities
NAP-DRR	National Action Plan for Disaster Risk Reduction
NPSDRM	National Policy and Strategy on Disaster Risk Management
OpenDRI	Open Data for Resilience Initiative
PDNA	post-disaster needs assessment
PNPM	National Program for Community Empowerment (<i>Program Nasional Pemberdayaan Masyarakat</i>)
PPCR	Pilot Program for Climate Resilience
PSNP	Productive Safety Nets Program
Rekompak	Indonesia's community-based approach for large-scale reconstruction and rehabilitation
RSLUP	risk-sensitive land use planning
ToR	Terms of Reference
TOT	training-of-the-trainers
TTL	Task Team Leader
UNDP	United Nations Development Programme
URP	Urban Resilience Project
WDRP	Woreda Disaster Risk Profiles
WINRIP	Western Indonesia National Roads Improvement Project

All monetary values are in U.S. dollars.

EXECUTIVE SUMMARY

This report presents the findings and recommendations of an evaluation of the Global Facility for Disaster Reduction and Recovery (GFDRR). The evaluation focuses on GFDRR activities between 2008 and 2014 in five countries in four regions: Bangladesh, the Eastern Caribbean (Saint Lucia and Dominica), Ethiopia, and Indonesia.

This evaluation takes place in an evolving landscape for climate change adaptation and disaster risk reduction. Hence, there is a need to regularly evaluate the impact of disaster management programs, like GFDRR, to understand how disaster risks are effectively managed and resilient societies are built. In this context, the evaluation has two objectives: (1) to analyze and evaluate the overall impact of GFDRR activities, specifically in terms of leveraging new investments and influencing ongoing programs; and (2) to generate a better understanding of how and why GFDRR has been able to contribute to making countries more resilient.

In its activities, GFDRR aims to increase resilience to natural disasters by scaling up technical and financial support for disaster risk management (DRM), contributing toward mainstreaming DRM into development, and assisting post-disaster countries in resilient recovery. GFDRR works in several ways to achieve this goal. A primary function is the provision of grants that are implemented by partners. In the five countries visited for this evaluation, nearly 90 percent of grants are World Bank-executed, with the remainder executed by country governments. GFDRR grants support three main activity types—capacity building, analytical products, and technical assistance—across five pillars of action: risk identification, risk reduction, preparedness, financial protection, and resilient recovery. GFDRR also provides focused technical support to implementing partners on a series of thematic initiatives and additionally acts as a “support hub” for a network of DRM specialists in the World Bank.

The evaluation findings are presented below.

The evaluation found that GFDRR has successfully delivered analytical products, capacity building, and technical assistance across all five pillars in Bangladesh, the Eastern Caribbean, Ethiopia, and Indonesia. While the evaluation was limited in its ability to assess GFDRR delivery against plan—because many GFDRR grant proposals do not describe planned outputs—the evaluation generally found that outputs were reasonable in scope and scale given the funding size of the grants.

Most activities that are under implementation or completed are achieving valuable downstream results. Most GFDRR activities in the five countries visited are making valuable contributions to achieving process-oriented (i.e., intermediate) outcomes. Intermediate outcomes observed include: raising disaster risk awareness at local and national levels and increasing the availability of disaster risk information; building capacity of national and local governments, as well as civil society, for disaster risk preparedness, reduction, and response; developing and demonstrating innovative tools and approaches for DRM; strengthening policy dialogue and supporting policy development and implementation, including around disaster risk financing and insurance; and influencing and leveraging significant resources for DRM.

GFDRR has leveraged DRM resources through support for the preparation of post-disaster needs assessments (PDNAs), technical assistance that directly led to the preparation and approval of a World Bank investment project, and the implementation of pilot projects with community support. GFDRR has supported PDNAs in Bangladesh, Saint Lucia, and Indonesia. Also in Bangladesh, GFDRR actively leveraged investment through the Urban Resilience Project (2015–20, \$182 million), where more than two years of sustained technical assistance under a \$2.8 million GFDRR grant led to the preparation

and approval of this large investment in early 2015. Proximity to World Bank operational staff and GFDRR flexibility were key contributors to this success.

GFDRR has been successful in identifying strategic entry points for relatively small grant contributions to demonstrate or advance DRM activities that can inform larger-scale investment operations. The evaluation identified over \$3.6 billion of investments (\$1.4 billion World Bank commitments) with nearly \$500 million of DRM components informed by GFDRR across all five countries studied. GFDRR activities have also influenced national and local government expenditures for DRM in Bangladesh, Ethiopia, and Indonesia.

Given the relatively young age of GFDRR's portfolio, limited evidence was found of outcomes and impacts achieved at-scale as of early 2015, although some activities show strong potential. In particular, linking GFDRR small grants with larger World Bank investment operations or broader government initiatives reinforces potential for downstream results and sustainability. In all countries studied, the evaluation found that sustained engagement is needed to ensure that the intermediate outcomes of some activities proceed toward outcomes and impacts. Longer-term support will be especially needed to realize outcomes for disaster risk financing and insurance activities and technology-oriented solutions.

GFDRR has contributed to incorporating or improving DRM components in many World Bank investment operations, which will achieve sizeable outcomes if successfully implemented. For example, building on GFDRR's critical groundwork, the \$182 million Urban Resilience Project in Bangladesh has potential to increase resilience to earthquakes for the 15.5 million people living in Greater Dhaka and Sylhet. Saint Lucia and Dominica's Disaster Risk Vulnerability Programs (DVRPs)—which GFDRR helped shape—

are expected to benefit more than 240,000 people combined. In Indonesia, the Western Indonesia National Roads Improvement Project will improve road sections traversing 12 districts with a total population over 4 million, and GFDRR's assistance means the project should now strengthen disaster risk mitigation in the road sector. In Ethiopia, expected benefits associated with reductions in drought and flood impacts and losses and long-term risk reduction efforts under the Productive Safety Nets Program IV are valued at roughly \$300 million per year.

By engaging at high levels of government and forging strong partnerships, GFDRR has increased its potential to achieve results at-scale. Partnership with the World Bank, and the access that partnership provides to key ministries, has been important to enable high-level engagement. The in-country presence of a GFDRR focal point has also been important for influencing World Bank investments in Bangladesh and Indonesia; in Ethiopia, the same World Bank task team leader has led GFDRR grants and the World Bank investment operations that GFDRR informed, directly enabling that influence.

Another contributor to success has been GFDRR's use of engagement strategies that reflect individual country conditions. For example, GFDRR has taken a proof-of-concept and community-driven development approach in Indonesia, where DRM responsibilities and budgets are decentralized. GFDRR used participatory technical assistance in Dhaka (Bangladesh), where local government structures and dynamics are very complex and require long-term relationship building. In Ethiopia, GFDRR successfully used the evolving social protection agenda as an entry-point to advance the DRM agenda. In the Eastern Caribbean, GFDRR has worked most effectively when providing support that strengthens larger World Bank initiatives (i.e., technical advice for DVRP development).





1. INTRODUCTION

Challenges to success have included lack of readiness or capacity to use some of the technologies piloted by GFDRR, long development periods for some technical assistance activities, and the use of less-effective activities, such as one-time training events or conference attendance support. The observation of these particular challenges suggests that a long-term approach is especially needed to solidify results for certain activity types, such as the introduction of new technologies and support for disaster risk financing and insurance. In addition, in Bangladesh, the evaluation observed that GFDRR utilized a co-financing modality ineffectively, lacking strategic dialogue during the creation of that arrangement and engagement during implementation.

To improve future GFDRR results achievement, the evaluation makes the following recommendations:

1. Find and pursue ways to deepen and sustain engagement on the ground. Some options might include continued support for GFDRR focal points

in-country, improved modalities for capacity building (e.g., on-the-job training), and designing grants to build on and reinforce each other.

2. Prioritize interventions that link to broader initiatives and make use of GFDRR's well-recognized technical expertise. All five country studies suggest that interventions that incorporate technical expertise and support are more likely to have strong stakeholder engagement, show better potential for contributing to results at-scale, and achieve leverage or influence.
3. Improve documentation of GFDRR activities and results to support further monitoring and evaluation. A challenge for this evaluation was incomplete documentation of GFDRR activities and results. To improve future monitoring and evaluation—and support more streamlined results reporting—GFDRR should consider improving documentation of activities and results.

The Global Facility for Disaster Reduction and Recovery (GFDRR) is a multilateral partnership that supports implementation of the Hyogo Framework for Action (HFA) in integrating disaster risk reduction and climate change adaptation into development plans and strategies. It provides technical and financial assistance to disaster-prone countries to reduce their vulnerability to climate- and non-climate natural disasters and works alongside a diverse group of partners, including United Nations agencies, the World Bank regional offices, and national governments. GFDRR's grant-making activities serve the organization's five pillars of action: risk identification, risk reduction, preparedness, financial protection, and resilient recovery.

This evaluation takes place in an evolving landscape for climate change adaptation and hazard risk reduction when many local, national, regional, and international partners are advocating for natural hazard risk management policies in country-level strategies. There is a growing demand to understand and differentiate amongst these strategies and their effectiveness at managing risk and building resilience. In particular, there is a need to evaluate the impact of disaster risk management (DRM) programs, including the effectiveness of policies in promoting action that contributes to resilience building of countries and people. In the context of this evolving landscape, GFDRR as a program is also changing and growing. Evaluation of GFDRR can contribute important learning to improve effective management of risks.

1.1 Purpose and Scope of the Evaluation

The two principal purposes of this evaluation are to: (1) ensure accountability by assessing GFDRR's role as a facilitator and as a catalyzer of investments to build resilience to natural hazards; and (2) contribute to a broader evidence base that demonstrates how disaster risks are effectively managed and resilient societies are built. To fulfill these purposes, this evaluation has two objectives: (1) to analyze and evaluate the overall impact of GFDRR activities, specifically in terms of leveraging new investments and influencing ongoing programs; and (2) to generate a better understanding of how and why GFDRR has been able to contribute to making countries more resilient.

The evaluation focuses on GFDRR activities between 2008 and 2014 in five countries in four regions: Bangladesh, the Eastern Caribbean (St. Lucia and Dominica), Ethiopia, and Indonesia. Within this temporal and geographic scope, the evaluation seeks to answer the following four questions posed in the Terms of Reference (TOR):

- Does GFDRR succeed in delivering planned analytical products and technical assistance?
- Is GFDRR able to use these interventions to leverage and influence new and ongoing investment programs?
- Are the activities to which GFDRR contributes achieving the outcomes intended?¹

Key Concepts and Definitions

The evaluation adopted the definitions that:

- GFDRR has *influenced* resources when the program's activities contribute to improving the enabling environment for DRM (e.g., legal, institutional, or regulatory systems) or to integrating DRM into existing programs and budgets.
- GFDRR has *leveraged* resources when the program's activities contribute to securing new funding for DRM.

¹ This evaluation question has been slightly re-phrased for clarity. The original TOR phrased this question differently: "Are these investment programs achieving the outcomes intended?" However, in most cases, given the size of GFDRR's contribution, the results of much broader World Bank investment programs would be outside the scope of GFDRR's plausible influence and thus outside the scope of this evaluation.

- What evidence exists that GFDRR is achieving progress against the intended impact on the resilience of people to natural disasters?

This evaluation complements previous evaluations of the GFDRR, including a formative evaluation in 2010,² followed by a global program review by the World Bank's Independent Evaluation Group in 2012,³ and most recently, a retrospective evaluation of a sample of five countries (Guatemala, Malawi, Nepal, Sri Lanka, and Vietnam) in 2014,⁴ which also made recommendations on GFDRR's monitoring and evaluation (M&E) framework. Building on the 2014 evaluation, this evaluation considers two key areas of particular interest: influence/leverage and intermediate outcomes. The relationship between this evaluation and the 2014 evaluation is discussed at more length in Appendix B.

1.2 Methodology

The evaluation draws on primary and secondary sources of information and uses qualitative methods to respond to the key evaluation questions. Data collection included a thorough desk review, interviews with GFDRR and World Bank staff, and in-depth fieldwork in Bangladesh, Dominica, Ethiopia, Indonesia, and Saint Lucia. GFDRR purposively

selected the fieldwork countries based on regional diversity, significant scale and scope of GFDRR engagement, number of years of engagement, and potential for investigation of leveraging and influencing of investment operations. More than 200 stakeholders were interviewed for this evaluation (see Figure 1).

The evaluation team built and tested hypotheses, created timelines of key milestones and activities, wrote back-to-office reports for country visits, and triangulated information across all sources to synthesize and identify findings across methods. Appendix B gives more detailed information on data collection and analysis methods used in this evaluation.

The evaluation faced two key limitations. The first was related to stakeholder availability and recall, particularly for grants that were administered earlier in the evaluation time period (e.g., 2008–2010). For a few grants, the evaluation team was unable to identify any project proponents or beneficiaries to interview; for several other grants, the evaluation was unable to triangulate evidence from project leads at the World Bank because project beneficiaries or third-party stakeholders with knowledge of the grant could not be identified in-country.

The second limitation was related to the lack of a baseline or stated expectations for outputs and outcomes against which evidence of progress could be measured. This issue is not unique to GFDRR; other grant-making organizations working on DRM and climate change adaptation issues have also grappled with developing approaches for measuring results.⁵ Many GFDRR grant proposals do not describe expected outputs or outcomes in terms that are conducive for meaningful evaluation; for example, several of the Bangladesh grant proposals—with activities ranging from conference support, to Damage, Loss and Needs Assessment (DLNA) development, to co-financing of the World Bank's Cyclone Sidr recovery project—list the following as the grant's expected outcome: "All organizations, personnel and volunteers responsible for maintaining preparedness are equipped and trained for effective disaster preparedness and response." As a result, it was not possible to assess outputs and outcomes against "plan" consistently. Instead, the evaluation supplemented grant proposals with GFDRR program documentation (including the GFDRR Strategy and monitoring and evaluation information) along with expert judgment to make determinations about reasonable expectations for results given grant activities.

1.3 Roadmap for the Evaluation

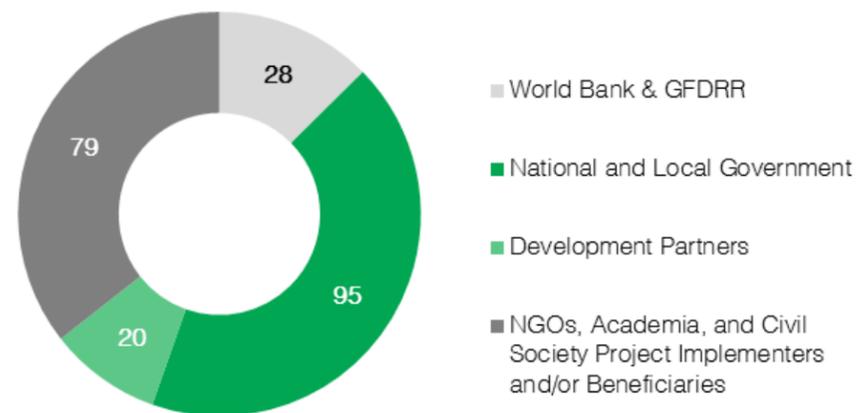
The remainder of the evaluation report is divided into three main chapters:

- Chapter 2** presents the case studies for each of the five countries: Bangladesh, Saint Lucia, Dominica, Ethiopia, and Indonesia. These case studies respond to the evaluation questions at the country-level.
- Chapter 3** addresses the four evaluation questions at the cross-country level, and also presents a discussion of the results of the intermediate outcome indicator mapping analysis.
- Chapter 4** provides the overall conclusions and recommendations for the evaluation.

In addition, a series of appendices provide supporting information:

- Appendix A** provides the original ToR for this evaluation, while **Appendix B** presents the evaluation methodology.
- Appendix C** presents key information about the GFDRR grants evaluated during fieldwork to Bangladesh, Dominica, Saint Lucia, Ethiopia, and Indonesia.
- Appendices D, E, and F** provide detailed evidentiary support for findings related to country-level results, leverage and influence, and intermediate outcome mapping, respectively.
- Appendix G and H** list the stakeholders consulted and the documents reviewed during the course of the evaluation.

Figure 1: Summary of Stakeholders Consulted



² This Universal Management Group. 2010. Evaluation of the World Bank Global Facility for Disaster Reduction and Recovery (GFDRR). Volume I – Final Evaluation Report.

³ World Bank. 2014. Progress Report on Mainstreaming Disaster Risk Management in World Bank Group Operations. Development Committee Meeting, April 12, 2014.

⁴ DARA. 2014. Evaluation Report – Retrospective Evaluation of the GFDRR Program in a Sample of Disaster-Prone Countries. April 2014.

⁵ See, for example, Climate-eval (2015). Good Practice Study on Principles for Indicator Development, Selection, and Use in Climate Change Adaptation Monitoring and Evaluation. Available at: <https://www.climate-eval.org/content/good-practice-study-principles-indicator-development-selection-and-use-climate-change>. Setting baselines is challenging for DRM and climate change adaptation given changing hazard profiles, in response to changing climate conditions, and the complexity and dynamism of vulnerability. Another challenge relates to the reverse logic of DRM interventions, whereby a successful initiative helps reduce the impact of a natural hazard event.

2. COUNTRY CASE STUDIES



2.1. Bangladesh

Key Messages for GFDRR in Bangladesh

- GFDRR has successfully delivered most of its planned outputs, including: providing technical assistance to support post-disaster recovery and reconstruction, building urban resilience, and improving research; facilitating dialogue on climate change impacts and resilience; conducting analytical studies on disaster reduction and recovery; engaging with GFDRR's regional thematic initiatives; and co-financing for a World Bank project.
- The evaluation found evidence of intermediate outcomes resulting from most GFDRR activities in Bangladesh, including: knowledge deepened; institutional capacity strengthened; innovative approaches and tools developed and demonstrated; and development strategy and financing informed.
- GFDRR activities appear capable of delivering downstream outcomes and impacts, particularly in the areas of preparedness and risk reduction.
- GFDRR has been particularly successful in delivering results where it has used its technical expertise, linked to broader initiatives, and capitalized on strong stakeholder support and political demand. The presence of the GFDRR focal point in Dhaka has also helped deepen GFDRR's engagement.
- Half of GFDRR's approved funding for Bangladesh from 2008–2014 was delivered as co-financing. This modality did not take full advantage of GFDRR's technical expertise, nor did it result in influence or leverage.
- GFDRR's technical assistance on urban resilience has directly led to (leveraged) the approval of a \$182 million World Bank investment project.

2.1.1. Bangladesh Context for GFDRR Engagement

Disaster risk context. Bangladesh is one of the most vulnerable countries in the world to cyclones and floods, and is located in a seismically active and high-risk region. Between 1980 and 2000, 60 percent of about 250,000 deaths worldwide from cyclones occurred in Bangladesh.⁶ Disaster mortality, which has been particularly high, has been reduced significantly through investment in coastal resilience. For example, in 1971 over 500,000 individuals were killed by a cyclone and in 1991, over 300,000 were killed. By comparison, Cyclone Sidr in 2007 led to only 3,400 deaths.⁷ Bangladesh is also susceptible to earthquakes. High population density, compounded with rapid and unplanned urbanization, have increased vulnerability to earthquake risk. Recent events, such as the collapse of the Rana Plaza in Dhaka in 2014, serve as a reminder of human-induced urban disasters, and their linkage to structural deficiencies of buildings and infrastructure.⁸

The potential for building collapse intensifies other risks involving earthquakes, fire, as well as heavy rainfall, storms, and strong winds.

Despite remarkable economic growth in recent years, Bangladesh still faces considerable development challenges. Poverty remains prevalent, with 47 million people in poverty and 26 million people in extreme poverty.⁹ Poverty and disaster risk are integrally linked and mutually reinforcing. A 2013 report ranked Bangladesh among the 11 countries most at risk of disaster-induced poverty.¹⁰

Institutional and policy context. Following enactment of the Disaster Management Act of 2012, which outlines the country's legal framework for disaster management, the Department of Disaster Management was set up. The Department coordinates national disaster management interventions across government agencies, including the strengthening and coordination of DRR and

emergency response activities undertaken by various government and non-government institutions.

The National Disaster Management Council and Inter-Ministerial Disaster Management Coordination Committee ensure coordination of disaster-related activities at the national level. At the city level, the Standing Orders on Disaster gives the mandate to City Corporations to lead emergency response within their jurisdictions. City Corporation Disaster Management Committees have responsibilities across the DRM cycle, from risk identification and reduction, to emergency response and recovery.¹¹

Bangladesh has been proactive in mainstreaming DRM into development plans. The priorities of the National Plan for Disaster Management for 2010–15 have been incorporated in high level policy and operational documents. Effective disaster management is one of the sub-goals of the Government of Bangladesh's Vision 2021, while the Bangladesh Perspective Plan for 2010–21, the Sixth Five Year Plan 2011–2015 and the National Sustainable Development Strategy also identify DRR as a priority area.¹²

GFDRR programming. GFDRR has provided nine grants to Bangladesh between 2007 and 2014, totaling \$6.9 million and covering all five of the GFDRR pillars (see Appendix C). GFDRR's engagement has broadly followed two streams. The first stream has been guided by a joint DLNA for Cyclone Sidr that was led by GFDRR and the World Bank. That DLNA identified some priority activities that the World Bank subsequently financed and for which GFDRR provided support, including the World Bank's Emergency 2007 Cyclone Recovery and Restoration Project (ECRRP) (2008–17, \$109 million IDA resources), which GFDRR co-financed, and the Coastal Embankment Improvement Project - Phase I (CEIP-I) (2013–20, \$375 million World Bank and \$25 million Pilot Program for Climate Resilience/PPCR), for which GFDRR is providing technical assistance for the

research component. Since 2011, GFDRR has started to focus on a second agenda on urban resilience, via its Bangladesh Urban Earthquake Resilience Project (BUERP) (Phase I and II). GFDRR has also engaged with its regional thematic programs on Disaster Risk Financing and Insurance (DRFI) and the Open Data for Resilience Initiative (OpenDRI). The figure on next page shows key policy and disaster milestones, GFDRR grants, and related World Bank investments.

2.1.2. GFDRR Results in Bangladesh

GFDRR's modalities in Bangladesh have ranged from analytical studies, to co-financing for ECRRP, to participatory technical assistance. GFDRR's linkages with operations at the World Bank maximized the opportunities to work alongside projects implemented by the World Bank and other development partners. GFDRR's engagement has deepened since the arrival of the focal point in late 2011 and the launch of an urban resilience agenda, while engagement with GFDRR's regional thematic programs helped bring specialized technical expertise and facilitate knowledge exchange.

Outputs. Between 2008 and 2014, GFDRR has successfully delivered nearly all of its planned outputs. These include:

- Analytical studies on disaster reduction and recovery.* Between 2007 and 2010, GFDRR commissioned a series of analytical studies under three separate grants. GFDRR prepared a study that assessed the viability of market-based agricultural insurance in Bangladesh in 2010, but the political context was such that there was no engagement from the Ministries of Finance or Agriculture.¹³ Some other outputs were not successfully delivered. GFDRR's grant to prepare background studies on mainstreaming disaster management into the Bangladeshi social protection programs was dropped in 2010, and the studies were not finalized.¹⁴

¹¹ World Bank. 2015. Urban Resilience Project. Project Appraisal Document. Report No: PAD1023.

¹² Government of Bangladesh. 2015. National progress report on the implementation of the Hyogo Framework for Action (2013–2015). Available at: <http://www.preventionweb.net/english/hyogo/progress/reports/>.

¹³ The report titled "Agricultural Insurance in Bangladesh: Promoting Access to Small and Marginal Farmers" was published in 2010.

¹⁴ The following products were prepared: (i) Improving Bangladesh's Response and Recovery Activities in the Aftermath of Disasters: An Institutional Assessment; (ii) Improving Bangladesh's Response and Recovery Activities in the Aftermath of Disasters: Review of Administrative Systems; (iii) Evaluation of Safety Net Programs for the Disaster Affected People; and (iv) Bangladesh: Local Government Disaster Management-Social Safety Nets (DM-SSNs) Handbook.

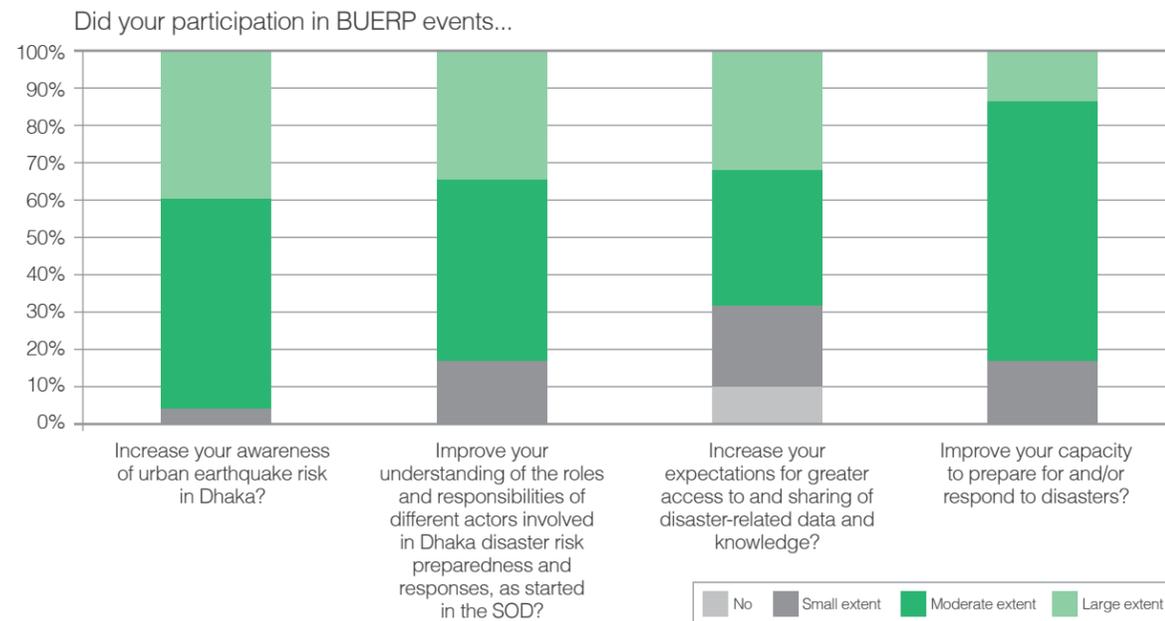
with other funds. About two-thirds of GFDRR's resources were used mainly for the procurement of supplies to support the recovery of the agriculture sector, as well as consultant salaries and NGO contracts. The remaining resources funded the improvement of existing cyclone shelters and raised earthen platforms (*killas*).¹⁹ All cyclone shelters are multi-purpose buildings.

Outcomes and impacts. The evaluation found evidence of intermediate outcomes resulting from most GFDRR activities in Bangladesh.²⁰ Key intermediate outcomes to which GFDRR contributed are the following. Figure 2 below also shows the results of an online survey of BUERP participants conducted by this evaluation, which shows further evidence of intermediate outcomes.²¹

- *Knowledge deepened.* BUERP increased understanding and awareness of earthquake risk and RSLUP among key stakeholders in Dhaka, which was previously low, and as a result of the preparation of foundational documents, increased availability of information about earthquake risk. GFDRR's research activities in support of CEIP-I
- *Client capacity increased.* BUERP increased understanding of roles and responsibilities stated in the Standing Orders on Disaster of the different actors involved in emergency preparedness and response in Dhaka. GFDRR's DaLA training generated support for the formation of the Disaster Needs Assessment Cell that was established in the Department of Disaster Management through ECRRP.
- *Innovative approaches and solutions generated.* BUERP raised awareness on the need for open access to data and information through the preparation of the risk atlas and the creation of the GEODASH platform.
- *Development financing informed.* GFDRR's leverage in Bangladesh has been significant, with GFDRR technical assistance through BUERP directly leading to the development of a now-approved urban resilience investment by the World Bank and the GoB. Moreover, GFDRR's technical assistance helped the GoB realize the need and

facilitated exchange of information on estuarine and coastal morphology and geomorphology.

Figure 2: Results of Participant Survey on BUERP Outcomes



¹⁹ Killas are often used to sequester livestock before residents take refuge in cyclone shelters.

²⁰ No results beyond outputs were identified for the GFDRR grant (\$79,000). "Background Studies for Improving Bangladesh's Response and Recovery Activities in the Aftermath of Disasters." Not all outputs were finalized and the grant was dropped.

²¹ This survey was disseminated to 163 participants in BUERP focus groups workshops, field investigations, high-level fora, Advisory Committee meetings, Scientific Consortium meetings, and the RSLUP training course. Twenty-three participants responded, for a response rate of approximately 14 percent.

value of investing in urban resilience, as furthered evidenced by the GoB's pledged co-financing to URP. GFDRR's engagements also facilitated close coordination and strategic collaboration with JICA on parallel investments in urban resilience (e.g., the World Bank will finance the procurement of search and rescue equipment for Fire Service and Civil Defense, while JICA finances the earthquake retrofitting of fire stations).

The forward-looking nature of the joint DLNA for Cyclone Sidr informed and influenced the preparation of new government and donor development financing by identifying key needs and priorities. More than \$1,600 million has been invested in World Bank projects stemming from the DLNA (see Table 1). In turn, GFDRR has undertaken activities to improve the quality of long-term research under one of those World Bank projects (CEIP-I). GFDRR support for CEIP-1 also helped to investigate the feasibility of World Bank financing of the Dhaka Eastern Embankment cum Bypass Road.

GFDRR's analytical products, prepared for the 2008 UK-Bangladesh Climate Change Conference, contributed to the preparation of the Bangladesh Climate Change Strategy and Action Plan and the concept note for the Bangladesh Climate Change Resilience Fund (BCCRF)—both of which guide donor and government investments in climate change and DRM. The BCCRF was capitalized at \$170 million.

Overall, GFDRR has created conditions that appear likely to contribute to strong outcomes and impacts, particularly in the areas of preparedness and risk reduction. For example, building on GFDRR's critical groundwork, the \$182 million Urban Resilience Project has potential to deliver impacts in the form of increased resilience to earthquakes for the 15.5 million people living in Greater Dhaka and Sylhet, due to access to improved emergency preparedness and response services.

GFDRR's contributions should improve the quality of long-term research under CEIP-I, which has potential to improve the design of risk reduction investments under the project and more broadly in the country and region. CEIP-I is expected to provide direct protection to 760,000 people living within the polder boundaries.²² Other ongoing activities, such as GFDRR's DRFI, show potential for progress toward tangible results,²³ but sustained engagement over the medium-term is needed to ensure that the intermediate outcomes of these activities proceed toward outcomes and impacts.

Some activities have already achieved impacts. The World Bank's executing agencies²⁴ for ECRRP used GFDRR monies in combination with other financing to introduce improved crop cultivation, aquaculture production and livestock rearing practices to cyclone affected communities, and foster new approaches to shelter construction. GFDRR co-financing for ECRRP

Table 1. World Bank Investments with DRM Components Leveraged by GFDRR

World Bank Project	Program / WB Loan Amount (US\$ million)	Implementation Years	GFDRR Leverage
Urban Resilience Project	182/173	2015–20	Through technical assistance
Emergency 2007 Cyclone Recovery and Restoration Project	184/184	2008–17	Through DLNA support
Coastal Embankment Improvement Project – Phase I	400/375	2013–20	
River Bank Improvement Program – Phase I	650/600	2014–23	
Multipurpose Disaster Shelters Project	376.7/375	2014–20	
Total	1792.7/1707		

²² World Bank. 2013. Bangladesh - First Phase of the Coastal Embankment Improvement Project. Washington DC; World Bank.

²³ The agricultural insurance study has picked up attention, and a team is advancing on the preparation of a risk agriculture risk transfer facility. At the same time, the property catastrophe insurance pool is progressing. Both of these will require long gestation periods, and continued GFDRR support, to materialize.

²⁴ The Food and Agriculture Organization (FAO) and Local Government Engineering Department (LGED).

(Component B) fully funded the improvement of 33 existing cyclone shelters in Bagerhat and Barisal districts and partially funded the improvement of 20 existing shelters and 10 *killas* in Barguna and Bhola districts.^{25,26} A draft report suggests that Component A—which GFDRR also co-financed²⁷—reached more than 270,000 beneficiary households and reduced the number of beneficiary households below the poverty threshold by more than 30 percent.²⁸

Enabling and detracting factors for success. GFDRR has been particularly successful in delivering results where it has been able to bring its technical expertise to bear, link to broader initiatives, and capitalize on strong stakeholder support and political demand. This is evident in the work on urban resilience in Dhaka (i.e., through BUERP) where GFDRR can be seen as demonstrating the importance of adopting a participatory approach to increase collective understanding of risk, of identifying linkages with operations at the World Bank and other donors (e.g., JICA), and of seizing the opportunity to garner high-level political support for BUERP after the collapse of Rana Plaza.

In contrast, the DRFI work has experienced slow progress as a result of lack of government interest and demand following the development of GFDRR's agricultural study in 2011. A key challenge is for GFDRR to identify and exploit opportunities where they exist, while still working within the constraints posed by the complex institutional environment. While there was limited reception for GFDRR's agricultural insurance report in 2010, GFDRR is now re-engaging with GoB at the government's request, using the 2010 report as a jumping-off point.

GFDRR has also been successful in identifying strategic entry points for small technical assistance contributions to have a wider impact, e.g., through improving the quality of long-term research under CEIP-I. Deeper technical engagements in sectors such as urban, water, and infrastructure strategically position World Bank task teams to better engage government and international partners to leverage funding going forward (e.g., JICA and GoB on Urban

Resilience, and GoB on Eastern Embankment cum Bypass). The placement of the GFDRR focal point in the World Bank country office is an enabling factor in identifying and pursuing these influence opportunities.

In general, the presence of a GFDRR focal point in-country has been a driver of deeper engagement and conditions for results. The focal point has been able to establish good working relationships and trust with stakeholders, as well as provide a continuity of coordination and expertise to clients and World Bank staff on DRM. It has also allowed GFDRR to maintain its flexibility and ability to manage institutional complexity in Bangladesh. For example, much of GFDRR's success in Dhaka involved working with non-traditional clients other than national government (e.g., the Dhaka Capital Development Authority, known as RAJUK, and City Corporations). In addition, a key contributor to the successful development of the Urban Resilience Project was that GFDRR's technical assistance was co-led by the GFDRR Regional Coordinator for South Asia and the GFDRR focal point for Bangladesh (located in Dhaka), both of whom are World Bank operational staff.

When GFDRR has been less successful in influencing DRM resources in Bangladesh, one hindrance has been the modality with which GFDRR engaged. Half of GFDRR's approved funding for Bangladesh from 2008 to 2014 was delivered as co-financing for ECRRP. Interviews revealed that GFDRR had limited interaction with project proponents after the initial commitment of resources, suggesting that GFDRR did not give direction or have influence in how its co-financing was used. As such, the co-financing modality did not take full advantage of GFDRR's technical expertise, nor did it in this case align with GFDRR's strategies to mainstream DRM into development, to influence policy making and investment at scale, or to develop or test innovative approaches. Since committing to co-financing the ECRRP in 2009, GFDRR engagements have changed strategy to focus on pointed technical assistance, which has shown to provide more strategic leverage in direct areas of need.

²⁵ To put this contribution in context, the entire Component B aims to improve 457 existing cyclone shelters in total, to construct 360 new cyclone shelters, to build 30 *killas*, and construct/re-construct road, bridges, and culverts in nine districts.
²⁶ LGED. 2015. Monthly Progress Report under ECRRP, Reporting Month March 2015. Grant No: TF-093588. Provided by LGED to the Evaluation Team.
²⁷ GFDRR contributed \$1.96 million out of total funding of \$30.96 million for Component A.
²⁸ FAO. 2014. Draft Implementation Completion and Results Report. Recovery of the Agriculture Sector and Improvement Programme under the Emergency 2007 Cyclone Recovery and Restoration Project (ECRRP) (Component A), Project UTF/BGD/040/BGD, Submitted 24 June 2014.

2.2. Eastern Caribbean (Saint Lucia and Dominica)

Key Messages for GFDRR in the Eastern Caribbean

- GFDRR has delivered outputs including analytical products, resources and tools, and related technical assistance for DaLA and PDNA activities, supplied technical and financial assessment work supporting DVRP development, and facilitated regional interactions in the Eastern Caribbean.
- Intermediate outcomes are mainly attributable to national grants, the CHaRIM regional grant, and the PDNA regional grant with a focus on raising awareness, building capacity, and policy support. Of the four other regional grants, there was no evidence that work had commenced in two grants, and for the other two grants, there was no evidence found of process-oriented outcomes resulting from the activities.
- Grants for which GFDRR has utilized its comparative advantages—particularly technical expertise and connection to larger World Bank operations—seem likely to achieve downstream results.
- Low capacity, competing demands for government staff in small island countries, and a lack of sustained engagement are key risks to achieving outcomes and impacts.
- GFDRR technical expertise was influential in the shaping the larger Disaster Vulnerability Programs (DVRP), financed by the World Bank and PPCR (\$68 million in Saint Lucia and \$38 million in Dominica).
- GFDRR has leveraged resources through post-disaster assessment in Saint Lucia.

2.1.1. Eastern Caribbean Context for GFDRR Engagement

Disaster risk context. Saint Lucia and Dominica are mountainous, small island countries in the Eastern Caribbean that are exposed to a range of weather-related hazards, including hurricanes, tropical storms, storm surges, landslides, and flooding, as well as geophysical hazards, such as earthquakes, tsunamis, and volcanic activity.²⁹ Climate change also affects these Caribbean countries, including shifts in precipitation patterns, more intense storms, and rising sea level.³⁰

Saint Lucia has experienced several tropical storms in the recent past, such as Tropical Storm Debbie in 1994, a Tropical Wave in 1996, Hurricane Tomas in 2010, and a low-pressure trough in 2013 (often called the “Christmas Rains”). The 2013 low-pressure trough resulted in economic damages and losses of \$99.8 million, roughly 8.3 percent of the island's GDP.³¹ In 2011, Dominica experienced flooding and landslides from heavy rains which caused \$100 million in damages (20 percent of GDP). Two years later, in December 2013, Dominica experienced intermittent periods of heavy rains (the same tropical depression

system that affected Saint Lucia) leading to an estimated \$20 million in damages.³²

In both countries, a large segment of the population resides along the coastline, leaving infrastructure and people vulnerable to the impacts of hurricanes and tropical storms.³³ In Saint Lucia, much of the infrastructure on the island was not originally designed to be resilient to disasters.³⁴ Two of Dominica's major economic sectors, agriculture and eco-tourism, are closely tied to its natural environment, making the island's economy particularly vulnerable to natural disasters.³⁵

Institutional and policy context. Disaster management in Saint Lucia is governed by the National Hazard Mitigation Policy established in 2003; the National Emergency Management Organization formed in 2006; and the 2007 National Disaster Management Plan. These policies have marked a shift from a reactionary, disaster response approach to a more proactive and comprehensive disaster management perspective. Saint Lucia has made progress in improving national DRM capacity through stronger monitoring and early warning systems, improved

²⁹ World Bank. 2014. Joint Rapid Damage and Needs Assessment: Saint Lucia Flood Event of December 24–25, 2013.
³⁰ Climate Change Knowledge Portal (CCKP). Available at: <http://sdwebx.worldbank.org/climateportal/>.
³¹ World Bank. 2014. Joint Rapid Damage and Needs Assessment: Saint Lucia Flood Event of December 24–25, 2013.
³² World Bank. 2014. Regional Disaster Vulnerability Reduction Program Project III.
³³ Climate Investment Funds. 2011. Strategic Program for Climate Resilience: St. Lucia.
³⁴ World Bank. 2014. Joint Rapid Damage and Needs Assessment: Saint Lucia Flood Event of December 24–25, 2013.
³⁵ World Bank. 2014. Regional Disaster Vulnerability Reduction Program Project III.

emergency preparedness, and increased public awareness and better capacity building for local decision-makers.

In Dominica, DRM programs are governed by the Emergency Powers Act, established in 1951 and revised in 1973 and 1990. In 2006, Dominica developed a National Disaster Plan to guide mitigation and response efforts.³⁶ Disaster management in Dominica is also guided by the National Climate Change Adaptation Policy (2002), National Hurricane Management Plan, Disaster Preparedness Plan for the Agriculture Sector, and Low-Carbon Climate-Resilient Development Strategy.³⁷

Both Dominica and Saint Lucia also participate in regional efforts related to natural hazard management. Most relevant for GFDRR has been Saint Lucia and Dominica's participation in a Caribbean regional program under the Pilot Program for Climate Resilience (PPCR), one of the funding windows of the Climate Investment Funds (CIF).

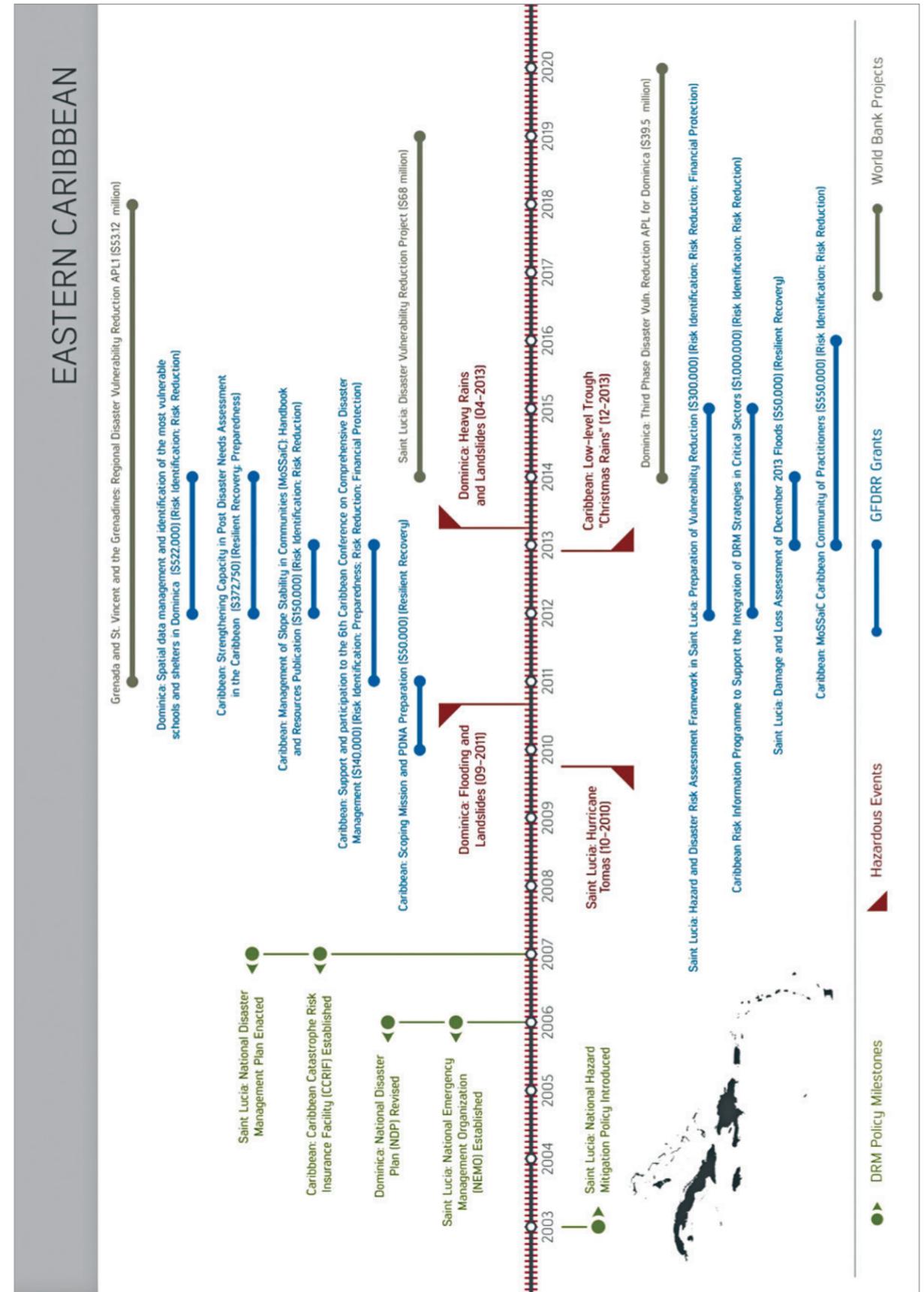
GFDRR programming. GFDRR provides both regional grants and country-specific grants to the Eastern Caribbean. Eight regional grants have been approved since 2008 totaling about \$3.5 million, of which six have involved Saint Lucia and Dominica (\$2.6 million). Four country grants have been approved for a total of \$922,000, two of which were implemented in Saint Lucia (\$350,000) and one in Dominica (\$522,000). While grants have covered all five GFDRR pillars, the large majority of funding has been directed at risk identification and reduction; about 10 percent has been allocated for resilient recovery—post-disaster needs assessment (PDNA) preparation and associated capacity building.

Country-specific grants have focused on supporting targeted technical assistance alongside the development of the countries' PPCR and IDA-funded Disaster Vulnerability Reduction Programs (DVRPs), as well as post-disaster assessments. GFDRR's Open Data Initiative has also been engaged. Regional grants have supported multi-country participation in conferences, networks, trainings, and the development of technical products. The figure on next page shows key policy milestones and disaster events, GFDRR grants, and related World Bank investment programs.

2.2.2. GFDRR Results in Saint Lucia and Dominica

Outputs. Between 2009 and 2014, GFDRR has delivered analytical products, resources and tools, and related technical assistance, as well as facilitated regional interactions in the Eastern Caribbean. Outputs include:

- Analytical products.** These include a PDNA and an assessment of World Bank financed DRM projects in Saint Lucia in the aftermath of Hurricane Tomas, as well as a Joint Rapid Damage and Needs Assessment (JRDNA) following the 2013 Christmas Rains, also in Saint Lucia. GFDRR also conducted a national-level flood hazard assessment, which is currently being refined. In addition, GFDRR supported the development and implementation of surveys and field manuals related to climate change adaptation, building code compliance, and domestic housing structural needs. This work is designed to understand improvements that could benefit from a micro-finance approach through the Climate Adaptation Finance Facility (CAFF)—a credit line component of Saint Lucia's DVRP. In Dominica, GFDRR supported shelter assessment work as part of the planning process for the DVRP.
- Resources and ICT tools to improve the availability and use of hazard and risk information in decision-making.** A regional GFDRR grant (Caribbean Handbook on Risk Information Management/CHaRIM) supported the development of a methodological framework for the generation and application of landslide and flood hazard maps, case studies and hazard maps using this framework, and an on-line handbook with resources and tools for producing and using hazard information for decision-making. In Dominica, GFDRR supported the development of spatial data infrastructure ("Dominode"), which is intended to be used to compile and coordinate geospatial information across ministries. In Saint Lucia, a GFDRR grant funded the development of a hazard information database. These activities are interlinked with spatial data policy development processes in both countries, where legislation and associated policies are in the process of being approved.



³⁶ World Bank. 2014. Regional Disaster Vulnerability Reduction Program Project III.
³⁷ GFDRR. 2013. ACP-EU for Disaster Reduction and Recovery (DRR) – Window 2 Proposal.

- **Capacity building.** GFDRR has provided support for capacity building alongside the development of most of its analytical products, resources, and tools. GFDRR supported training on a DaLA methodology for 33 participants in Saint Lucia following the 2013 Christmas Rains. Saint Lucian experts attended technical training on the flood hazard assessment. GFDRR grants funded capacity building for government ministries and academia around the development, implementation, and analysis of household and business community surveys. In Dominica, GFDRR supported training and technical assistance on the use and sharing of spatial data management platforms (Dominode). For CHaRIM, GFDRR supported workshops and trainings to build capacity and regional collaboration in the application of the methodological framework for risk identification.
- **Outreach materials.** GFDRRR funded publication of The Management of Slope Stability in Communities (MoSSaiC) Handbook through World Bank Publications.^{38,39}
- **Conference participation.** GFDRR supported physical planning participants and organized a session on donor coordination and outreach in the 6th Caribbean Conference on Comprehensive Disaster Management.

For four of the nine grant proposals reviewed, some outputs are not yet completed, due partly to project delays. In Saint Lucia, the focus of the vulnerability assessment activity was narrowed in 2014 to the housing sector to identify resilience-building actions that would be eligible for financing from the Climate Adaptation Finance Facility (CAFF). This activity, executed in partnership with Sir Arthur Lewis Community College, is expected to be completed in August 2015. A case study for watershed management in Bois d'Orange has been postponed to late 2015.

Under a regional grant, the publication of the MoSSaiC Handbook reportedly consumed more resources than anticipated, and thus, other planned activities were not able to be completed.⁴⁰ These

foregone activities have been rolled into the MoSSaiC Community of Practitioners grant and are currently being completed. The funds for this third grant (the MoSSaiC Caribbean Community of Practitioners) were approved in 2013, but delays related to deployment of the web-based tools and learning platform have meant that trainings are now scheduled to begin in August 2015 with six priority countries identified: Belize, Dominica, Grenada, Jamaica, Saint Lucia, and Saint Vincent & the Grenadines.

Similarly, for another regional grant aimed at strengthened PDNA capacity (implemented by UNDP), although the project became effective in June 2013, delays in establishing the legal frameworks and staffing changes meant that PDNA workshops did not commence until July 2014 (first regional workshop in Barbados). The first country workshop for 47 participants took place in July 2015, with four additional country workshops scheduled for the third quarter of 2015 (the Saint Lucia workshop is scheduled for September 2015).

Outcomes and impacts. In the Eastern Caribbean, intermediate outcomes have primarily been associated with the national grants, the CHaRIM regional grant, and the PDNA regional grant. For the remaining regional grants, the evaluation team did not observe any intermediate outcomes achieved; for two grants, strengthening PDNA capacity and the MoSSaiC Caribbean Community of Practitioners, delays have meant that activities are just commencing, and any outcomes will accrue outside the timeframe of this evaluation,⁴¹ and for the other two grants, there was no evidence found of process-oriented outcomes resulting from the grant activities.⁴² Key intermediate outcomes to which GFDRR contributed are:

- **Knowledge deepened.** In Saint Lucia, capacity and understanding associated with micro-finance initiatives to support the CAFF has been improved. In Dominica, GFDRR facilitated exchange of knowledge related to building standards for shelters and raised awareness on open source information sharing platforms and their use in Dominica. There is a greater understanding among

ministries and better availability of information about landslide and flood hazards that has come from GFDRR support in both Dominica and Saint Lucia.

- **Client capacity increased.** In Dominica, GFDRR revised and streamlined the approach for seasonal assessment of shelters to better account for vulnerability and increased the capacity of Government of Dominica to use the approach. GFDRR's technical assistance also improved the capacity of the Government of Dominica to design resilient shelters and identify and retrofit vulnerable shelters, as well as to collect, harmonize, store, and share geospatial data. There is limited evidence that support for PDNA and JDRNA activities and associated analytical products have increased capacity within ministries, with a few individuals gaining improved capacity for DRM planning and implementation.
- **Innovative approaches and solutions generated.** Support for the Dominode platform has led to a nascent community of practice around using geospatial information in decision-making, and there is interest in using the technology platform more widely.
- **Development financing informed.** GFDRR has leveraged resources through post-disaster assessment in Saint Lucia; no evidence of direct leverage was found in Dominica. In Saint Lucia, GFDRR support for the disaster assessment after Hurricane Tomas in 2010 and for the JRDNA following the 2013 Christmas Rains contributed to leveraging recovery and reconstruction funds.

These funds include \$15 million in IDA resources, \$17 million in emergency response resources from the World Bank's Crisis Response Window (part of the DVRP), and \$10 million in reconstruction support from the European Union (managed by the World Bank). In the context of a small island country like Saint Lucia, this amount of funding is significant.

GFDRR activities have influenced the DVRPs in both Saint Lucia and Dominica, as shown in Table 2 below. In Saint Lucia, a number of recommendations from the above-mentioned JRDNA are now funded under the DVRP. GFDRR support for household and structural assessment surveys should also inform the design of the CAFF, which will be implemented under the DVRP. In Dominica, GFDRR support for spatial data management and sharing platform and a shelter vulnerability assessment helped to inform development of the DVRP. GFDRR's development of the basic structure of the GeoNode and collection of existing information into a common platform will form the foundation for this DVRP component. The second component, the shelter assessment, was originally planned to be included in the DVRP, but was ultimately de-prioritized. The work established improvements in the assessment process and created geo-positioning information for shelters and a data base. Based on the GFDRR-supported work, the Government of Dominica is pursuing financing through other donors.

- **Policy/strategy informed.** GFDRR supported the development of an information sharing policy in Dominica.

Table 2. World Bank Investments with DRM Components Influenced by GFDRR

World Bank Project	Program / WB Loan Amount (US\$ million)	Implementation Years	GFDRR Influence
Hurricane Tomas Emergency Recovery Project – Saint Lucia	10	2011–2014	The reconstruction priorities identified in the Post-Tomas Damage Assessment influenced all components of the HTERP.
DVRP – Saint Lucia	68/24	2014–2019	The priorities identified in the JRDNA influenced several components of the DVRP, as well as the majority of the proposed AF DVRP activities.
Planned Additional Financing DVRP – Saint Lucia	11.5/10	2015–2019	
DVRP – Dominica	38/17	2015–2020	Spatial data-management and -sharing for decision-making included in the DVRP.

³⁸ World Holcombe, E.A., S. Smith, E. Wright, M.G. Anderson (in press). An integrated approach for evaluating the effectiveness of landslide hazard reduction in vulnerable communities in the Caribbean. Natural Hazards. DOI: 10.1007/s11069-011-9920-7.

³⁹ The MoSSaiC approach was developed by researchers from the University of Bristol, and was first funded by USAID, which also supported pilot activities in Saint Lucia. None of the communities that had MoSSaiC interventions before Hurricane Tomas experienced landslides.

⁴⁰ Including a Spanish version of manuscript, CHASM software, E-course, and MoSSaiC Wiki / Manage 'Mini Manual' / Community leaflets and posts.

⁴¹ MoSSaiC Caribbean Community Practitioners (\$550,000) and Strengthening Capacity in Post Disaster Needs Assessment in the Caribbean (\$373,000).

⁴² Support and Participation in the 6th Caribbean Conference on Comprehensive Disaster Management (\$110,000); and Management of Slope Stability in Communities (MoSSaiC): Handbook and Resources Publication (\$150,000).

Grants for which GFDRR has utilized its comparative advantages—particularly technical expertise and connection to larger World Bank operations—seem likely to achieve downstream results. These include primarily the national grants designed to inform and influence larger-scale DVRP investments. In particular, the technical expertise that GFDRR provided to the World Bank was influential in the shaping of the DVRP in both countries. The DVRPs represent significantly more resources than either country has had to address DRR previously (\$68 million in Saint Lucia, and \$38 million in Dominica, including both PPCR and World Bank financing). With planned follow-on funding from the EU in the amount of \$10M to be managed by the World Bank in support of further activities under the DVRP in Saint Lucia.

Saint Lucia's DVRP is anticipated to directly benefit 169,000 people, reduce the vulnerability of eight schools, health centers, and emergency shelters to landslides, flooding, and other climate-related events, and reduce the number of days of interrupted traffic due to these events from 20 to five.⁴³ Dominica's DVRP is expected to benefit the entire population of Dominica (71,680), reduce the number of days of interrupted traffic due to landslides, flooding, and other climate-related events from 30 to 7, and provide 3,000 households with uninterrupted water service in the event of a natural disaster. Successful operation of a spatial data management platform, early warning systems, and data collection/management infrastructure should also allow Dominica to improve decision-making.⁴⁴

Enabling and detracting factors for success. GFDRR interventions have been successful when technical expertise and advisory support services have informed larger World Bank operations. In particular,

technical advice during PDNA and JDRNA activities in Saint Lucia have helped to influence the larger scale DVRPs. Similarly, the Dominode and shelter assessment support in Dominica improved the planning process for DVRP development. For both countries the DVRPs represent significantly more funding for DRM informed activities in these small island states.

Low capacity, competing demands for government staff in small island countries, and a lack of sustained engagement are key risks to achieving outcomes and impacts. GFDRR's Dominode support offers an example. With the completion of GFDRR's short-term consultant's contract, individuals in ministries and institutions were trained to use the software, a nascent community of practice was established, and available data sets were uploaded to the server. Data sets continue to be created, but there is insufficient ability to effectively use the information for planning purposes.⁴⁵ With ongoing technical assistance, policy dialogue, and outreach support, Dominode can be an effective tool for informed decision-making.

Regional initiatives have been particularly inhibited by lack of institutional and staff capacity, and a perceived lack of incentives to disseminate regional knowledge. For regional events, the evaluation team found no evidence of knowledge transfer from regional grant participants to the larger country context, and because the number of stakeholders participating in regional events are limited (e.g., two per country for CHaRIM), there is risk of knowledge being lost in the event of staff turnover or a failure of trained staff to pass on knowledge. GFDRR can play a role moving forward to ensure that this capacity is not lost by providing additional support.

⁴³ World Bank. 2014. Saint Lucia - Disaster Vulnerability Reduction Project. Washington, DC; World Bank Group. Available at: <http://documents.worldbank.org/curated/en/2014/05/19627898/saint-lucia-disaster-vulnerability-reduction-project>.

⁴⁴ World Bank. 2014. Dominica - Third Phase of the Eastern Caribbean Regional Disaster Vulnerability Reduction Program Project. Washington DC; World Bank Group. Available at: <http://documents.worldbank.org/curated/en/2014/04/19393604/dominica-third-phase-eastern-caribbean-regional-disaster-vulnerability-reduction-program-project>.

⁴⁵ For instance, the interim server has been repurposed for its intended use and a newly acquired server has not been put on line (as of the time of the field visit in early April 2015). Further code development and LINUX work is needed to fully operationalize the system. Stakeholders also reported that additional training for personnel on the application and use of the system and data development is needed, as well as outreach to decision-makers to create greater ownership.

2.3. Ethiopia

Key Messages for GFDRR in Ethiopia

- GFDRR has delivered many intended outputs, including trainings and support for technical assistance and capacity building at the national, regional, and local (woreda) level. GFDRR support for DRM-related information systems; training for PDNA, the LEAP model, and Woreda-net; pilot scale DRM at the woreda level; and advisory services to the Government of Ethiopia (GoE) for DRM policy development have been delivered.
- Intermediate outcomes were achieved in the areas of improved availability and dissemination of disaster risk information for Woreda Disaster Risk Profiles (WDRPs) and the LEAP model. Piloting of woreda-level DRM and new applications of the LEAP model to better connect and inform Ethiopia's early warning system (EWS) and help GoE make better decisions were successful, but further follow up is needed.
- A few GFDRR activities show evidence of contributing to longer-term outcomes and impacts, and are aligned with national initiatives and priorities: improving EWSs (through upgrading the LEAP model and to a lesser degree weather reporting), supporting woreda-level disaster risk identification, reduction, and preparedness through WDRP, and providing technical assistance to operationalize the DRM- SPIF.
- The World Bank Productive Safety Nets Program (PSNP) has been strengthened by GFDRR contributions as activities supported by earlier GFDRR grants (LEAP and WDRPs and connectivity) are now a component of the most recent PSNP IV, with an allocation of \$32 million for DRM.

2.3.1. Ethiopia Context for GFDRR Engagement

Disaster risk context. Ethiopia is exposed to numerous natural hazards, including droughts, prolonged food insecurity, floods, fires, landslides, and earthquakes. The country's most significant and recurring natural hazard is drought. In 2003, one of Ethiopia's harshest droughts affected more than 12 million people. Downstream impacts of drought include diminished availability of water, degradation of land, reduced availability of pastureland, and diseases for livestock. These impacts further stress rural populations as they lead to decreased productivity of livestock and crops, food insecurity, scarce natural resources, limitation of economic growth, and malnutrition, stunting, and morbidity among human populations. This is particularly true for the majority of Ethiopia's population that reside in rural drought-prone, pastoral, and agro-pastoral societies.^{46,47}

Flooding is also a growing concern in Ethiopia. Flash floods and seasonal river floods are becoming more frequent and widespread due to both natural and human-induced factors, including more significant climate variability, land degradation and deforestation, and larger and denser human settlements. Major floods have resulted in significant loss of life and

property damage in Ethiopia and have been particularly harmful for urban residents.

Institutional and policy context. In 1993, the GoE adopted its first DRM policy, the National Policy on Disaster Prevention and Management. The policy's main purpose was to link relief assistance with development efforts in order to mitigate the impacts of disasters and to enhance the coping capacities of the affected population. Disaster management through the second millennium was focused primarily on responding to drought emergencies.^{48,49}

The year 2007 marked a paradigm shift as Ethiopia's approach to DRM moved away from relief-focused efforts to a more proactive, multi-sectoral, and multi-hazard approach. While Ethiopia has had a disaster management institution in the GoE since the mid-1970s, in 2007, this institution was restructured as the Disaster Risk Management and Food Security Sector (DRMFSS) and placed under the Ministry of Agriculture and Rural Development.^{50,51}

The new DRMFSS spearheaded an updated National Policy and Strategy on Disaster Risk Management (NPSDRM). Approved in July 2013, the NPSDRM introduces a new institutional arrangement for the

⁴⁶ Climate Change Knowledge Portal. Ethiopia Dashboard, Natural Hazards. Available at: http://sdwebx.worldbank.org/climateportal/home.cfm?page=country_profile&CCode=ETH&ThisTab=NaturalHazards.

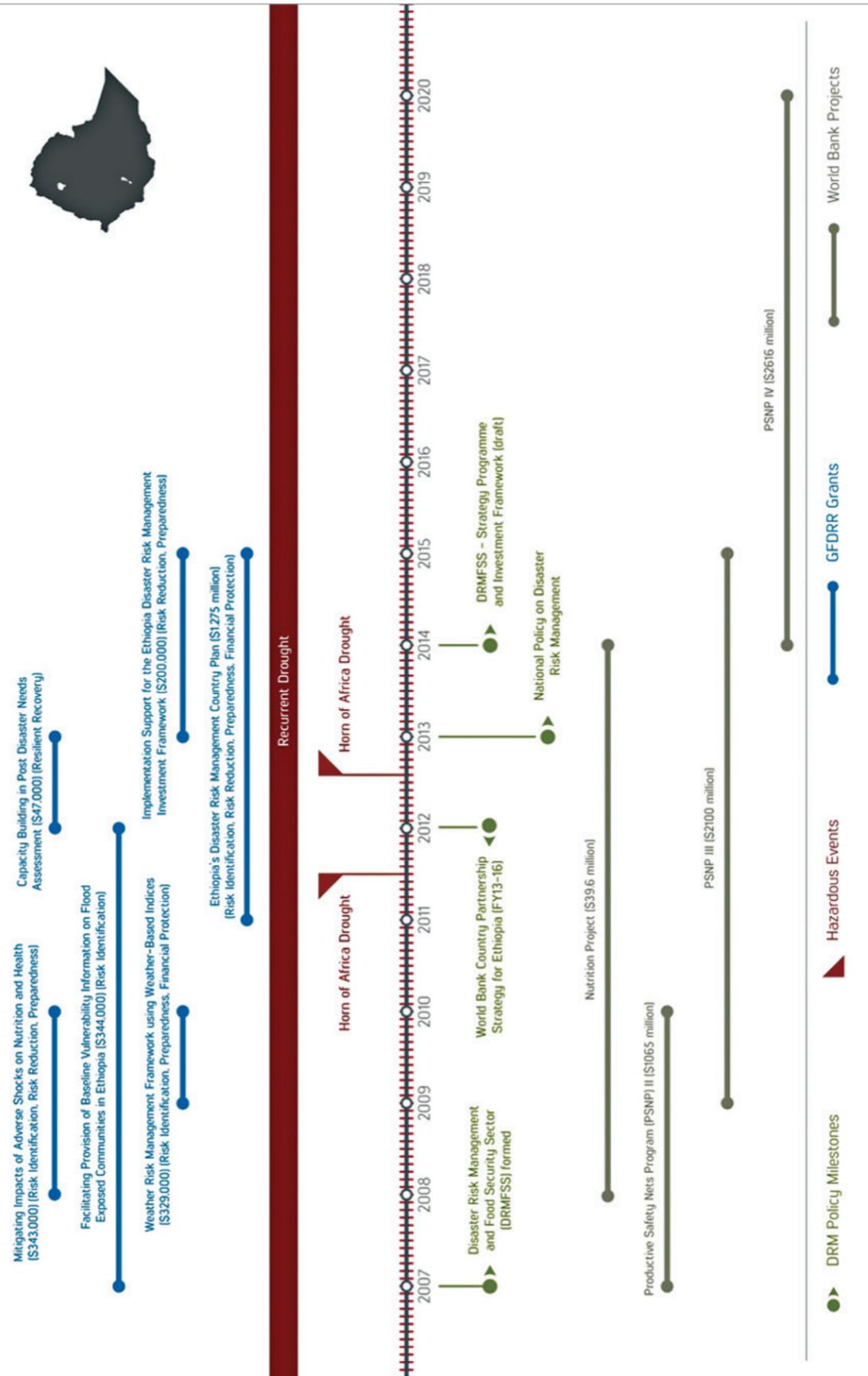
⁴⁷ GFDRR. May 2014. Country Program Update. Available at: <https://www.GFDRR.org/sites/GFDRR/files/region/ET.pdf>.

⁴⁸ Track 2 Proposal. Ethiopia – Disaster Risk Management Country Plan.

⁴⁹ International Federation of Red Cross Red Crescent Societies, 2013. Ethiopia: Country Case Study Report – How Law and Regulation Supports Disaster Risk Reduction.

⁵⁰ Track 2 Proposal. Ethiopia – Disaster Risk Management Country Plan.

⁵¹ International Federation of Red Cross Red Crescent Societies, 2013. Ethiopia: Country Case Study Report – How Law and Regulation Supports Disaster Risk Reduction.



organization, coordination, and implementation of DRM activities in Ethiopia. The Disaster Risk Management Strategic Programme and Investment Framework (DRM-SPIF) was created as a complement to and implementation framework for the NPSDRM. DRM-SPIF identifies priority investment areas and estimates associated financing needs.⁵²

GFDRR programming. GFDRR has funded six grants in Ethiopia over the period 2007 to 2014, totaling \$2.5 million and covering all five of GFDRR's pillars. About half of that funding has gone toward support for Ethiopia's Disaster Risk Management Country Plan, which has involved piloting risk identification, reduction, and preparedness activities at the *woreda* (i.e., district) level.

In general, GFDRR's activities in Ethiopia have focused on drought preparedness and response and ensuring food security and have been closely linked with World Bank programs (including the Productive Safety Nets Program/PSNP, which is one of the most significant development programs in Ethiopia and in its fourth stage). The figure below shows the timing of key policy milestones and disaster events, GFDRR grants, and related World Bank investment programs.

2.3.2. GFDRR Results in Ethiopia

Outputs. Between 2007 and 2014, GFDRR has successfully delivered a wide range of outputs in Ethiopia at both the local and national levels. These include:

- *Pilot-scale support for woreda-level DRM.* GFDRR supported pilot activities focused on improving disaster risk identification, mitigation, and preparedness at the local level, in 35 *woredas* as described above.
- *Systems to improve the timeliness and effectiveness of risk information.* A number of GFDRR's grants supported the development, improvement, and application of DRM-related information systems. The DRM Country Plan grant supported development of Woreda-net, a digital interactive database of all related information that has improved the connectivity and information exchange between *woreda*-level government and the regional and national levels. GFDRR has also

supported linking a nutritional information system and the EWS in Ethiopia and improved the use and linkage of the LEAP model to Ethiopia's EWS.

- *Advisory services and analytical products to bolster DRM in Ethiopia.* GFDRR has supported a number of technical experts to provide advisory services and capacity-building efforts to the GoE and its partners. GFDRR has advised on the development of a new DRM policy and the DRM-SPIF. GFDRR is also providing ongoing technical assistance as the GoE begins to operationalize the policy and DRM-SPIF.
- *Training and technical assistance at the woreda and national level.* To support many of the activities described above, GFDRR has also provided trainings and targeted technical assistance. GFDRR has provided training for over 100 GoE staff at national and regional levels in using the LEAP model. GFDRR has also provided training at both the national and *woreda* level to produce the Woreda Disaster Risk Profiles (WDRPs), contingency plans, and DRM/Adaptation Plans, and for the ongoing use of Woreda-net. GFDRR also conducted a PDNA training and field application course for 66 participants from major federal, regional, and *woreda* government agencies and experts from other development agencies, although lack of follow-up means there is a risk of erosion of the capacity gained through the PDNA training.
- *Facilitation of learning.* GFDRR has also supported peer learning through two overseas study tours for 14 participants on early warning systems and through a south-to-south knowledge exchange with Turkey on DRM reform policies and strategies. Follow up to ensure that capacity and learning are maintained and expanded is critical here, as well.

Outcomes and impacts. In Ethiopia, the evaluation found evidence that the results from GFDRR activities went beyond the output level to achieve intermediate outcomes in three of six grants, with two showing lesser success generating intermediate outcomes (nutrition mapping, weather risk management framework). For one of the grants, related to providing baseline vulnerability information on flood exposed communities in Ethiopia, there was limited recollection

⁵² Disaster Risk Management and Food Security Sector, Ministry of Agriculture in Ethiopia. Disaster Risk Management Strategic Programme and Investment Framework

in the field, although the project completion report for this grant identifies actions that set the stage for later *woreda* risk profiling and support for the DRM-SPIF.⁵³ Key intermediate outcomes to which GFDRR has contributed are:

- *Knowledge deepened.* GFDRR activities raised awareness among *woredas* participating in the DRM Country Plan as local citizens participated in the process to gather, assess, and synthesize risk information in the WDRP; develop scenarios and thresholds for the contingency plans; and brainstorm and prioritize DRM and adaptation measures that will reduce local disaster risk.
GFDRR activities have also contributed to greater availability and improved dissemination of disaster risk information. For example, the development of the WDRPs made more disaster information available. Furthermore, dissemination of disaster risk information became more timely and hence, more readily available for decision-making through activities associated with the WDRP and the LEAP model. Communication and dissemination of information has been improved through Woreda-net, although there are challenges associated with the technology (e.g., Internet outages, power losses, and slow connections) and maintenance (e.g., availability of replacement parts, and access to trained technicians).
- *Client capacity increased.* GFDRR has contributed to strengthening the capacity of Ethiopian national and local institutions for: identification of key disaster risks and enabling conditions through the development of the WDRP; understanding ways to reduce critical disaster risk through the development of DRM/Adaptation Plans at the *woreda* level; preparation for disasters through development of contingency plans at the *woreda* level; improved communication through Woreda-net; and the potential to trigger contingency funds through risk information, including outputs of the LEAP model. Also, linking early warning information with nutrition information has helped the GoE to improve the timing and response to malnutrition.
- *Innovative approaches and solutions generated.* GFDRR supported development of new

applications of the LEAP model to better connect and inform Ethiopia's EWS and help GoE make better decisions. GFDRR also supported the exchange of these approaches and tools through study tours and south-to-south knowledge exchange, which established dialogue and created a structure for developing communities of practice.

- *Development financing informed.* GFDRR has contributed to the inclusion of approximately \$32 million of DRM components in Productive Safety Net Program IV (PSNP IV, \$2,616 million; \$600 million World Bank, 2010–2014). PSNP IV includes \$9 million for the development of WDRP and DRR and contingency plans in PSNP *woredas*; these products will be linked to other program components to support long-term risk reduction. PSNP-IV also includes \$20 million to strengthen Ethiopia's EWS, including integrating the LEAP model—which GFDRR helped refine and socialize—with other components into a dynamic platform.⁵⁴

In addition, the GoE-led DRM-SPIF—which GFDRR is helping to operationalize—has identified multi-billion dollar investments in DRM in the coming 20 years and has potential to leverage substantial donor and government investment.

- *Policy/strategy informed.* The partnership between the World Bank and GFDRR in Ethiopia—using GFDRR's strategic grants and the World Bank's local presence, convening power, and access to national ministries (World Bank is considered an influential and trusted advisor within GoE)—has helped facilitate a transition in the policy dialogue and programmatic priorities toward risk reduction and preparedness. This is clearly demonstrated by the shift in mandate of DRM-FSS, NPS-DRM, and DRM-SPIF to focus on DRM. GFDRR activities have supported this shift, including through the provision of advisory services on the development of the national DRM policy. As another example, the GoE has fully integrated the LEAP model and nutrition information into the country's EWS in part due to development of LEAP and the Nutrition Information System through GFDRR's grants.

Some GFDRR activities show potential for contributing to longer-term outcomes and impacts, and a few

activities already show evidence of these results. In particular, GFDRR activities that are aligned with national initiatives and priorities—such as improving EWS (through upgrading the LEAP model and weather reporting), supporting *woreda*-level disaster risk identification, reduction, and preparedness, and providing technical assistance to operationalize the DRM-SPIF—seem more likely to achieve downstream results. Moving forward, continued institutional strengthening, capacity building, and technical assistance through GFDRR interventions will be needed to ensure sustainability of outcomes and results generation. At the *woreda* level, maintaining avenues for, and actively supporting, collaboration, including funding for networking and identifying/supporting champions, could help ensure long-term success.

PSNP-IV has potential to achieve positive DRM outcomes and impacts, due in part to GFDRR's contributions vis-à-vis the DRM components. PSNP-IV anticipates achieving two major DRM benefits: (1) a reduction in drought and flood impacts and losses following effective early warning and triggers of the response system, estimated at roughly \$30–\$50 million per year; and (2) long-term risk reduction through development of risk profiles and risk reduction plans that will inform public works, with national benefits estimated at roughly \$250 million per year (assuming a 50 percent risk reduction rate).⁵⁵

Evidence from desk review and interviews suggests that a few GFDRR activities have achieved concrete outcomes. The WDRP has led to capacity built at the *woreda* level through training and development of Disaster Risk Profiles, contingency plans, and DRM/Adaptation Plans. The activities piloted by the World Bank are now being picked up for other *woredas* through other funding mechanisms. GFDRR's work in collaboration with UNICEF on nutrition and health has helped to improve the generation and collection of malnutrition information and strengthened the application of this information within Ethiopia's early warning system. In certain priority 1 hotspot *woredas*, the linkage between malnutrition information through the Nutrition Information System and the EWS has enhanced the capacity of Ethiopia's EWS to understand how health information correlates with DRM.

GFDRR's work on the LEAP model, in conjunction with the range of other partners supporting the refinement and development of the tool, has increased the accuracy and timeliness of early warning information, especially as it relates to drought by collecting and tracking precipitation and crop yield data. Improvements in the LEAP model have also helped to make decisions related to response measures and distribution of resources more transparent and objective.

In order for these activities to be fully effective, however, more work needs to be done to push these outputs and activities toward sustainable outcomes and ultimately toward impacts. More support is required to operationalize the DRM-SPIF with a focus on mainstreaming and using the DRM outputs produced under these grants for effective and long-term decision-making. This includes using risk information and DRM/adaptation priorities in longer-term development and financial planning. Supporting the further development of a more direct and transparent connection between early warning information, contingency plans, and the actual triggering of the contingency fund would also likely lead to strengthened response and resilience to natural disasters, and importantly improve decision makers' trust in the systems and reliability of information.

Enabling and detracting factors for success. The evolving social protection agenda in Ethiopia, moving from a reactive emergency response approach to a more pro-active resilience and preparedness approach, as championed by the GoE, allowed GFDRR an entry point to influence development of robust DRM approaches. GFDRR's influence and its relationship to the World Bank and hence, access to larger-scale World Bank programs—most notably PSNP IV—has enabled replication of GFDRR's innovative pilot activities, and offers opportunities for achieving results at-scale. This influence was significantly streamlined and reinforced by having the same Task Team Leader (TTL) for the GFDRR grant and the PSNP, facilitating the process of informing the investment project through grant activities in a harmonized fashion.

⁵³ For the grant related to facilitating provision of baseline vulnerability information on flood exposed communities in Ethiopia, some documentation was unavailable from GFDRR, and the evaluation team was unable to make contact with the World Bank Task Team Leader despite several attempts. Interviewees in the field had little recollection of the grant activity or the executing entity.

⁵⁴ World Bank, 2014. Project Appraisal Document – Productive Safety Nets Project 4. Available at: http://www-wds.worldbank.org/external/default/WDSContentServer/WDS/IB/2014/09/11/00470435_20140911143122/Rendered/PDF/PAD10220PAD0P1010Box385319B00U0090.pdf.

⁵⁵ World Bank, 2014. Project Appraisal Document – Productive Safety Nets Project 4. Available at: http://www-wds.worldbank.org/external/default/WDSContentServer/WDS/IB/2014/09/11/00470435_20140911143122/Rendered/PDF/PAD10220PAD0P1010Box385319B00U0090.pdf.

The PSNP began to form a connection with DRM processes as early as 2007, under PSNP II, evidenced by its relationship with the DRMFSS, whose Food Security Coordination Directorate is in charge of coordinating food delivery, monitoring, and household asset building aspects of PSNP.^{56,57} Under PSNP III, which was launched in 2009, there was a specific call to use the LEAP model as an early warning indicator. By 2014, PSNP IV allocated a portion of its funds for DRM-focused activities. GFDRR's contribution to this evolution has been through support for strategic initiatives that advance a specific activity or test a concept that can help push the DRM policy dialogue forward. The World Bank has used the verified results of the tested activities or concepts to demonstrate the benefit and importance to the GoE. Used in this way, GFDRR grants have significantly informed the design of PSNP IV.

In particular, GFDRR grants in Ethiopia have been used to test and demonstrate the value of specific DRM approaches that encourage uptake by DRMFSS and the broader development community. For example, GFDRR supported further refinement and expansion of the Livelihood Early Assessment and Protection (LEAP) model, which is used by a diverse set of Ethiopian stakeholders to encourage

preparedness and trigger contingency financing under adverse conditions. This is a departure from the previous approach that was more reactive and often at a point further along the livelihood-survival continuum than desirable.

Another useful approach has been to kick-start or pilot particular DRM activities that support larger initiatives at scale. For example, GFDRR supported the piloting of 35 WDRPs, contingency plans, and DRM/Adaptation Plans, and the Woreda-net (a connectivity platform), along with associated training and outreach resources. These activities have since been replicated in a number of other districts.

A lack of readiness for GFDRR-piloted technologies is a key challenge in Ethiopia. The Woreda-net program was set up to address part of this challenge (i.e., getting timely and accurate data into a structured data system), but only a handful of *woredas* (out of more than 700) are online, and software and hardware troubles can mean that data from a particular *woreda* are missing for months at a time. Longer-term support (including training and technology and hardware infrastructure support) are needed to ensure that systems are usable.

2.4. Indonesia

Key Messages for GFDRR in Indonesia

- GFDRR has successfully delivered a wide range of outputs in Indonesia at the national and subnational levels, including: analytical studies at national and local levels; advisory services and analytical products to mainstream DRR into World Bank investments; development of a tool for contingency planning; DRM capacity building and knowledge management support; pilot-scale support for resilient recovery, risk identification, and safe schools; and facilitation and dialogue at the national level.
- All activities to which GFDRR has contributed in Indonesia are achieving valuable results beyond the expected outputs. Key process outcomes include: innovative approaches and tools developed and demonstrated; policy dialogue strengthened; institutional capacity of government and civil society for DRR, preparedness, and resilient recovery strengthened; greater availability of disaster risk information; awareness raised; and DRM mainstreamed into development planning and investments.
- Many activities show potential for progress toward tangible results, but additional action is needed to ensure that the intermediate outcomes of these activities proceed toward outcomes and impacts—and that they do so at-scale. This is particularly true for GFDRR's pilot efforts.
- GFDRR activities have leveraged DRM funding in Indonesia on a pilot scale, and have influenced DRM resource allocations by donors (notably \$632 million of World Bank investment programs) and national and local government departments.
- GFDRR's strategy in Indonesia offers a strong opportunity for achieving downstream outcomes and impacts at-scale by engaging at the national level, leveraging and building relationships with key ministries via the World Bank, and using existing project mechanisms and institutional structures.

2.4.1. Indonesia Context for GFDRR Engagement

Disaster risk context. Located in the Pacific “Ring of Fire,” Indonesia is the world's largest archipelago with more than 17,000 islands and a population of nearly 250 million. Indonesia is consistently ranked among the most disaster-prone countries in the world.⁵⁸ The country is prone to both geologic and hydro-meteorological hazards. Volcanic activity, earthquakes, tsunamis, floods, landslides, droughts, and forest fires frequently occur in Indonesia. Since 1900, more than 400 natural disasters have resulted in more than 263,000 deaths and affected nearly 30 million people.⁵⁹ Over the past two decades, ten natural disasters (floods, earthquakes, tsunamis, and wildfires) have resulted in post-disaster costs of over \$24 billion.⁶⁰ Changes in climate are expected to exacerbate existing hazards. Indonesia is highly vulnerable to climate stressors such as changing weather patterns and rising sea levels. Socioeconomic dynamics also contribute to vulnerability. Indonesia ranks 108 (medium development) out of 187 countries in the Human Development Index, and 11.4 percent of people live below the country's poverty line.⁶¹ More than

half of the population lives in urban areas, primarily located in coastal zones, exposed to hazards such as earthquakes, tsunamis, and flooding.

Institutional and policy context. Following the 2004 Indian Ocean Tsunami, Indonesia enacted a new Law on Disaster Management (Law 24/2007) that describes the principles, organization, and implementation of the national disaster management system. The 2007 law has also been further elaborated by the issuance of several regulations and implementing guidelines. The framework calls for comprehensive risk reduction and shared responsibility between national and local governments. This regulatory framework brought fundamental change to DRM in Indonesia by establishing a dedicated agency for disaster management, the National Disaster Management Agency (*Badan Nasional Penanggulangan Bencana/BNPB*), and mandating the creation of disaster management agencies at the local government level (*Badan Penanggulangan Bencana Daerah/BPBD*). Establishing the BPBDs is an effort to formalize responsibility and build resilience to natural disasters at the local level. The capacity and resources of the

⁵⁶ World Bank, 2014. Project Appraisal Document – Productive Safety Nets Project 4. Available at: http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2014/09/11/00470435_20140911143122/Rendered/PDF/PAD10220PAD0P1010Box385319B00OU0090.pdf.

⁵⁷ International Federation of Red Cross Red Crescent Societies, 2013. Ethiopia: Country Case Study Report – How Law and Regulation Supports Disaster Risk Reduction.

⁵⁸ World Bank. Natural Disaster Hotspots, A Global Risk Analysis (Washington, DC: Disaster Risk Management Series, 2005).

⁵⁹ Djalante et al. 2012. Building resilience to natural hazards in Indonesia: progress and challenges in implementing the Hyogo Framework for Action. Natural Hazards. 10.1007.

⁶⁰ EM-DAT 2009. International Disaster Database. Université Catholique de Louvain, Brussels.

⁶¹ World Development Indicators, 2013; UNDP Human Development Index 2014.

BPBDs to carry out these responsibilities is, however, often insufficient.

In response to the 2005 HFA, Indonesia has developed two three-year National Action Plans for Disaster Risk Reduction (NAP-DRR). A 2014 National Action Plan on Climate Change Adaptation also identifies some of the country's main vulnerabilities to climate change and lays out short, medium, and long-term actions. The Government of Indonesia (GoI) has also developed National Disaster Management Plans (most recently for 2015–2019). Indonesia has also made progress in mainstreaming DRR into development planning. At the national level, government priorities in the Medium-Term Development Plans (*Rencana Pembangunan Jangka Menengah Nasional*) incorporate disaster management.

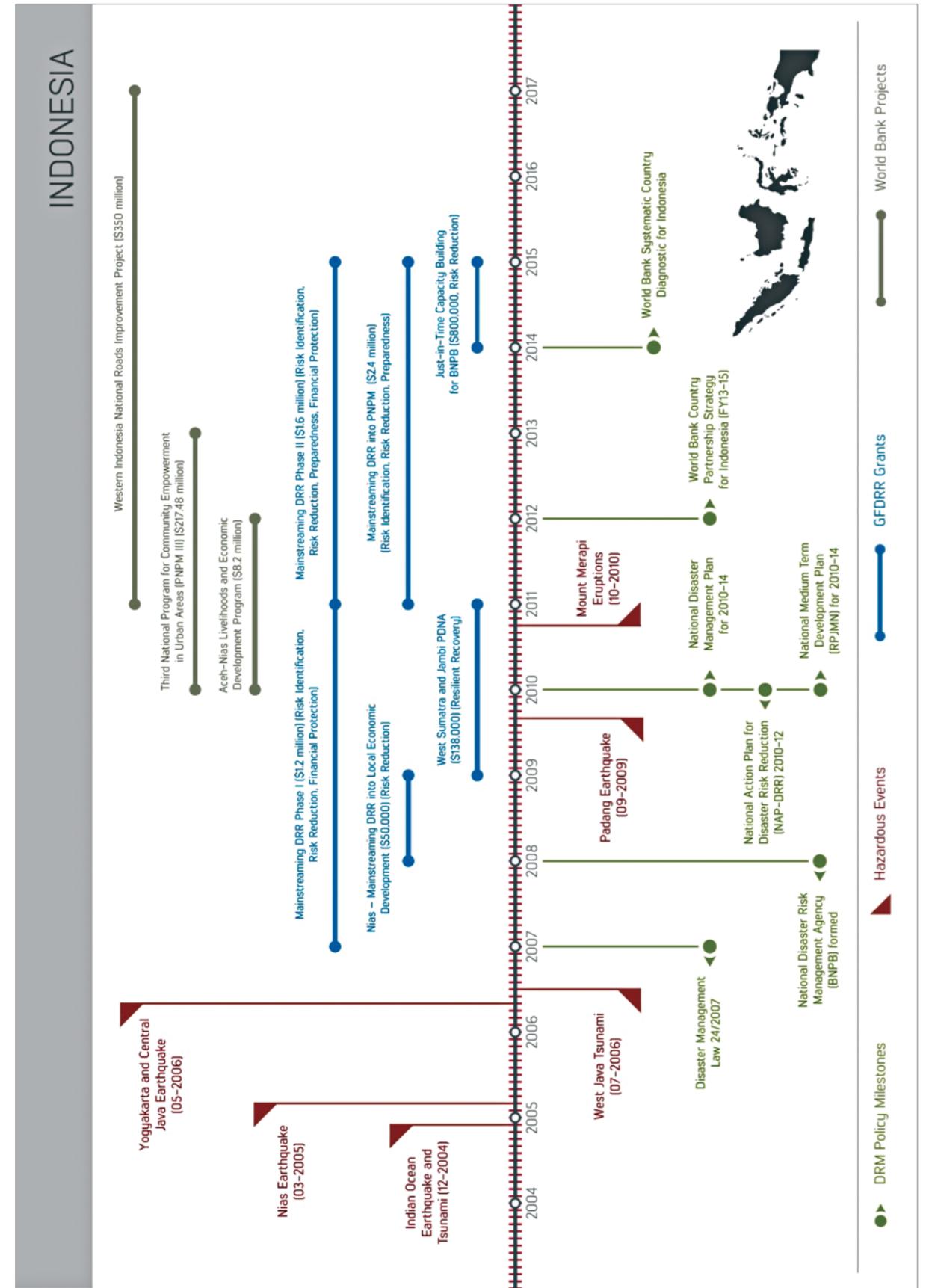
GFDRR programming. GFDRR has provided six grants to Indonesia between 2008 and 2014, totaling \$6.2 million and covering all five of the GFDRR pillars (see Appendix C). GFDRR's approach evolved from a more stand-alone grant-making approach to a programmatic approach after 2009. In the period 2008–2014, the majority of GFDRR's support to Indonesia has been channeled through two programmatic grants—Mainstreaming DRR Phase I (\$1.2 million) and Phase II (\$1.6 million)—and a \$2.4 million grant for mainstreaming DRR into the Third National Program for Community Empowerment in Urban Areas (*Program Nasional Pemberdayaan Masyarakat/PNPM-Urban*).⁶² Many sub-activities have been implemented under Phase I and II, focusing on four areas: mainstreaming DRR, capacity building for the national and local DRM agencies, disaster risk financing and insurance, and area-based resilient development. Under this umbrella, GFDRR has also engaged with its regional thematic programs, including those on safe schools, OpenDRI, and DRFI.

The figure below shows key policy and disaster milestones, GFDRR grants, and related World Bank investment projects and programs.

2.4.2. GFDRR Results in Indonesia

Outputs. Between 2008 and 2014, GFDRR has successfully delivered a wide range of outputs in Indonesia at both the local and national levels. These include:

- Analytical studies at the national and local level.** At the national level, GFDRR prepared two studies to support the preparation of the NAP-DRR for 2010–12, which also informed the National Disaster Management Plan, the government's annual DRR work plan (2010–12), and the National Medium-Term Development Plan 2010–2014. Also at the national level, GFDRR prepared a study on options for advancing a national DRFI strategy for Indonesia. Following the 2009 earthquakes in West Sumatra and Jambi, GFDRR provided financial support for conducting a damage, loss, and preliminary needs assessment that was used as the basis for the region's rehabilitation and reconstruction plan.
- Advisory services and analytical products to mainstream DRR into World Bank investments.** In 2009, GFDRR funded consultants to prepare a DRM strategy that was incorporated into the World Bank's Local Economic Development Project in Nias (2010–12, \$8.2 million). After the Nias project, mainstreaming DRR into World Bank investments was facilitated via the GFDRR focal point positioned in the World Bank country office in Jakarta. GFDRR's focal point participated in project missions and provided technical advice to improve the DRR content of the community settlement plan process for Community-Based Settlement Rehabilitation and Reconstruction Project for Central and West Java and Yogyakarta Special Region (2007–15, \$61 million). This work informed GFDRR's integration of DRR considerations into PNPM-Urban III, as noted above. GFDRR provided small grants (roughly \$38,000 each) to 16 urban wards (*kelurahans*) in four cities to prepare community disaster risk action plans and implement some of the mitigation and preparedness measures. Through its focal point, GFDRR also provided expert advice to the World Bank project team and the Ministry of Public Works on the inclusion of a component under the Western Indonesia National Roads Improvement Project (WINRIP) (2011–17, \$350 million) that provides technical assistance and capacity building support to strengthen disaster risk mitigation in the roads sector. The project now also includes a contingency component for DRR.
- InaSAFE tool.** In partnership with the Australia-Indonesia Facility for Disaster Reduction, GFDRR



has provided technical staff (via its Innovation Labs), facilitated engagement with government agencies, and funded software developers for the development of the Indonesian Scenario Assessment for Emergency (InaSAFE).⁶³ InaSAFE is a free and open source software tool that produces outputs that can be used for contingency planning.

- **DRM capacity building and knowledge management.** GFDRR supported the operationalization of BNPB, formed in early 2008, through the secondment of a World Bank staff. In 2009, GFDRR developed a curriculum and training module for DaLA that has now been fully institutionalized in Indonesia's national training center, Pusdiklat. GFDRR has also developed guidelines and training modules for community-based DRP⁶⁴ that have been delivered to more than 7,000 facilitators under PNPM-Urban III, which has national coverage across Indonesia's *kelurahans*. More recently, at the request of Gol, GFDRR—in partnership with the World Bank's Leadership, Learning and Innovation (LLI) group—is supporting the development of an innovative approach for national-level DRM knowledge management, through facilitation with BNPB and production of guidelines and knowledge assets.
- **Pilot-scale support for resilient recovery, risk identification, and safe schools.** For many of its activities in Indonesia, GFDRR has used a “proof-of-concept” approach that recognizes Indonesia's political economy and decentralized governance. Many budgetary and regulatory authorities for DRR are at the local level, making this a logical strategy and entry point. Using this approach, GFDRR has piloted activities such as technical assistance for safe schools and participatory mapping in urban areas, and then leverages the World Bank's convening power to attempt to scale up or institutionalize GFDRR's work at the national level. For instance, in Yogyakarta, after the 2010 eruption of Mount Merapi, GFDRR funded short-term consultants to provide expert advice related to the livelihoods and ecosystem restoration components of Indonesia's reconstruction effort (Rekompak⁶⁵) on a pilot scale (e.g., training community resilience facilitators for 16 resettlements, advising on three

demonstration plots covering 10 hectares). GFDRR has also supported multiple smaller-scale risk mapping efforts to fill DRM data gaps and support planning, including collaborative maps of nine villages in Yogyakarta damaged by pyroclastic flow, eight segments along the Winongo River, 11 villages in Bantul at risk of landslides, and 267 villages in Jakarta. As another example, GFDRR has funded a safe school pilot project in 180 schools in six districts and cities in three pilot provinces: West Sumatra (Padang), West Java (Bandung) and West Nusa Tenggara (NTB) Province (Lombok).⁶⁶ Applying a community-driven approach, technical assistance was provided directly to the schools through facilitators on structural rehabilitation and non-structural preparedness measures.

- **Facilitation and dialogue at national level.** To support many of the activities described above, GFDRR has also engaged in higher-level dialogue. For example, to elevate the safe schools pilot program, GFDRR has participated in policy dialogue with the Ministry of Education and Culture (MoEC) and BNPB regarding Indonesia's One Million Safe Schools and Safe Hospitals Initiative, and played a convening and technical advisory role for BNPB in developing *Regulation of Head of National Agency for Disaster Management (BNPB) No. 4 in 2012 (Perka BNPB No. 4/2012) on Guideline on Implementation of Safe School/ Madrasa from Disaster*. GFDRR also facilitated the visit of the Vice Minister of MoEC to see the pilot projects in Padang. As another example, GFDRR has engaged in discussions with BAPPENAS (the Ministry of National Development Planning), and the Geospatial Information Agency (Badan Informasi Geospasial or BIG) on how integrating DRR considerations into mapping, using participatory techniques and open-source data, can influence more effective use of urban neighborhood upgrading funds. GFDRR has also discussed DRFI options with the Ministry of Finance and BNPB.

Outcomes and Impacts. The evaluation found evidence that all activities to which GFDRR has contributed in Indonesia are achieving valuable results beyond the expected outputs (see

Appendix D). Key process-oriented (intermediate) outcomes are:

- **Knowledge deepened.** Disaster risk awareness has been raised in urban communities through DRM training for PNPM facilitators and GFDRR direct grants to PNPM pilot *kelurahans*. The four participating *kelurahans* in Padang reported an increased understanding of the hazards and vulnerabilities among their residents, as well as strengthened preparedness. Similar reports of increased awareness were made for the schools participating in the safe schools pilot program. GFDRR's participatory mapping activities in Jakarta and Yogyakarta have contributed to greater understanding of disaster risks and availability of disaster risk information. These activities have generated open-source information that has informed better contingency planning and been shared with other agencies to support development planning and resilient recovery. Recognition of the value of open data was also promoted through mapping and through the development and dissemination of InaSAFE, which has been lauded at the highest levels—including the President of Indonesia.
- **Client capacity increased.** GFDRR has contributed to strengthening national and local institutional capacities for DRR, preparedness, and resilient recovery. Evidence suggests improved in-country capacity to independently conduct post-disaster assessments, supported by GFDRR training events and the adoption of the DaLA module in Indonesia's national training institute. GFDRR's support for BNPB when it was newly formed directly contributed to building BNPB's capacity in terms of the agency's operational and technical expertise. As another example, GFDRR contributed to the development of a livelihoods strategy in Yogyakarta that is now part of Indonesia's national post-disaster community-based rehabilitation approach; previously the Ministry of Public Works had focused on infrastructure, with less consideration for some of the socio-economic aspects of post-disaster rehabilitation.

GFDRR has also increased the capacity of civil society to contribute to DRM through the training of more than 6,000 community facilitators and 350

certified trainers (using the training-of-the-trainers or TOT model) on DRR under PNPM-Urban III and training of community facilitators on livelihood considerations for resilient recovery. At the pilot level, the capacity of community empowerment groups in GFDRR's pilot PNPM-Urban *kelurahans* to identify, reduce, and prepare for disaster risks has been strengthened. GFDRR's engagement of local partners—including NGOs and local universities—has both increased the capacity of those partners to engage on DRR issues, as well as improve the results of the interventions in the medium and long term through the use of advisors that are trusted by the local communities.

- **Innovative approaches and solutions generated.** For example, in Bantul, GFDRR piloted an approach for assessing and communicating landslide hazard risks; according to interviews with the Ministry of Public Works, this was the first time in Indonesia that a community-based risk assessment had been conducted and that people had been relocated based on the mapping. The DRM national knowledge hub that GFDRR is developing with LLI offers an innovative strategy for addressing Indonesia's challenges in training all 340 of its local disaster management agencies (known as BPBDs). In the longer-term, this knowledge management system could improve the development and retention of Indonesian disaster management staff on the “technical track” if it introduces a new way to value technical staff outputs.⁶⁷ As a further example, the InaSAFE tool offers an opportunity to use the collected mapping data to support local-level contingency planning, which is a required activity for local BPBDs under national regulation. InaSAFE was awarded by *Wired*, an American magazine that reports on emerging technologies, as one of the top 10 “open-source rookies of the year” in 2013. There is interest also outside of Indonesia to adapt and use the underlying software.
- **Development financing informed.** In Indonesia, where substantial domestic and international funding is already committed to DRM interventions, GFDRR activities have not actively leveraged substantial amounts of new DRM funding. One exception is reconstruction and rehabilitation funds leveraged through GFDRR contributions to the West Sumatra and Jambi PDNA. However,

⁶³ InaSAFE can be accessed at: <http://inasafe.org/en/>.

⁶⁴ Guidelines and training modules for community-based DRP have been uploaded to the project website (www.p2kp.org in the Bahasa Indonesia version). These include PRBBK (*Pengurangan Risiko Bencana Berbasis Komunitas*) Guidelines, PRBBK Technical Guidelines, Training Modules for Local Government, and Training Modules for Facilitators (Stages 1 and 2).

⁶⁵ Rekompak is a community-based approach for large scale reconstruction and rehabilitation pioneered in Indonesia by the Multi Donor Fund for Aceh and Nias and the Java Reconstruction Fund.

⁶⁶ Cofinanced by the Basic Education Capacity Building Trust Fund.

⁶⁷ Promotions along the technical track are partly determined by the volume of research that staff produce. Allowing knowledge products developed for the hub by technical staff to count as research would provide an additional opportunity for those staff to use their work experiences to develop research products, as well as provide an incentive to keep the knowledge hub populated.

GFDRR activities have leveraged DRM funding on a pilot scale, suggesting that GFDRR's work was successful in helping communities see the value of increased preparedness and risk reduction. In Bantul, the local government spent its own resources to do structural mitigation works as a result of GFDRR's landslide risk assessment. As another example, some communities and businesses made in-kind contributions, in the form of materials, land, or labor, to supplement GFDRR funding for safe schools and for community disaster risk action plans.

GFDRR activities have also influenced both donor and government expenditures. Between 2009 and 2014, GFDRR influenced DRM components in more than \$636 million of World Bank investment programs, as shown in Table 3 (see Appendix E for details). Signals also point to opportunities for future influence of World Bank programs. Building on the success of mainstreaming DRR through PNPM, the World Bank and the Ministry of Public Works have now incorporated DRR into the Neighborhood Development guidelines and technical guidelines published in early 2014.⁶⁸ The PNPM Urban Neighborhood Development pilot aims to promote urban upgrading by significantly increasing the size of the grant (to about \$75,000 per *kelurahan*) and introducing spatial planning and area prioritization.⁶⁹ Interviews with the World Bank also indicated that a draft Project Concept Note (PCN) for an urban slum upgrading program incorporated DRR considerations, building on the PNPM-Urban III experience.

GFDRR activities have also influenced national and local government expenditures for DRM. At the national level, GFDRR contributed to the

NAP-DRR that influenced government DRM investment from 2010 to 2014. GFDRR also contributed to the incorporation of livelihoods and eco-settlement considerations into Indonesia's broader reconstruction and rehabilitation approach (known as *Rekompak*), which should influence resource allocation for future post-disaster recovery. In future, GFDRR has potential through its DRM knowledge hub activity to influence how the national DRM management agency spends its training budget, to more effectively and efficiently train local disaster agency staff. At the local level, GFDRR contributed to participatory risk mapping activities in Jakarta that enabled the local disaster risk agency (BPBD DKI) to use its budget more effectively. Before the mapping, BPBD DKI allocated logistics and human resources evenly across villages, because it could not see risk at a finer resolution. As a result, the agency now has strengthened contingency planning.

- *Policy/strategy informed.* By complementing the preparation of the NAP-DRR with facilitation and dialogue at the national level, GFDRR contributed to integrating DRR into Indonesia's National Medium-Term Development Plan for 2010–2014. GFDRR has also participated in dialogue with national ministries to advance DRR efforts. For example, the GFDRR and World Bank partnership has advanced the policy dialogue with the Ministry of Finance regarding DRFI options and the need for legal structures to support DRFI implementation. Through its focal point, GFDRR has also engaged in conversation with BNPB and MoEC on safe schools, with BAPPENAS on urban development, with BIG on participatory mapping and open-source data, with the Ministry

of Public Works on DRM components for urban neighborhood upgrading and the integration of livelihood considerations into post-disaster reconstruction and rehabilitation efforts. These dialogues have the potential to contribute to mainstreaming DRM considerations into broader development efforts and support the scale-up of GFDRR pilot initiatives.

Fieldwork suggested that a few GFDRR activities at the pilot and local levels have achieved outcomes and impacts as of early 2015. For example, in Bantul (Yogyakarta), where GFDRR funded an innovative community-based assessment for landslide risk, nearly 90 households have been relocated to safer ground, and the local government has also conducted structural mitigation works based on the assessment. In Padang, where GFDRR provided pilot grants to four *kelurahans*, some risk reduction measures have been taken, such as building retention walls and making drainage improvements. In many of the 180 schools participating in GFDRR's safe schools pilot, structural improvements have been financed through Indonesia's education Special Allocation Fund (DAK), to better protect against earthquakes and other natural disasters. Some of these pilot-level activities have had mixed results on-the-ground, but most still seem likely to fulfill a proof-of-concept purpose (as discussed below).

World Bank projects informed by GFDRR activities have—or have potential to—achieve positive outcomes and impacts. The Aceh-Nias LEDP provided training to 3,744 farmers (totaling 44,940 farmer-training days) and 128 local and provincial government staff that included how to integrate disaster resilience measures into agriculture.⁷⁰ At project-end, 69 percent of the training groups had adopted key farming and livelihood project recommendations. The WINRIP project will improve road sections traversing 12 districts with a total population over 4 million; with GFDRR's assistance, the project now includes a \$1 million component to strengthen disaster risk mitigation in the road sector. GFDRR grants to 16 *kelurahans* under PNPM Urban III could reduce disaster risk and improve preparedness for 160,000 beneficiaries.⁷¹

Many other GFDRR activities show potential for progress toward tangible results, but additional action is needed to ensure that the intermediate outcomes of these activities proceed toward outcomes and impacts—and that they do so at-scale. This is particularly true for GFDRR's pilot efforts. For example, GFDRR has conducted and contributed to the participatory development of finer resolution maps in Jakarta and Yogyakarta. The development of

Mixed Results from Pilot Activities

The evaluation found mixed results from some pilot activities. These experiences offer opportunities to learn lessons—as would be expected from a pilot project—and to ensure more effective interventions when scaling up.

For example, the evaluation observed mixed results in terms of the implementation of GFDRR's advisory services on post-disaster livelihood rehabilitation. Communities have largely restored their livelihoods but not primarily from the sources that were advised. Certain livelihood strategies (such as mushroom cultivation) were unsuccessful due to overlooking cultural elements of the community. Shortcomings were observed in the approach for supporting tourism (e.g., little consideration of packaging or handling of tourism trips, no available parking at the handicraft showrooms, insufficient consideration of how to arrange tourism routes for maximum economic impact). In another example, while nine of ten hectares of GFDRR's ecosystem restoration demonstration plots are growing well, the evaluation found no evidence of further replication or uptake and no evidence that ecosystem restoration principles had been incorporated into community settlement plans.

Under the safe schools pilot program, results in terms of awareness and behavioral changes have varied from school to school. Achievements have been largely determined by individual assertiveness and initiative from school headmasters and committees, and regular rotation of headmasters has been a challenge for progress toward impact. School facilitators interviewed estimated that about half of the pilot schools still continue evacuation drills after the conclusion of the program.

Table 3. World Bank Investments with DRM Components Influenced by GFDRR

World Bank Project	Program / WB Loan Amount (US\$ million)	Implementation Years
Aceh-Nias Livelihoods and Economic Development Program (LEDP)	\$8.2 / \$8.2	2010–12
Community-Based Settlement Rehabilitation and Reconstruction Project for Central and West Java and Yogyakarta Special Region	\$61 / \$60	2007–15
Western Indonesia National Roads Improvement Project (WINRIP)	\$350 / \$250	2010–13
PNPM-Urban III	\$217 / \$150	2010–14
Total	\$636 / \$468	

⁶⁸ Available at: http://www.p2kp.org/pustaka/files/Ebook_MANIS_PLPBK_FEB2014.pdf; http://www.p2kp.org/pustaka/files/Ebook_JUKNIS_PLPBK_FEB2014.pdf.

⁶⁹ World Bank. 2012. Rapid Appraisal of PNPM Neighborhood Development (and Poverty Alleviation Partnership Grant Mechanism). Available at: http://www-wds.worldbank.org/external/default/WDSContentServer/WDS/IB/2014/12/26/000442464_20141226142459/Rendered/PDF/834230WP0Rapid0Box385397B00PUBLIC00.pdf.

⁷⁰ For example, the project introduced terracing and steps to ensure proper drainage to protect against landslides, and demonstrated the importance of cleaning and maintaining irrigation channels to mitigate flooding in irrigated rice fields. According to the project completion report, these measures increased food security, mitigated against future disasters, and increased resilience. See: World Bank. 2013. Implementation Completion and Results Report (TF-096865). Available at: http://www-wds.worldbank.org/external/default/WDSContentServer/WDS/IB/2013/06/10/000442464_20130610100340/Rendered/PDF/ICR26120P110630IC0disclosed06060130.pdf.

⁷¹ Number of beneficiaries roughly scaled based on the population of one participating *kelurahan*—Lolong Belanti—which reported a daytime population of approximately 10,000 people.

these maps has increased the awareness of disaster risks among involved communities, and the maps have been shared with relevant local agencies and stakeholders for broader planning purposes. But more assistance is needed at the local level to link these intermediate results to outcomes like more systemic use of risk information in development planning and strengthened response to potential disasters, as well as to use these experiences to influence national level guidelines.

Through PNPM-Urban III, GFDRR has produced and integrated a DRM module into the standard training for community development facilitators, but without sustained support and incentives at the local level, it is unclear whether that training will translate into mainstreaming DRM into development planning in communities. As another example, more dialogue is required with MoEC to mainstream DRM considerations into school retrofitting using DAK funds (and the GFDRR pilot program as the illustrative intervention). Longer term engagement is also required to strengthen the financial and response capacity of the Gol and other relevant non-governmental stakeholders. GFDRR has contributed to strengthened policy dialogue with the Ministry of Finance and BNPB on financial protection options, but all of the expected outcomes stated in the grant proposal are yet to be achieved.⁷²

Some of this follow-on work is already planned or underway, suggesting good potential for future outcomes and impact.

Enabling and detracting factors for success. GFDRR's strategy in Indonesia offers a strong opportunity for achieving outcomes and impacts at-scale by engaging at the national level, leveraging and building relationships with key ministries via the World Bank, and using existing project mechanisms and institutional structure to gain scale (e.g., through PNPM-Urban's national network of facilitators). Using the World Bank's access, GFDRR's focal point in

Jakarta has developed solid, long-term relationships with key government agencies that have potential to enable GFDRR to use its smaller, proof-of-concept activities to influence DRM thinking and actions at the national level. Because much of this work requires ongoing interfacing with national ministries, GFDRR's focal point represents a critical element for progress toward impact.

The location of GFDRR's focal point in the World Bank office in Jakarta has also facilitated connections with operational World Bank staff, enabling GFDRR's influence of several World Bank investment projects, including the Project for Central and West Java and Yogyakarta Special Region (CSRRP), WINRIP, and PNPM Urban III.

GFDRR's technical expertise and strong partnering are other factors that have contributed to successful achievement of results in Indonesia. For example, successes with InaSAFE can be partly attributed to the knowledge and skills contributed by GFDRR's Innovation Labs, as well as the strength of GFDRR's partnership with Australia-Indonesia Facility for Disaster Reduction and GFDRR's relationship with BNPB to ensure national ownership. Access to the Ministry of Finance through the World Bank and GFDRR's technical leadership on DRFI has enabled progress toward results on this agenda. GFDRR's relationship with BNPB and disaster risk expertise, combined with the knowledge management innovations of the World Bank's LLI, have the potential to achieve valuable DRR outcomes nationwide.

At the local level, the evaluation found that the presence of a community champion, GFDRR's strategic engagement of local executing organizations (such as universities, local NGOs, and existing community facilitators) that can gain the trust of community members, and a participatory approach were drivers of these successes. A co-benefit of using these local executing entities has been building DRM expertise and experience in educational institutions.

⁷² For example, "Government budget allocated to support risk-prone, poor households," "Households and SMEs have wider, more affordable access to catastrophic insurance," "Ex-ante measures against natural disasters reduce overall disaster costs."



3. CROSS-CUTTING ANALYSIS

3.1. Moving Toward Impact

3.1.1. GFDRR Results

GFDRR has successfully delivered outputs in Bangladesh, the Eastern Caribbean, Ethiopia, and Indonesia, and the evaluation found evidence that most activities that are under implementation or completed are achieving valuable downstream results. Some key intermediate outcomes observed across the five case study countries include:

- **Knowledge deepened.** GFDRR activities have raised disaster risk awareness at local and national levels. In Bangladesh, GFDRR contributed to increased understanding and awareness of earthquake risk among key stakeholders in Dhaka. In Ethiopia, awareness was raised at the *woreda* level, through pilot programs. In Indonesia, awareness was raised in urban communities through facilitator training on DRR, and through safe school pilots.
- GFDRR has also contributed to increased availability of disaster risk information, broader support for open data, and more informed decision-making. In Bangladesh, GFDRR contributions have been through technical assistance on urban resilience, and research activities in support of CEIP-I. In the Eastern Caribbean, GFDRR has supported the development of GeoNodes and socialized the tool to garner national-level support for data sharing. In Ethiopia, development of the WDRPs and Woreda-net, and improvements to the LEAP model, have contributed to resiliency outcomes. In Indonesia, disaster risk information has been made increasingly available through participatory mapping, InaSAFE, a national risk assessment study, and rapid diagnostics. PDNAs in Indonesia, Saint Lucia, and Bangladesh contributed to greater availability of information about needs and quantified financial requirements for DRM.
- **Client capacity increased.** GFDRR has contributed toward building capacity of national and local governments, as well as civil society, for disaster risk preparedness, reduction, and response. In Bangladesh, GFDRR has improved emergency preparedness and response capacity of Dhaka government authorities. In Dominica, the national government shows increased capacity around geospatial data and shelter vulnerability assessments. In Ethiopia, GFDRR's capacity building has focused at the local (*woreda*) level, for disaster risk identification, reduction, and preparedness. In Indonesia, national capacity for independently conducting DaLAs has increased through GFDRR support, and GFDRR also played a role in operationalizing the newly formed national disaster management agency. In Indonesia, GFDRR has also increased the capacity of civil society to contribute to DRM through training and pilot programs. In the Eastern Caribbean, national government capacities have been strengthened, but there is a risk of capacity loss unless follow-on support is provided.
- **Innovative approaches and solutions generated.** GFDRR has contributed to developing and demonstrating innovative tools and approaches for DRM. These include the InaSAFE model in Indonesia, GeoNode in the Eastern Caribbean, the LEAP model in Ethiopia, and the creation of the GEODASH platform with data for Dhaka, in connection with BUERP in Bangladesh.
- **Development financing informed.** GFDRR has leveraged and influenced significant resources for DRM. This finding is discussed at length in Section 3.2.
- **Policy/strategy informed.** GFDRR has strengthened policy dialogue and supported policy development and implementation, including around disaster risk financing and insurance. In Bangladesh and Indonesia, GFDRR has provided analytical products and dialogued with ministries of finance on DRFI. In Dominica, GFDRR supported the development of policy around information sharing. In Ethiopia, GFDRR provided advisory services on development of the national DRM policy and the operationalization of the DRM-SPIF. In Indonesia, GFDRR has frequent dialogue with BNPB and BAPPENAS, and also supported policy changes with BIG, the Ministry of Public Works, and the Ministry of Education and Culture.

Given the relatively young age of GFDRR's portfolio, limited evidence was found of outcomes and impacts achieved at-scale as of early 2015, although some activities show strong potential. In particular, linking GFDRR small grants with larger World Bank investment operations or broader government initiatives reinforces potential for downstream results and sustainability.

Many World Bank investment operations to which GFDRR has contributed the incorporation or improvement of DRM components will achieve sizeable outcomes, if successfully implemented. For example, building on GFDRR's critical groundwork, the \$182 million Urban Resilience Project in Bangladesh has potential to increase resilience to earthquakes for the 15.5 million people living in Greater Dhaka and Sylhet. Saint Lucia and Dominica's DVRPs—which GFDRR helped shape—are expected to benefit more than 240,000 people combined. In Indonesia, the WINRIP project will improve road sections traversing 12 districts with a total population of over 4 million, and GFDRR's assistance means the project should now strengthen disaster risk mitigation in the road sector. In Ethiopia, expected benefits associated with reductions in drought and flood impacts and losses and long-term risk reduction efforts under PSNP-IV are valued at roughly \$300 million per year.

In all countries studied, the evaluation found that sustained engagement is needed to ensure that the intermediate outcomes of some activities proceed toward outcomes and impacts. In particular, longer term support will be needed to realize outcomes for DFRI activities and technology-oriented solutions.

3.1.2. Contributing or Detracting Factors for Achieving Success

To better understand how and why GFDRR has, or has not, accomplished its goals the evaluation included a cross-country analysis of observed and potential results based on the factors that contribute to and detract from GFDRR success. Table 4 presents the enabling factors, while Table 5 presents the challenges to success.

The evaluation found that GFDRR has engaged at high levels of government, including central ministries and line ministries with responsibilities for DRM, which increases potential for achieving results at-scale. Partnership with the World Bank, and the access that partnership provides to key ministries, has been important to enable that high-level engagement. GFDRR has worked in strong partnership with some key partners, such as the World Bank, UNDP, and the European Commission in preparation of PDNAs, Australia-Indonesia Facility for Disaster Reduction in Indonesia, and JICA in Bangladesh. These partnerships have enhanced the scope of potential results to which GFDRR is contributing.

GFDRR has been successful in identifying strategic entry points for relatively small grant contributions to demonstrate or advance DRM activities that can inform larger-scale World Bank investment operations. The in-country presence of a GFDRR focal point has been important in this regard in Bangladesh and Indonesia; in Ethiopia, the same World Bank TTL has led GFDRR grants and the World Bank investment operations that GFDRR informed, directly enabling that influence. GFDRR's influence and leverage is discussed in more detail in Section 3.2 below.

Another contributor to success has been GFDRR's use of engagement strategies that reflect individual country conditions. For example, GFDRR has taken a proof-of-concept and community-driven development approach in Indonesia, where DRM responsibilities and budgets are decentralized. GFDRR used participatory technical assistance in Dhaka (Bangladesh), where local government structures and dynamics are very complex and require long-term relationship building. In Ethiopia, GFDRR successfully used the evolving social protection agenda as an entry-point to advance the DRM agenda. In the Eastern Caribbean, GFDRR has worked most effectively when providing support that strengthens larger World Bank initiatives (i.e., technical advice for DVRP development).

At the local level, strong choices for executing agencies have also contributed to results achievement. For example, in Indonesia, NGOs and local universities have been used to execute many GFDRR grants because these organizations are able to gain community trust and engagement, which have been precursors for pilot-level success.

GFDRR often operates in a country context in which there are weak or insufficient legal or regulatory frameworks for DRM, lack of law or code enforcement, insufficient or unpredictable budgets for DRM, and weak institutional capacity. Much of GFDRR's work aims at removing these obstacles. Thus, the evaluation focused on challenges to GFDRR's success in translating its activities into longer-term results within these broader constraints.

Challenges were observed in most countries associated with readiness or capacity to use some

of the technologies piloted by GFDRR. For example, in Indonesia, local DRM agencies generally do not have staff with sufficient GIS programming skills to independently use InaSAFE. Geospatial platforms in the Eastern Caribbean and the Woreda-net systems in Ethiopia similarly suffer from software, hardware, and trained user challenges. Governments in the five countries visited showed interest in these technology-based tools and in two countries (Indonesia and Ethiopia), governments acknowledged the need to invest in human capacity and have started to hire staff with necessary skills.

These types of obstacles to introducing new technologies are recognized in engagement strategies—for example, the World Bank's Strategic Engagement Framework for the Caribbean anticipates issues related to hardware, network, and software limitations, as well as information technology human support capacity.⁷³ Still, for GFDRR, the observation of these challenges suggests that a long-term approach is needed to institutionalize the use of these technologies.

Similarly, the development period for some technical assistance activities, including DRFI, is particularly long and requires ongoing GFDRR support. Ensuring strong government support can help maintain momentum for these longer engagements; in one country (Bangladesh), an initial lack of client demand for DFRI slowed progress.

Some GFDRR activities, such as one-time training events or conference attendance support, appear less likely to achieve long-term results. During fieldwork, the evaluation was unable to find robust evidence of enduring impacts of these types of

Table 4. Enabling Factors for Success

Strengths and Factors for Success
• Engagement at high levels of government.
• Alignment with larger World Bank investment operations.
• Technical expertise and regional thematic programs.
• In-country presence of GFDRR focal points.
• Tailoring engagement strategies to country conditions.
• Programmatic approach to grant-making.
• Strong partnerships.
• Strong choices for executing agencies at the local level.

Table 5. Weaknesses and Challenges to Success

Weaknesses and Challenges to Success
• Lack of readiness or capacity to use technologies piloted.
• Long development periods.
• Staff turnover/rotations and competing demands for staff time.
• Use of less-effective activities like one-time training events or conference attendance support.
• Ineffective use of co-financing modality.

⁷³ World Bank. 2012. The Caribbean Region: Strategic Engagement Framework for Disaster Risk Management and Climate Resilience FY13-15. June 2012.

activities. In contrast, for example, in Indonesia, GFDRR was able to demonstrate the effectiveness of DaLA trainings such that GFDRR's training module was eventually institutionalized in the national training center, ensuring its sustainability.

Rotation of staff and competing demands for staff time have also been challenges to achieving sustainable results through training, capacity building, and some technical assistance activities. This is especially true in the small island Eastern Caribbean context, where ministries often operate with few staff.

Lastly, in Bangladesh, the evaluation observed that GFDRR co-financing was implemented in such a way that it did not take advantage of GFDRR's comparative advantages, including technical expertise and partnership with the World Bank. In particular, lack of strategic dialogue during the creation of that arrangement, and a lack of engagement with GFDRR during implementation, may have contributed to an ineffective use of co-financing.

3.2. Leverage and Influence

GFDRR grants represent a very small portion of the investments needed to reduce disaster risk in the five countries studied in this evaluation. Strategic application of GFDRR's grants, however, have potential to amplify results, either by directly leveraging larger investments by partners or by influencing how existing resources for resilience are spent.

Leverage. GFDRR has leveraged DRM resources through three different pathways, as illustrated in Table 6 below (see also Appendix E). Of these pathways, two leverage resources at-scale: support for PDNAs, and technical assistance that led to approval of an investment project.

PDNAs are intended to provide a coordinated and credible basis for recovery and reconstruction planning, and for the international community to assist the affected country in this process, including through providing funding. As such, PDNAs often leverage emergency relief and DRM investments and improve the enabling environment for DRM (influence). Through grants for PDNAs in Bangladesh, Saint Lucia, and Indonesia, GFDRR—in partnership with the World Bank, United Nations agencies, the European Union and other development partners—has helped develop recommendations for key actions that are frequently funded by the World Bank and other donors. In Bangladesh, more than \$1,600 million has been committed to World Bank projects based on the PDNA that GFDRR supported after Cyclone Sidr. In Saint Lucia, the JRDNA, supported by GFDRR after the 2013 Christmas Rains, was used to leverage emergency response resources (\$17 million) from the World Bank's Crisis Response Window and planned funding from the EU of \$10M to support the DVRP. GFDRR's technical expertise has lent credibility to these assessments.

GFDRR is primarily leveraging funds from the World Bank and host country governments; funds from other bilateral and multilateral donors were also leveraged through PDNA support. In Bangladesh, GFDRR has actively leveraged investment through the Urban Resilience Project (2015–20, \$182 million), where more than two years of sustained technical assistance under a \$2.8 million GFDRR grant led to the preparation and approval of this large investment in early 2015 (\$173 million in World Bank loans and \$9 million in co-financing from the GoB). In Indonesia, GFDRR activities have leveraged DRM funding on a smaller scale. For instance, the local government in Bantul spent its own resources to do structural mitigation works in a few villages as a

Table 6. Leverage Pathways

Leverage Pathways	Bangladesh	Saint Lucia	Dominica	Ethiopia	Indonesia
Support for the preparation of post-disaster needs assessments	●	●			●
Technical assistance that directly led to the preparation and approval of a World Bank investment project	●				
Implementation of pilot projects with community support					●

result of GFDRR's landslide risk assessment, and some communities and businesses made in-kind contributions to supplement GFDRR funding for safe schools and community disaster risk action plans under PNPM.

It is notable that leverage through the two non-PDNA pathways was observed only in countries where a GFDRR focal point is stationed in-country. The evaluation found the evidence for non-PDNA leverage in Bangladesh and Indonesia, while no instances of leverage were identified in Dominica and Ethiopia. Particularly in Bangladesh, where technical assistance had to navigate complex institutional infrastructure, the engagement of the focal point was critical for success.

Influence. The evaluation found evidence that GFDRR has influenced resources that are contributing to integrating DRM into existing programs and budgets or to improving the enabling environment for DRM (e.g., legal, institutional, or regulatory systems) in all five countries studied (see Appendix E).

Influence was generally conveyed through two pathways, as shown in Table 7: either country government resources or World Bank project funding was influenced. This is partly a reflection of the location of GFDRR focal points in World Bank offices in Indonesia and Bangladesh, as well as of the execution arrangements for GFDRR grants. In the five countries, nearly 90 percent of grants are World Bank-executed, based on dollar value; the remainder are recipient-executed (country government).

- *Influence of World Bank investment projects.* The evaluation identified over \$3.6 billion of

investments (\$1.4 billion World Bank commitments) with nearly \$500 million of DRM components informed by GFDRR in all five countries studied. GFDRR has been successful in identifying strategic entry points for relatively small grant contributions to demonstrate or advance DRM activities that can inform larger-scale investment operations. In Indonesia and Bangladesh, GFDRR has also helped include zero-dollar contingency components in World Bank projects. These components provide an option for countries to rapidly access funding for emergency response in the event of a natural disaster.

- *Influence of government expenditures.* GFDRR activities have influenced national and local government expenditures for DRM in Bangladesh, Ethiopia, and Indonesia. Certain activities currently ongoing in Indonesia also show potential for future influence of national government expenditures, including the DRM knowledge management hub, which could influence how BNPB allocates its budget to train disaster management government staff around the country, and the safe schools pilot program, which has potential to influence national education funding to improve structural and non-structural resilience.

The scope of GFDRR's influence has varied by country. In Indonesia, Ethiopia, and Bangladesh, GFDRR has been more successful in mainstreaming DRM into investments across sectors (transport, community and economic development, health and nutrition) and into traditional development and planning, whereas in the Eastern Caribbean, GFDRR's influence has been more contained to DRM-specific projects (the DVRPs).

Table 7. Influence Pathways

Influence Pathways	Bangladesh	Saint Lucia	Dominica	Ethiopia	Indonesia
Influence of World Bank investment projects	●	●	●	●	●
Influence of government expenditures	●			●	●

Lessons learned. Enabling factors for influencing and leveraging have included the high-quality technical expertise provided by GFDRR staff and their proximity to World Bank operations, as well as strong support from community, government, and donor stakeholders. In particular:

- Proximity of GFDRR to World Bank operations staff maximized the opportunity to influence and leverage resources (notably World Bank projects) and to identify strategic entry points for small grant contributions to have a broader impact. In Bangladesh and Ethiopia, proximity is taken one step further. The same World Bank staff person serves as the TTL for the influencing/leveraging GFDRR grant and the World Bank investment operation that the GFDRR grant leveraged/influenced. In Bangladesh, this tautology helped project leaders to think strategically about how technical assistance could be linked to investments, while the World Bank's convening power and access to ministries of finance and key line ministries has also been a critical contributing factor.
- An explicit objective to mainstream DRR—a key element of the GFDRR mission—seems to be correlated with more instances of such influence. In Indonesia, where programmatic grants had an express purpose of mainstreaming DRR into World Bank investments, the evaluation found more instances of that outcome being achieved (including across sectors). Much of this mainstreaming was catalysed by the GFDRR focal point. Similarly, in Indonesia, where programmatic grants had a stated objective to mainstream DRR into development, evidence was found of GFDRR contributions to this effect: at the national level through national development plans and government education budgets, and at the local level through community-driven development planning.

Not all GFDRR activities have successfully leveraged or influenced DRM resources. Some lessons learned include:

- Analytical work or capacity building alone may not be sufficient for leveraging or influencing DRM resources if there is weak linkage of the grant activities to broader government or World Bank and other donor initiatives.
- Influencing of government resources is unlikely to happen without sustained direct engagement of the full range of relevant stakeholders. For

instance, preparing a study/report, assessment, or guidelines for how to integrate DRM into planning is unlikely to lead automatically to recommendations being institutionalized. Time and real resources (human and financial) are required to make change.

- Where GFDRR has been less successful in leveraging or influencing, one hindrance may be the modality with which GFDRR engaged. For example, co-financing of the ECRRP in Bangladesh, without any accompanying strategic dialogue or technical assistance, did not result in discernible leverage or influence.

3.3. Special Focus on Intermediate Outcomes

The 2014 evaluation of GFDRR found that GFDRR succeeds in delivering planned outputs and makes a valuable contribution beyond the output level—but that the M&E framework's outcome indicators do not adequately capture that contribution. The 2014 evaluation recommended that GFDRR adopt intermediate outcomes with process-based indicators that reflect GFDRR's role as a facilitator of progress in DRM. In response, the ToR for this evaluation called for “field-test[ing]” of new intermediate outcome indicators. These cross-pillar indicators were developed by GFDRR and draw on standardized World Bank outcome indicators (see Appendix F).

A comprehensive field-testing of the intermediate outcome indicators would have been premature, since reference sheets (e.g., with indicator definitions, measurement protocols, and data requirements) have not yet been developed by GFDRR and thus cannot be rigorously tested. Instead, qualitative data on intermediate outcomes was gathered through desk review and interviews and mapped to the intermediate outcome indicators (see Appendix F). In the absence of more detailed definitions, the interpretation of the indicators and the subsequent mapping is that of the ICF evaluation team. Several observations can be made based on an analysis of the mapping.

First, the qualitative research conducted for this evaluation yielded evidence of progress toward DRM results that could be mapped against the intermediate outcome indicators. Interviews with project proponents and beneficiaries were especially productive in identifying process-based results. These interviews and desk review confirmed that most of the observable results of GFDRR interventions are in

the intermediate outcome step of the results chain. For many activities, the timeframe for the evaluation (2008–2014) was too short to observe contributions to longer-term DRM outcomes, and/or a sustained effort is required to ensure that process-oriented intermediate outcomes lead to concrete outcomes and impacts.

Relevance to the types of results that GFDRR achieves varied among indicators. Observed intermediate outcomes corresponded most closely to indicators related to awareness raising (“facilitated exchange of best practice w/ clients”), capacity building (“implementation capacity strengthened”), and influencing investments and policies (“preparation of new operation informed”; “existing operations informed”; “government policy/strategy informed”). No data were found to support the achievement of other indicators, such as those related to “design capacity strengthened” and “M&E capacity increased.” This is not a result of failure of GFDRR interventions to achieve certain intermediate outcomes, but rather a reflection of the mission and strategy of GFDRR—i.e., some of the indicators are designed to capture intermediate outcomes that are not integral to the GFDRR results chain. For example, none of the GFDRR interventions in the five countries examined for the evaluation were aimed at increasing the capacity of national counterparts to monitor and evaluate DRM activities, and hence no results were observed in this area.

The mapping exercise revealed opportunities for improving the indicators for future use by GFDRR in monitoring and evaluation. Indicators could be more precisely worded and tailored to GFDRR's mission. In some cases, the intermediate outcomes observed did not exactly map to the indicators provided. For example, many GFDRR interventions raised disaster risk awareness among stakeholders; the evaluation team mapped these intermediate outcomes to the indicator “best practices exchanged with clients,” although this is not a precise articulation of what GFDRR actually achieved. Other intermediate outcomes, such as a greater availability of disaster risk information for decision-making, did not correspond to a specific indicator.⁷⁴

In other cases, distinctions between indicators were vague. For example, GFDRR contributed to the development of the innovative InaSAFE tool in Indonesia and also helped potential users build capacity to implement the tool. It was unclear whether these activities should be counted as “developing” or “fostering” an innovative approach, since there are separate indicators for each and no technical definitions to facilitate interpretation. The phrasing of the indicators could also be improved; in M&E best practices, indicators are typically framed in non-directional terms to enable measurement (e.g., “number of people,” “extent or degree to which,” “quality of”).

Guidance could also be provided for measuring and reporting. Indicator reference sheets could be developed to enable common understandings of how indicators are defined and measured, what data sources should be used, and responsibilities for monitoring, reporting, and quality assurance. A more systematic approach could be adopted for qualitative indicator assessment, such as scoring criteria or a self-assessment method for strengthened capacity or increased awareness. The results of this mapping exercise also suggest that guidance on how to present narrative on qualitative indicators would improve reporting; for example, for a capacity-building indicator, a reference sheet might ask for information on GFDRR's capacity building inputs, the organization whose capacity was strengthened, the specific competencies that were improved, and so on.

Finally, GFDRR might consider whether it would be more useful to organize intermediate outcome indicators by the five program pillars. While the process-based nature of many of the intermediate outcomes may be similar across pillars (e.g., capacity strengthened, knowledge deepened), for the purposes of better understanding and articulating the program's results chain, it could be better to visualize these intermediate outcomes in a logical framework organized by pillar (e.g., similar to that presented in Annex I of the GFDRR Strategy for 2013–2015).

⁷⁴ Although greater availability of disaster risk information did not correspond at the indicator-level, for the purposes of presenting results in this evaluation report, it was grouped with the intermediate outcome “knowledge deepened.”



4. CONCLUSIONS AND RECOMMENDATIONS

4.1. Conclusions

Based on the country case studies and the cross-cutting analysis, the evaluation makes the following conclusions on the four evaluation questions.

Does GFDRR succeed in delivering planned analytical products and technical assistance?

GFDRR has delivered analytical products, capacity building, and technical assistance in all five countries studied. Many GFDRR grant proposals do not describe planned outputs, and thus the evaluation was limited in its ability to assess GFDRR delivery against plan. Limited instances of non-completion of expected outputs were observed in Bangladesh and Ethiopia, and for a few grants in the Eastern Caribbean, evidence was not available to confirm delivery of some outputs. However, on the whole, the evaluation found that outputs were successfully delivered and were reasonable in scope and scale given the size of the grants.

Is GFDRR able to use these interventions to leverage and influence new and ongoing investment programs?

GFDRR has leveraged DRM resources through the support for PDNAs (Bangladesh, Indonesia, Saint Lucia); technical assistance that directly led to the preparation and approval of a World Bank investment project (Bangladesh); and implementation of pilot projects that leveraged community-scale support (Indonesia). Apart from PDNA support, successful leveraging takes sustained engagement, and seems most likely to be achieved through a technical assistance modality.

GFDRR has been successful at influencing World Bank resources (five countries) and country government resources (Bangladesh, Ethiopia, Indonesia); this influence has contributed to integrating DRM into existing programs and budgets. GFDRR has been less successful at influencing other donor resources, with the notable exception of JICA in Bangladesh.

GFDRR has also been successful at improving the enabling environment for DRM through policy dialogue and support (five countries) and PDNA support. Recognized technical expertise, proximity to World Bank operations, and an explicit objective to mainstream DRM seem to be enabling factors for influence.

Are the activities to which GFDRR contributes achieving the outcomes intended?

Most GFDRR activities are making valuable contributions to achieving process-oriented outcomes, including building institutional capacity, strengthening policy dialogue, increasing availability of disaster risk information, mainstreaming DRM into development, and assisting in resilient disaster recovery through PDNA support. For many activities, sustained engagement is needed to translate this progress into more tangible and sustainable outcomes at-scale.

What evidence exists that GFDRR is achieving progress against the intended impact on the resilience of people to natural disasters?

Limited evidence was found of impacts achieved at-scale as of early 2015. The relatively young age of GFDRR's portfolio and the time often required to reach impact are contributing factors to this conclusion. Some activities show potential to achieve impacts—particularly those linked to larger World Bank investment operations or broader government initiatives, which can strengthen the potential for downstream results and sustainability. Activities like one-time training events or conference attendance support appear less likely to achieve impact.

4.2. Recommendations

The evaluation makes the following recommendations to improve future GFDRR results achievement.

Recommendation #1: Find and pursue ways to deepen and sustain engagement on-the-ground

Potential for achieving downstream results would be improved by deeper and more sustained engagement. This could be achieved through several different avenues. Continued support for GFDRR focal points in-country can help ensure that activities maintain momentum and advance toward outcomes at-scale. Focal points could also support follow up to ensure that communities of practice, technologies, and other GFDRR-supported activities continue to be implemented after individual grants have closed. Capacity-building modalities could also be improved; for instance, to avoid some of the pitfalls of one-time training events, on-the-job training could be incorporated to improve capacity building and institutionalization. On-the-job training can also raise awareness and facilitate consensus building. At the country level, grants could be more purposefully designed to build on and reinforce each other; results are stronger in countries where there is a clearer linkage and trajectory among grants (e.g., Indonesia, Ethiopia, Bangladesh).

Recommendation #2: Prioritize interventions that link to broader initiatives and make use of GFDRR's well-recognized technical expertise

All five country studies suggested that activities that are linked to World Bank, government, and other donor initiatives and programs are more likely to have strong stakeholder support, show better potential for contributing to results at-scale, and achieve leverage or influence. Similarly, interventions that make use of GFDRR's comparative advantages in the DRM community, including technical expertise and regional thematic initiatives, also show strong promise for achieving results.

Recommendation #3: Improve documentation of GFDRR activities and results to support further M&E

A challenge for this evaluation was incomplete documentation of GFDRR activities and results. Project proposals sometimes lacked clear descriptions of expected outputs and outcomes; progress reports were often missing; and in some cases, it was difficult to track down grant work products or financial records. Through fieldwork and the on-the-ground support of the GFDRR Evaluation Task Manager, the evaluation team was able to find sufficient documentation to come to robust conclusions for this report. However, to facilitate future M&E—and support more streamlined results reporting—GFDRR should consider improving documentation of activities and results. The evaluation generally supports GFDRR's movement away from its original Results-Based Management System—which was developed when GFDRR's portfolio was much more limited—and toward linking with World Bank monitoring processes.

APPENDIX

Appendix A. Terms of Reference

4. Introduction

A. Background

How to best manage the growing risks that disasters pose to economies and societies is a major contemporary challenge for policy makers. There is therefore a growing demand for evidence on the effective management of risks, and resilience of systems built. A number of global programs have made their own evaluation efforts, notably those working from the perspective of adaptation to climate change. The field of Disaster Risk Management (DRM) has few examples of good practice in the evaluation of impact. Evaluation of DRM programs have tended to focus on institutional and policy aspects: few have considered the action that follows and its contribution to the changing resilience of countries and people.

The Global Facility for Disaster Reduction and Recovery (GFDRR) is well positioned to contribute to an evidence base on effective management of risks, through better understanding the impact of its program. In particular, the dual focus of the program – on both stimulating institutional reform and leveraging investment – provides an important opportunity to learn what works and account for resources spent. Through the eight-year life of its program, GFDRR has already invested significant effort in defining and measuring results. The program has been the subject of a number of independent evaluations. See Annex 1 for overview of past evaluations.

B. GFDRR Program

In line with global commitments following the adoption of the Hyogo Framework for Action (HFA) 2005 – 15, the World Bank, the United Nations and bilateral donors launched GFDRR in 2006 to deepen international technical and financial cooperation to mainstream DRR in development policies and strategies and build resilience in vulnerable countries. GFDRR's mission is to support national and local efforts to build resilient societies who can manage and adapt to disaster risks, in order to reduce the human and economic impacts of disasters. This role will continue and evolve under the next generation HFA, to be discussed in Sendai in March 2015.

GFDRR is a grant-making facility – not a direct implementer – and as such works primarily through the World Bank and other partners to stimulate

policy reform and implement public investment that can better protect people from the natural hazard risks they face. In line with geographic and thematic priorities set by its donors and partners, GFDRR has supported over 50 countries since 2006, with the most significant engagement in 31 priority countries. In addition, GFDRR also manages special initiatives that focus on particular regions or specific topics, including a €74.5 million initiative of the Africa, Caribbean and Pacific (ACP) Group of States financed by the European Union, and a \$100 million technical assistance and knowledge exchange program financed by the Ministry of Finance, Japan. Between 2007 and 2014, GFDRR's portfolio has grown from \$6.4 million in FY2007 to \$279 million.

The GFDRR 2013-2015 strategy – Managing Disaster Risks for a Resilient Future – sets out the five pillars of action: 1) Risk Identification; 2) Risk Reduction; 3) Preparedness; 4) Financial Protection; and 5) Resilient Recovery. Central to this strategy is the need to gain a better evidence base understanding of the effectiveness of GFDRR investments and more clearly define the pathways to resilience that the GFDRR program seeks to follow.

C. Monitoring and evaluation

The overarching framework for the evaluation will be the GFDRR M&E framework. This framework was developed in 2013 and tested by the 2014 DARA evaluation. Recently, based on the recommendations from this evaluation, an additional level of intermediate outcome indicators has been added. See Annex 2 for the current M&E framework.

Monitoring: GFDRR keeps track of the transformation of financial resources and other inputs into products and services (outputs). Outputs are associated with specific interventions supported by the GFDRR and are under the direct control of the Program. For example, GFDRR considers the development a prioritization assessment to support a country's effort to reduce disaster risk as a direct output of the Program.

Evaluation: GFDRR is also committed to assess the intended effects of the delivered goods and services. In the absence of these events actually happening (or of sufficient data on their impacts if they do occur), GFDRR is dedicated to demonstrate impact, independently of trends

in losses, using 'proxy' indicators of improved performance in risk management. These indicators measure achievements that do not depend solely on the Program. At country level, a broad range of stakeholders will have to act (and work together) to achieve this impact.

D. Lessons learned from the 2014 evaluation

The 2014 DARA evaluation was the first of a planned series of independent evaluations of GFDRR. The evaluation focused on five country case studies: Guatemala, Malawi, Nepal, Sri Lanka, and Vietnam. The evaluation did not intend that these case studies constitute a large enough sample to draw conclusions on the program as a whole. GFDRR will therefore commission two additional evaluations (one focused on country case studies and another on two thematic programs). Each evaluation is expected to build on and improve the analysis from the previous evaluation.

The DARA evaluation provided a long and detailed list of recommendations, which were discussed with members of the Consultative Group (CG) and GFDRR. Of the list, two key areas on which this evaluation will need to further explore and elaborate include: how GFDRR measures its own performance and how effective the leveraging strategy is in achieving results at scale. These areas are described below in more detail.

Measuring performance: The DARA evaluation found that GFDRR succeeds in delivering planned outputs and makes a valuable contribution to the broader DRM performance at the national level: GFDRR triggers policy processes, facilitates some of the necessary conditions for risk reduction, promotes government readiness, and leverages support for DRM. Moving forward, the facilitation role that GFDRR plays at country level should be better captured in the M&E framework.

Recommendation for 2015 evaluation: Acknowledging that it was difficult to capture GFDRR's direct contribution to a country's DRM performance through the M&E framework's outcome indicators, this evaluation should use and field-test the newly developed intermediate outcome indicators. The intermediate outcome indicators have been designed to strengthen the logic of the existing framework and to ensure that evaluations in the future would better capture GFDRR's role as a facilitator of progress in DRM performance.



Leveraging strategy: The DARA evaluation confirmed that the synergy between World Bank and GFDRR has delivered results at scale, particularly in the areas of risk reduction and financial protection.

Recommendation for the 2015 evaluation: This evaluation should further expand the understanding of the way GFDRR is able to influence and leverage resources for resilience. In particular, this evaluation will have to assess how the close partnership between GFDRR and the World Bank enables the limited sum of GFDRR resources to influence national dialogues on the importance of investment DRM with ministries of finance and key line ministries. Moreover, the evaluation should assess whether, in absence of this partnership, GFDRR resources would still provide a sufficient platform to promote a national policy dialogue and whether its recommendations would be integrated into large-scale investment programs.

These two areas of study should guide the evaluator in responding to the general parameters described in the scope of services section below.

5. Audience and Purpose of the Evaluation

A. Audience

The findings of the evaluation will inform two key audiences.

External: the evaluation will allow GFDRR to communicate externally with the Consultative Group, country partners, and the broader DRM community about the impact of GFDRR and more generally about lessons learned regarding change processes related to efforts to build resilience.

Internal: the evaluation will enable the GFDRR Secretariat to incorporate lessons learned into its internal decision-making processes, specifically related to (i) the conditions under which GFDRR-supported GFDRR interventions can make an impact (or not); (ii) the design and implementation of future GFDRR grants; and (iii) improvements required to further maximize impacts.

B. Purpose of the evaluation

GFDRR considers evaluation as a tool for accountability and learning. As such, the purpose for this evaluation is to:

- Ensure accountability by demonstrating that GFDRR effectively adopts the role of a facilitator and acts as a catalyst to 'crowd in' investments for resilience, thereby benefitting people beyond its direct sphere of interaction; and
- Contribute to building the evidence base that demonstrates how disaster risks are effectively managed and resilient societies are built.

C. Evaluation objectives

Based on the above mentioned purpose, the objectives of the evaluation will be to:

Objective 1: Analyze and evaluate the overall impact of GFDRR activities, specifically in terms of leveraging new investments and influencing ongoing programs; and

Objective 2: Generate a better understanding of how and why GFDRR has been able to contribute to making countries more resilient.

6. Scope of Services

In order to meet the evaluation's accountability objective, the Firm will have to answer three key questions:

- Does GFDRR succeed in delivering planned analytical products and technical assistance?
- Is GFDRR able to use these interventions to leverage and influence new and ongoing investment programs?
- Are these investment programs achieving the outcomes intended?
- What evidence exists that GFDRR is achieving progress against the intended impact on the resilience of people to natural disasters?

Subsequently, in order to meet the learning objective, the Firm is expected to analyze the how and why behind the findings on what GFDRR has accomplished. In this context, the evaluator will have to look into what factors have led to results in DRM performance at country level (including external factors) and how GFDRR's interventions relate to these factors.

7. Evaluation Methodology

This section establishes minimum design standards for the evaluation. The final design for this evaluation will be developed through an inception report which will be reviewed for quality assurance by GFDRR.

A. Methods

There are a range of methods that can assist with gathering and analyzing data to answer the key evaluation questions. While the Firm is free to select its preferred method or mix of methods commensurate with the level of available resources, GFDRR would encourage including the use of the following methods:

Contribution Analysis: This type of analysis would allow an assessment of cause-effect relationships and offer a credible evidence-based contribution story. In other words, the Firm will be able to make causal claims about whether and how GFDRR interventions have contributed to observed impacts.

Contextual Analysis: Since it is unlikely that GFDRR interventions are equally effective in each and every context, the Firm is also strongly encouraged to conduct a contextual analysis of GFDRR interventions. This would require the Firm to look into *inter alia* stakeholder behavior, institutional capacities, and socio-economic trends.

In general, GFDRR is open to using new methods as they are developed and validated as credible and appropriate for measuring impact in complex environments and these methods can help answer *how* and *why* questions alongside *what* questions.

B. Data sources

Desk Review: The Firm will have to carry out a desk review of all relevant internal documents. GFDRR collects monitoring information related to its interventions through an online 'Results-Based Management System.' This information will be made available to the evaluator. In addition, GFDRR will provide all documentation related to World Bank development policy lending and investment operations which can be directly and indirectly linked to GFDRR interventions (e.g., GFDRR staff provided technical support to ensure risk was factored into the design of the operation or GFDRR financed analytical work which informed the design process).

Interviews and Focus Group Discussions: Interviews are considered to be a key component of the evaluation. As such, the Firm will be expected to develop an interview guide with research questions which will be presented for approval as part of the inception report. Considering the focus of the GFDRR program on national and sub-national processes of government, the evaluator is expected to conduct interviews with counterparts in national and city government agencies. In addition, given GFDRR's position within the World Bank, the evaluator will also have to carry out a series of interviews with World

Bank staff at HQ and Country Offices. Finally, the Firm can consider targeted one-on-one or focus group discussion at local level to capture data directly derived from the beneficiaries and other development partners.

Field Visits: The Firm is expected to visit 4 countries to conduct field research. These visits are expected to take up to 10 days. Given the timeline of the contract, the Firm may have to conduct some of the field visits simultaneously.

8. Country Selection

GFDRR will select four countries. Similar to the DARA Evaluation, it should not be assumed that findings in these countries apply across the board to the

GFDRR's programs. These four countries will be selected based on the following four criteria:

- Regional diversity:** the four selected countries should represent the GFDRR's most active regions;
- Significant scale and scope of GFDRR engagement:** the selected countries should have benefitted from number of grants across GFDRR's pillars of action;
- Number of years of engagement:** GFDRR should have been engaged for a number of years in the four selected countries (6-7 years);
- Potential for investigation of leveraging and influencing of investment operations:** The selected countries should have significant relevant portfolio to offer scope to consider this aspect.

9. Evaluation Process

1. Inception	2. Case Studies	3. Reporting Part 1
1.1 Desk Review <ul style="list-style-type: none"> DARA evaluation GFDRR strategic documents GFDRR program reports GFDRR stories of impact 	2.1 Preparation country visits <ul style="list-style-type: none"> Review of project documents Interview DRM focal points Identification stakeholders Preparation mission agenda Logistics 	3.1 Synthesizing data <ul style="list-style-type: none"> Qualitative review Quantitative review Triangulation and validation
1.2 Kick-off Meeting <ul style="list-style-type: none"> Meeting with GFDRR Meeting with DRM RCs 	2.2 HQ Interviews <ul style="list-style-type: none"> GFDRR World Bank 	3.2 Stories of Impact
1.3 Evaluation framework <ul style="list-style-type: none"> Approach Methodology Evaluation questions 	2.3 Field case studies <ul style="list-style-type: none"> Interviews Triangulation Analysis 	4. Reporting Part 2
1.4 Inception Report	2.4 Case Study Reports	
4.1 Technical Evaluation Report		

Communication and Liaising with GFDRR Task Team Manager

10. Deliverables and Timing

Inception Report: After an initial review of relevant documentation, the Firm will produce an inception report which sets out the evaluation framework. This will include: (i) evaluation framework (overall approach and risks/limitations), (ii) evaluation methodology (data collection and data analysis methods; key data sources); (iii) data collection instruments (questionnaires and interview guide); (iv) work plan (time line and responsibilities by evaluation phase); and (v) logistics. The inception report will be shared with GFDRR and the CG for review and clearance.

Case Studies: Following the country visits, the Firm will develop a report for each country. Each report will summarize the findings of the country visit. These reports will be shared with GFDRR, but do not require clearance.

Stories of Impact: The stories of impact will focus primarily on what GFDRR has achieved. The primary audience will be the Consultative Group. Each report will include: (i) the story of two beneficiaries⁷⁵; (ii) results and achievements; (iii) context; (iv) approach;

(v) lessons learned; and (vi) next steps. Each report will be 2-3 pages. These reports will be shared with GFDRR for review and clearance.

Technical Evaluation Report: The technical report will focus on *what* GFDRR has achieved but also provide a solid analysis of *why* and *how* GFDRR has (or has not) been able to achieve results on the ground (see scope of services). The primary audience will be the GFDRR Secretariat. This report provide a synthesis of the findings of the desk review, the interviews in Washington and the visited countries, and other data sources. The report will include a foreword, executive summary, and relevant annexes. The total recommended length of the executive summary is 3-4 pages. The total recommended length of the report is 35-40 pages, excluding annexes. This report will be shared with GFDRR and the CG for review and clearance.

Workshops: The Firm will organize and carry out a workshop before finalizing the inception report and another before finalizing the technical evaluation report and the stories of impact.

Timeline:

	December	January	February	March	April	May	June	July
Phase 1								
Phase 2								
Phase 3								
Phase 4								

⁷⁵ This will need to include one direct beneficiary (for example, a government official that participating in training events) and one indirect beneficiary (for example, a representative from a community that benefitted from a government program that GFDRR influenced/leveraged). This may require travel outside the country's capital.

Deadline:

#	Deliverables	Deadlines
Phase 1 - Inception		
1	Draft Inception Report	TBD
2	Workshop	TBD
3	Final Inception Report	TBD
Phase 2 – Case Studies		
4	Case Studies	TBD
Phase 3 - Reporting Part 1		
5	Draft Stories of Impact	TBD
6	Final Stories of Impact	TBD
7	Presentation by GFDRR Task Manager at Spring CG meeting	TBD
Phase 4 – Reporting Part 2		
8	Draft technical evaluation report	TBD
9	Workshop	TBD
10	Final technical evaluation report	TBD
11	Presentation by GFDRR Task Manager at Fall CG meeting	TBD

11. Staffing Requirements

The Firm has to propose a staffing plan and skill mix necessary to meet the objectives and scope of the services. If all the required skills are not available within the firm, they are encouraged to make joint ventures with other firms.

A. General requirements

The Firm should be able to demonstrate:

- Knowledge and experience with complex quantitative and qualitative evaluations;
- Demonstrated experience with World Bank and Trust Fund programs;
- In-depth knowledge of issues related to DRM policies and operations;
- Previous experience of theory-based approaches to evaluation;
- Previous experience with the evaluation and/ or operation of multi-donor programs or global partnerships (preferred);
- Excellent written and verbal communication skills.

B. Specific requirements

The Lead Evaluator should be able to demonstrate:

- Minimum of 15 years of professional experience in evaluating multi-disciplinary projects and programs;
- Experience with theory of change-based evaluations.

The team should comprise the following specialists:

- A Resilience / Recovery Specialist with extensive experience in monitoring and evaluation, particularly in the fields of international development, disaster risk management, climate change adaptation, policy influence, and organizational assessment;
- A DRM Indicators & Data Specialist who is knowledgeable of the general literature and current issues in development evaluation, particularly related to disaster risk management and climate change adaptation; Proven experience in field work is required;

- A Communications Specialist with proven understanding of international development issues. S/he should have a demonstrated ability to communicate the results of technical evaluations to a broader audience through a range of communication products, including but not limited to impact stories, infographics, and video.

The Firm is encouraged to engage national DRM/ Resilience specialists in the countries selected.

12. Project Management

The Client for this project is GFDRR. The Firm shall report and communicate the status and products of the project to GFDRR's evaluation Task Manager on a weekly basis after the project's initiation. In addition, there will be monthly project meetings via teleconference. The inception report should be provided at the first monthly project meeting. The final deliverables will have to be cleared by the Consultative Group (CG) and GFDRR Secretariat.

13. Resources to be provided by the Client

GFDRR will provide the following support to the selected Firm for the purposes of this assignment:

Data Collection:

- Original GFDRR Grant Proposals (including ToRs)
- Outputs
- Progress reports (RBMS reports, Aide-Memoirs, and BTORs) and Completion Reports
- Financial reports
- Access to key stakeholders in Washington HQ and the field

Expert Advice and Inputs, specifically:

- Guidance on data interpretation and analysis
- Field Visits

Project Management:

The GFDRR evaluation Task Manager will be the day-to-day project manager to oversight all aspects of the assignment. The GFDRR team supporting the evaluation will include the GFDRR Program Manager, the Track II Team Leader, and the former evaluation Task Manager.

14. Other

A. Selection Procedure And Form Of Contract

The Firm will be selected following the World Bank's Guidelines: Selection and Employment of Consultants by World Bank Borrowers (January 2011).

B. Payment schedule

The Firm will be remunerated for the deliverables as follows:

- 10% upon contract signature
- 10% upon delivery of Inception Report
- 30% upon delivery of Draft Evaluation Report and Impact Stories
- 40% upon delivery of Final Evaluation Report and Impact Stories
- 10% upon delivery of Edited Final Evaluation Report And Impact Stories

C. Duration of assignment

The duration of the contract will be for 6 months from mobilization.

Appendix B. Methodology

This appendix describes the methodology and instruments (i.e., interview protocols) used to assess the results achieved by GFDRR in Bangladesh, Dominica, Saint Lucia, Ethiopia, and Indonesia. The evaluation team originally presented this methodology in its Inception Report.

B.1. Evaluation Scope

This evaluation focused on GFDRR activities between 2008 and 2014. The geographical scope of the evaluation was five countries in four regions: Bangladesh, the Eastern Caribbean (Saint Lucia and Dominica), Ethiopia, and Indonesia. These countries/ regions were selected by GFDRR based on the following criteria:

- **Regional diversity:** the four selected countries should represent the GFDRR's most active regions;
- **Significant scale and scope of GFDRR engagement:** the selected countries should have benefitted from number of grants across GFDRR's pillars of action;
- **Number of years of engagement:** GFDRR should have been engaged for a number of years in the four selected countries (6–7 years); and
- **Potential for investigation of leveraging and influencing of investment operations:** the selected countries should have significant relevant portfolio to offer scope to consider this aspect.

B.2. Key Roles and Responsibilities

A consulting firm, ICF International (ICF), was selected through a competitive process to conduct this evaluation of GFDRR. The team was led by the Lead Evaluator, Mr. Mark Wagner, and the Deputy Evaluator was Ms. Jessica Kyle, joined by Ms. Charlotte Mack and Mr. Nikolaos Papachristodoulou as the other core evaluators. The ICF team was responsible for performing all information-gathering and analysis and preparing the evaluation work products. The ICF team reported directly to the GFDRR Evaluation Task Manager, Ms. Vica Rosario Bogaerts.

B.3. Evaluation Design and Framework

According to the Terms of Reference (ToR), the evaluation sought to answer the following four questions:

- Does GFDRR succeed in delivering planned analytical products and technical assistance?
- Is GFDRR able to use these interventions to leverage and influence new and ongoing investment programs?
- Are the activities to which GFDRR contributes achieving the outcomes intended?⁷⁶
- What evidence exists that GFDRR is achieving progress against the intended impact on the resilience of people to natural disasters?

B.3.1. Relationship to 2014 Evaluation

This evaluation was preceded by a GFDRR evaluation released in 2014: *Retrospective Evaluation of the GFDRR Program in a Sample of Disaster-Prone Countries*, conducted by DARA (hereafter referred to as the 2014 evaluation). The 2014 evaluation focused on GFDRR's work in five countries (Guatemala, Malawi, Nepal, Sri Lanka, and Vietnam) and was also tasked with testing assumptions and making recommendations about GFDRR's M&E framework and theory of change.

This evaluation sought to build on and complement the 2014 evaluation, while at the same time following its own methodology and responding to a different scope of work. In broad strokes, this evaluation followed a similar methodology to the 2014 evaluation; this evaluation used primarily qualitative approaches, drawing on evidence from desk review and key informant interviews, and using triangulation and other data analysis methods to identify evidence-based findings and recommendations. Two notable differences are discussed below.

Leveraging and influencing DRM resources. This evaluation sought to expand the understanding of the way GFDRR is able to leverage and influence resources for resilience, beyond what the 2014

⁷⁶ This evaluation question has been slightly re-phrased for clarity. The original ToR phrased this question differently: "Are these investment programs achieving the outcomes intended?" However, in most cases, given the size of GFDRR's contribution, the results of much broader World Bank investment programs would be outside the scope of GFDRR's plausible influence and thus outside the scope of this evaluation. Through desk review, this evaluation will clarify the activities to which GFDRR has contributed and assess the results of those activities.

evaluation found. In particular, this evaluation assessed the close partnership between GFDRR and the World Bank, in the context of findings on influence and leverage.

The evaluation adopted the definitions that:

- GFDRR has **influenced** resources when the program's activities contribute to improving the enabling environment for DRM (e.g., legal, institutional, or regulatory systems) or to integrating DRM into existing programs and budgets.
- GFDRR has **leveraged** resources when the program's activities contribute to securing new funding for DRM.⁷⁷

Intermediate outcomes. In contrast to the 2014 evaluation, this evaluation is not explicitly focused on drawing lessons learned and recommendations about GFDRR's entire M&E framework. This evaluation did field test new intermediate outcomes, which were developed by GFDRR and draw on standardized World Bank outcome indicators. The methodology for this field-testing is described in the sections that follow.

B.3.2. Evaluation Matrix

The evaluation team began by developing an evaluation matrix to guide the assessment process, as provided in the table below.

Table B-1. Evaluation Matrix

Evaluation Question	Evaluation Sub-Questions	Data Sources	Methods
Does GFDRR succeed in delivering planned analytical products and technical assistance?	<ul style="list-style-type: none"> Have the expected outputs been achieved? If not, what was delivered instead, and why? What obstacles and challenges were faced in the preparation and delivery of the outputs? How were these difficulties addressed? Were beneficiaries satisfied with the quality of the products and technical assistance received? If not, why not? 	<ul style="list-style-type: none"> Desk review of GFDRR grant proposals and ToRs, project products, progress reports, and completion reports Key informant interviews with GFDRR, World Bank, project implementing partners, government agencies and other beneficiaries 	Triangulation
Is GFDRR able to use these interventions to leverage and influence new and ongoing investment programs?	<ul style="list-style-type: none"> Has GFDRR influenced resources by improving enabling environments or helping governments integrate DRM into existing investments? Why and how? Have GFDRR activities contributed to securing new DRM funding (from domestic, donor, or private sources)? What types of GFDRR interventions have been most successful in influencing or leveraging investments? Why and how? What have been the most significant helping and hindering factors to influencing or leveraging investments? What role has the partnership between GFDRR and the World Bank played in leveraging and influencing new and ongoing investment programs? Could GFDRR have achieved the same results in the absence of that partnership? 	<ul style="list-style-type: none"> Desk review of ongoing and planned investments and the extent to which risk is integrated Key informant interviews with GFDRR, national and subnational government counterparts, World Bank and other partners 	Contribution analysis; timeline creation; triangulation

⁷⁷ For example, GFDRR would be considered to have leveraged resources if: GFDRR contributed to piloting a successful initiative that led to wider-scale funding from the national government; or GFDRR informed national dialogues with key ministries about the importance of investment DRM and new government resources were subsequently committed; or GFDRR contributed to a post-disaster assessment that helped secure financing for resilient recovery; or GFDRR contributed to a study that formed the basis for a project that was subsequently funded.

Evaluation Question	Evaluation Sub-Questions	Data Sources	Methods
Are the activities to which GFDRR contributes achieving the outcomes intended?	<ul style="list-style-type: none"> What were the intended outcomes of the activities to which GFDRR contributed? What changes have actually been observed in the behavior, activities, or actions of the relevant social actor (e.g., government institution, organization, communities) as a result of the activities to which GFDRR has contributed (i.e., Were the intended outcomes, or other outcomes, achieved)? What were the reasons for success or failure in delivering the expected results? What is the likelihood for future achievement of outcomes? What role has the partnership between GFDRR and the World Bank played in the achievement of results? Could GFDRR have achieved the same results in the absence of that partnership? 	<ul style="list-style-type: none"> Desk review of GFDRR grant proposals and ToRs, project products, progress reports, and completion reports Key informant interviews with GFDRR, World Bank, project implementing partners, government agencies and other beneficiaries 	Contribution and contextual analysis; timeline creation; triangulation
What evidence exists that GFDRR is achieving progress against the intended impact on the resilience of people to natural disasters?	<ul style="list-style-type: none"> Has GFDRR contributed to any activities that have measurably increased the resilience of people to natural hazards? If so, what evidence exists of this impact? If not, what is the likelihood that this impact may be achieved in the future? What else needs to happen to deliver this intended impact? 	<ul style="list-style-type: none"> Key informant interviews with GFDRR, World Bank, project implementing partners, government agencies and other beneficiaries Desk review of World Bank project completion reports 	Contribution analysis; triangulation

B.4. Data Collection Methods

The evaluation collected information from desk review and stakeholder consultation.

B.4.1. Desk Review

The evaluation team reviewed both internal and external documents relevant to GFDRR interventions, including:

- Documents and data produced by GFDRR, including GFDRR grant proposals and ToRs, project outputs, progress reports and completion reports, financial reports, strategic documents, program reports, and stories of impact.
- GFDRR monitoring information available through the Results-Based Monitoring System.
- Documentation related to World Bank development policy lending and investment operations that are directly or indirectly linked to GFDRR interventions.
- Hyogo Framework for Action reports.
- Relevant national/subnational development and DRM documents and secondary data.
- Previous evaluations of GFDRR.

- External documents related to the broader international and regional DRR context, such as those by UN bodies, NGOs and research organizations, MDBs, bilateral programs, and other entities.

A full list of documents consulted for this evaluation is provided in Appendix H.

B.4.2. Stakeholder Input

Stakeholder input was gathered primarily via key informant interviews and focus groups, in-person in Washington, DC, and during country visits, and via Skype or telephone when in-person interviews were not possible. Email inquiries were also made to supplement interviews or to facilitate follow up questions.

A list of priority informants was developed by the GFDRR Evaluation Task Manager (in consultation with GFDRR and World Bank staff) and provided to the evaluation team. To ensure that a range of perspectives are represented, the evaluation team reviewed and supplemented this list through a number of channels including: reviewing GFDRR grant documentation (e.g., project outputs, progress

and completion reports) to identify stakeholder names, making inquiries with TTLs or other project staff, and coordinating with our local consultants.

Key informant interviews and focus groups were conducted using a semi-structured interview format. The protocols that guided the interviews for each group of informants (GFDRR and World Bank staff; host country governments and other beneficiaries; and partners) are provided in Section B.7 below.

Country visits were conducted by two-person teams during March and April 2015: Ethiopia (March 2–10, Addis Ababa and Lasta Woreda); Indonesia (March 22–April 3, Jakarta, Yogyakarta,⁷⁸ and Padang⁷⁹); Saint Lucia (March 23–27); Dominica (March 30–April 1); and Bangladesh (April 4–9, Dhaka). The evaluation team was accompanied by national consultants in Ethiopia (Mr. Taye Yadessa), Indonesia (Dr. Riyanti Djalante), and Bangladesh (Mr. Mohammed Taher).

More than 200 stakeholders were consulted, as summarized in Table B-2 below; a full list of stakeholders consulted is provided in Appendix G.

A short online survey was also disseminated to 163 participants in GFDRR's Bangladesh Urban

Earthquake Resilience Program (BUERP) focus groups workshops, field investigations, high-level fora, Advisory Committee meetings, Scientific Consortium meetings, and the RSLUP training course. Twenty-three participants responded, for a response rate of approximately 14 percent.

B.5. Methods of Analysis

The evaluation utilized several analytical methods including hypothesis building and testing; contribution and contextual analysis; qualitative analysis of stakeholder input; and intermediate outcome indicator mapping (see text box). Triangulation was also used to synthesize and identify findings across methods.

Intermediate Outcome Indicator Mapping

Interview protocols included questions that attempted to elicit changes (outcomes) observed as a result of the activities to which GFDRR has contributed, and also asked interviewees to identify the important changes among those observed. ICF analyzed and categorized the responses to these questions and mapped those results to the proposed intermediate outcome indicators.

Table B-2. Summary of Stakeholders Consulted for the Evaluation

	Saint Lucia	Dominica	Ethiopia	Bangladesh	Indonesia	Non-Country Specific	Total
World Bank and GFDRR	1	3	7	6	4	7	28
National and Local Government	18	13	20	14	30	0	95
Development Partners	0	0	6	10	4	0	20
NGOs, Academia, and Civil Society Project Implementers and/or Beneficiaries	1	1	4	3	70	0	79
Total	20	17	37	33	108	7	222

⁷⁸ In Yogyakarta, the team visited numerous project sites: Three hantap (resettlements) in the sub-districts Umbul Harjo and Glagah Harjo; the demonstration plot in the dusun Kopeng where GFDRR funded technical assistance to provide advice on the ecosystem restoration; the kelurahan Bumijo in Segment 3 along the Winongo River, an urban ward where GFDRR has funded collaborative mapping; and a hantap in Bantul district (dusun Wukirsari), where GFDRR funded participatory landslide risk mapping.

⁷⁹ In Padang, the team visited five project sites: Kelurahan Lolong Belanti, one of the urban wards that have received a grant from GFDRR through PNPM, where representatives from the other three kelurahans that have received GFDRR grants were also in attendance (Bungo Psang, Lubuk Buayo, and Batang Harau); and four primary schools where either the current or former headmaster had participated in the safe schools pilot program.

Triangulation entails comparing findings across evaluation methods (as described above) and data sources (e.g., desk review, interviews in Washington and visited countries, and other sources) to identify findings that can be confirmed by multiple sources or methods. Triangulation minimizes the likelihood that anecdotes will factor in to the evaluation's findings, and also highlights which findings require further research for confirmation.

B.6. Limitations

The evaluation team is confident that the findings presented in this report are valid and evidence-based. However, the evaluation faced two key limitations.

The first was related to stakeholder availability and recall, particularly for grants that were administered earlier in the evaluation time period (e.g., 2008–2010). There was a risk that key informants' would not be able to remember—or remember accurately—events that happened as many as seven years ago. Institutional memory is particularly weakened by staff turnover. Recall can also be influenced by institutional, political, or social interests. To mitigate this risk, ICF set the scene carefully with key informants (e.g., by identifying projects, individual staff, or activities as specifically as possible) to improve recall, and triangulate interview evidence with other data collected. For a few grants, the evaluation team

was unable to identify any project proponents or beneficiaries to interview; for several other grants, the evaluation team was unable to triangulate evidence from project leads at the World Bank because project beneficiaries or third-party stakeholders with knowledge of the grant could not be identified in-country.

The second limitation was related to the lack of a baseline or stated expectations for outputs and outcomes against which evidence of progress could be measured. Many GFDRR grant proposals do not describe expected outputs or outcomes in terms that are conducive for meaningful evaluation; for example, several of the Bangladesh grant proposals—with activities ranging from conference support, to PDNA development, to cofinancing of the Cyclone Sidr recovery project—list the following as the grant's expected outcome: "All organizations, personnel and volunteers responsible for maintaining preparedness are equipped and trained for effective disaster preparedness and response." As a result, it was not possible to assess outputs and outcomes against "plan" consistently. Instead, the evaluation supplemented grant proposals with GFDRR program documentation (including the GFDRR Strategy and monitoring and evaluation information) along with our expert judgment to make determinations about reasonable expectations for results given grant activities.

B.7. Interview Protocols

Protocol for key informant interviews: GFDRR and World Bank Staff

Date: _____ Name: _____

Country: _____ Title: _____

Sex: Male Female Organization: _____

Interviewer(s): _____

Introduction

- Inform the interviewee of the overall aim of the interview, the time allotted, and that their comments will not be attributed.
- If appropriate, ask the interviewee to begin with a brief description of their involvement with GFDRR.

Guiding Research Questions for Interviews

1. Please describe what you think GFDRR does as a program. What does the program seek to achieve?
2. Has the way GFDRR operates in [country] evolved over time? If so, please describe.
3. What are GFDRR's activities or outputs in [country]?
 - a. Were these activities/outputs consistent with plans? If not, how and why did they change?
 - b. Do you think that beneficiaries were satisfied with the activities/outputs?
 - c. Which activities have made the biggest difference in [country]? Why?
4. If GFDRR's activity contributed to a larger output (for example, a joint product with multiple partners), what was the value added of GFDRR's contribution?
5. If GFDRR funded the time of staff in [country], what were the results of that contribution?
6. What was the relationship of the GFDRR activity to other World Bank activities?
7. What results (intermediate outcomes/outcomes) do you ultimately anticipate from each activity/output to which GFDRR has contributed?

Prompt: Organize results by GFDRR pillar. Use intermediate outcomes and outcomes from GFDRR documents. Other examples include: behavioral changes like adopting new practices or changed attitudes; or systemic changes like improved institutional capacity, implementation of new or revised plans or policies, increased DRM-related investments.

8. What changes have you observed in the behavior, activities, or actions of [institution, organization, community, etc.] as a result of the activities/outputs to which GFDRR has contributed?

Prompt: For example, if GFDRR contributed to a study, has the study changed the evolution or development of an existing or a new project? Or, if GFDRR helped bring stakeholders together, what effects do you observe as a result?

- a. What evidence can you provide of these changes?
- b. Among these changes, which is the most important for improving DRM in [country]? Why?
- c. What future outcomes do you anticipate? What is the likelihood of achieving those?

9. [If not raised in response to Question #7] Has GFDRR contributed to activities that improved the enabling environment for DRM and/or resulted in the integration of DRM into existing programs/investments? Why and how? Please give specific examples.
 - a. Has GFDRR support helped to improve the results derived from [country's] spending on DRM?
 - b. Has GFDRR's influence led to securing new DRM funding (e.g., from domestic, donor, or private sector sources)?
10. What were the reasons for success or failure in delivering the expected results?
 - a. What factors were helpful in achieving these results?
 - b. What factors hindered the achievement of these results? How were obstacles or problems addressed?
11. Have there been any other effects as a result of this activity?

Prompt: For example, effects on internal World Bank operations, effects on the development of other projects, other DRM investments made or influenced, etc.
12. What is the extent of coordination with national and/or local governments and other partners?
13. To what extent are GFDRR activities complementary to and coordinated with activities of the World Bank?
 - a. What role has the partnership between GFDRR and the World Bank played in the achievement of results?
 - b. In your opinion, could GFDRR have made a similar contribution to results without its partnership with the World Bank?
14. To date, have any people in [country] experienced increased resilience to natural hazards, as a result of activities to which GFDRR has contributed?
 - a. If so, what evidence can you provide of these impacts?
 - b. If not, what is the likelihood that this impact may be achieved in the future? What else needs to happen to deliver this intended impact?
 - c. How and to what extent will GFDRR's impacts be sustained in the future? (e.g., have strategies or plans been developed? What support is there to implement those strategies or plans?)
15. What lessons have you learned from GFDRR's engagement in [country]?
 - a. How can GFDRR's interventions be improved in future?
 - b. What, if anything, could be done differently to improve the positioning of GFDRR to influence effective DRM? Are there any changes of approach or procedure that might help GFDRR to be more effective?
16. What would you have GFDRR focus on in [country] moving forward? Are there other areas in which GFDRR support could have significant impact?

Protocol for key informant interviews: Host Country Governments and Other Beneficiaries

Date: _____ Name: _____

Country: _____ Title: _____

Sex: Male Female Organization: _____

Interviewer(s): _____

Introduction

- Inform the interviewee of the overall aim of the interview, the time allotted, and that their comments will not be attributed.

Guiding Research Questions for Interviews

1. Were you satisfied with [the activity to which GFDRR contributed]? If not, why not?
2. Did [the activity to which GFDRR contributed] address a specific priority for your government [or community/country]?
3. What changes have you observed in your [institution, organization, community, etc.] as a result of [the activity to which GFDRR contributed]?
Prompts: For example, if GFDRR contributed to a study, has the study changed the evolution or development of an existing or a new project? Or, if GFDRR helped bring stakeholders together, what effects do you observe as a result? Has GFDRR support to your [institution, organization, community, etc.] influenced other projects or stakeholders? If so, how?
 - a. What evidence can you provide of these changes?
4. Among these changes, which is the most important for improving DRM in [country]? Why?
 - a. What do you expect to be the long-term effects of [the output to which GFDRR contributed]?
 - b. What other future outcomes do you anticipate? What is the likelihood of achieving those?
5. [If not raised in response to Question #3] Has [the activity to which GFDRR contributed] improved the enabling environment for DRM and/or resulted in the integration of DRM into existing programs/investments? Why and how? Please give specific examples.
 - a. Has GFDRR support helped to improve the results derived from [country's] spending on DRM?
 - b. Has GFDRR's influence led to securing new DRM funding (e.g., from domestic, donor, or private sector sources)?
6. Were any obstacles or problems encountered in the delivery of [the output to which GFDRR contributed]? How were these addressed?
7. To date, have any people in [country] experienced increased resilience to natural hazards, as a result of [the activity to which GFDRR contributed]?
 - a. If so, what evidence can you provide of these impacts?
 - b. If not, what is the likelihood that this impact may be achieved in the future? What else needs to happen to deliver this intended impact?
 - c. How and to what extent will the activity's impacts be sustained in the future? (e.g., Have strategies or plans been developed? What support is there to implement those strategies or plans?)
8. What lessons have you learned from [the output to which GFDRR contributed]? How can interventions be improved in future?

Protocol for key informant interviews: Partners

Date: _____ Name: _____

Country: _____ Title: _____

Sex: Male Female Organization: _____

Interviewer(s): _____

Introduction

- Inform the interviewee of the overall aim of the interview, the time allotted, and that their comments will not be attributed.
- If appropriate, ask the interviewee to begin with a brief description of their engagement with GFDRR.

Guiding Research Questions for Interviews

1. Please describe what you think GFDRR does as a program. What does the program seek to achieve?
2. What was GFDRR's contribution to [larger output with partner]?
 - a. Were you satisfied with that contribution?
 - b. What was GFDRR's value added?
3. What results (intermediate outcomes/outcomes) do you ultimately anticipate from [the output to which GFDRR contributed]?
Prompt: Use intermediate outcomes and outcomes from GFDRR documents. Other examples include: behavioral changes like adopting new practices or changed attitudes; or systemic changes like improved institutional capacity, implementation of new or revised plans or policies, increased DRM-related investments.
4. What changes have you actually observed in the behavior, activities, or actions of [institution, organization, community, etc.] as a result of [the output to which GFDRR contributed]?
Prompt: For example, if GFDRR contributed to a study, has the study changed the evolution or development of an existing or a new project? Or, if GFDRR helped bring stakeholders together, what effects do you observe as a result?
 - a. What evidence can you provide of these changes?
 - b. Among these changes, which is the most important for improving DRM in [country]? Why?
 - c. What future outcomes do you anticipate? What is the likelihood of achieving those?
5. [If not raised in response to Question #4] Has GFDRR contributed to activities that improved the enabling environment for DRM and/or resulted in the integration of DRM into existing programs/investments? Why and how? Please give specific examples.
 - a. Has GFDRR support helped to improve the results derived from [country's] spending on DRM?
 - b. Has GFDRR's influence led to securing new DRM funding (e.g., from domestic, donor, or private sector sources)?
6. Has GFDRR support helped to improve the results derived from [country's] spending on DRM?
 - a. Has GFDRR's influence led to securing DRM funding (e.g., from domestic, donor, or private sector sources)?
7. What were the reasons for success or failure in delivering the expected results?
 - a. What factors were helpful in achieving these results?
 - b. What factors hindered the achievement of these results? How were obstacles or problems addressed?

8. Have there been any other effects as a result of this activity/output?
Prompt: For example, effects on internal World Bank operations, effects on the development of other projects, other DRM investments made or influenced, etc.
9. How effectively has GFDRR coordinated with other partners in [country] to achieve results?
10. What role has the partnership between GFDRR and the World Bank played in the achievement of results?
 a. In your opinion, could GFDRR have made a similar contribution to results without its partnership with the World Bank?
11. To date, have any people in [country] experienced increased resilience to natural hazards, as a result of [the output to which GFDRR contributed]?
 a. If so, what evidence can you provide of these impacts?
 b. If not, what is the likelihood that this impact may be achieved in the future? What else needs to happen to deliver this intended impact?
 c. How and to what extent will GFDRR's impacts be sustained in the future? (e.g., have strategies or plans been developed? What support is there to implement those strategies or plans?)
12. What lessons have you learned from your partnership with GFDRR in [country]?
 a. How can GFDRR's expertise and resources be used most effectively in future?
 b. What, if anything, could be done differently to improve the positioning of GFDRR to influence effective DRM? Are there any changes of approach or procedure that might help GFDRR to be more effective?
13. What would you have GFDRR focus on in [country] moving forward? Are there other areas in which GFDRR support could have significant impact?

Appendix C. Overview of GFDRR Portfolio Evaluated

Table C-1 below summarizes key information on each of the grants provided to the five countries investigated during this evaluation.

Table C-1. Key Information on GFDRR Grants

Grant	Year	Value	Types of Activities	Pillar(s)
Bangladesh				
Bangladesh Urban Earthquake Resilience Project (BUERP) Phase I & II	2012/2013–Ongoing	\$2.8 million	<ul style="list-style-type: none"> Capacity building Analytical product Technical assistance 	<ul style="list-style-type: none"> Risk Identification Risk Reduction
Coastal Embankment Improvement Project (CEIP) Research Support	2013–Ongoing	\$200,000	<ul style="list-style-type: none"> Technical assistance 	<ul style="list-style-type: none"> Risk Reduction
Support Rehabilitation in Cyclone Sidr-affected Areas (ECRRP)	2009–2013	\$3.2 million	<ul style="list-style-type: none"> Investments in agricultural recovery, multipurpose disaster shelters, technical assistance 	<ul style="list-style-type: none"> Resilient Recovery
Climate Change and Flood Risks for Agriculture	2008–2009	\$61,000	<ul style="list-style-type: none"> Analytical product 	<ul style="list-style-type: none"> Risk Identification
Agriculture Risk Insurance Feasibility Study	2007–2010	\$125,000	<ul style="list-style-type: none"> Analytical product 	<ul style="list-style-type: none"> Financial Protection
Background Studies for Improving Bangladesh's Response and Recovery Activities in the Aftermath of Disasters	2008–2010	\$79,000	<ul style="list-style-type: none"> Analytical product 	<ul style="list-style-type: none"> Resilient Recovery
Support to UK-Bangladesh Climate Change Conference	2007–2008	\$107,000	<ul style="list-style-type: none"> Analytical product 	<ul style="list-style-type: none"> Resilient Recovery Risk Reduction
Capacity Building in Damage and Loss Assessment (DaLA)	2007–2013	\$383,000	<ul style="list-style-type: none"> Capacity building 	<ul style="list-style-type: none"> Resilient Recovery
Joint Damage, Loss, and Needs Assessment (DLNA) for Cyclone Sidr	2008–2010		<ul style="list-style-type: none"> Analytical product 	<ul style="list-style-type: none"> Resilient Recovery
Eastern Caribbean (Dominica and Saint Lucia)				
<i>Country Grants</i>				
Hazard and Disaster Risk Assessment Framework in Saint Lucia: Preparation of Vulnerability Reduction	2012–Ongoing	\$300,000	<ul style="list-style-type: none"> Capacity building Analytical product Technical assistance Policy dialogue 	<ul style="list-style-type: none"> Risk Identification Risk Reduction Financial Protection
Saint Lucia Damage and Loss Assessment of December 2013 Floods	2013–2014	\$50,000	<ul style="list-style-type: none"> Capacity building Damage assessment Analytical product 	<ul style="list-style-type: none"> Resilient Recovery
Spatial data management and identification of the most vulnerable schools and shelters in Dominica	2013–Ongoing	\$522,000	<ul style="list-style-type: none"> Capacity building Analytical product Technical assistance 	<ul style="list-style-type: none"> Risk Identification Risk Reduction
St. Vincent and the Grenadines Floods and Landslides 2013	2014	\$50,000	<ul style="list-style-type: none"> Capacity building Damage assessment Analytical product 	<ul style="list-style-type: none"> Risk Identification
<i>Regional Grants</i>				
Caribbean Risk Atlas	2009–2013	\$765,000	<ul style="list-style-type: none"> Analytical product Capacity building 	<ul style="list-style-type: none"> Risk Identification
Scoping Mission and PDNA Preparation, Eastern Caribbean	2010–2011	\$100,000	<ul style="list-style-type: none"> Damage assessment Analytical product 	<ul style="list-style-type: none"> Resilient Recovery

Grant	Year	Value	Types of Activities	Pillar(s)
Support to Design a Climate Proofing Program for Public Infrastructure Program for Eastern Caribbean	2010–2012	\$150,000	<ul style="list-style-type: none"> Capacity building Technical assistance 	<ul style="list-style-type: none"> Risk Identification Risk Reduction
Management of Slope Stability in Communities (MoSSaiC): Handbook & Resources Publication	2012–2013	\$150,000	<ul style="list-style-type: none"> Analytical product 	<ul style="list-style-type: none"> Risk Identification Risk Reduction
Support and participation to the 6th Caribbean Conference on Comprehensive Disaster Management	2012	\$110,000	<ul style="list-style-type: none"> Capacity building Knowledge sharing 	<ul style="list-style-type: none"> Risk Identification Preparedness Risk Reduction Financial Protection
MoSSaiC Caribbean Community of Practitioners	2013–Ongoing	\$550,000	<ul style="list-style-type: none"> Capacity building Knowledge sharing 	<ul style="list-style-type: none"> Risk Identification Risk Reduction
Strengthening Capacity in Post Disaster Needs Assessment in the Caribbean	2012–Ongoing	\$373,000	<ul style="list-style-type: none"> Capacity building Knowledge sharing 	<ul style="list-style-type: none"> Resilient Recovery Preparedness
Caribbean Risk Information Programme to support the Integration of DRM Strategies in Critical Sectors	2012–Ongoing	\$1.34 Million	<ul style="list-style-type: none"> Capacity building Knowledge sharing 	<ul style="list-style-type: none"> Risk Identification Risk Reduction
Ethiopia				
Ethiopia's Disaster Risk Management Country Plan	2010–Ongoing	\$1.275 million	<ul style="list-style-type: none"> Capacity building Analytical product Technical assistance Policy dialogue 	<ul style="list-style-type: none"> Risk Identification Risk Reduction Preparedness Financial Protection
Capacity Building in Post Disaster Needs Assessment	2012–2013	\$47,000	<ul style="list-style-type: none"> Capacity building 	<ul style="list-style-type: none"> Resilient Recovery
Weather Risk Management Framework using Weather-Based Indices	2009–2010	\$329,000	<ul style="list-style-type: none"> Capacity building Analytical product Technical assistance 	<ul style="list-style-type: none"> Risk Identification Preparedness Financial Protection
Facilitating provision of baseline vulnerability information on flood exposed communities in Ethiopia	2007–2012	\$344,000	<ul style="list-style-type: none"> Analytical product Technical assistance Capacity building 	<ul style="list-style-type: none"> Risk Identification
Implementation Support for the Ethiopia Disaster Risk Management Investment Framework	2013–Ongoing	\$200,000	<ul style="list-style-type: none"> Technical assistance Capacity building Policy dialogue 	<ul style="list-style-type: none"> Risk Reduction Preparedness
Mitigating impacts of adverse shocks on nutrition and health	2008–2010	\$343,000	<ul style="list-style-type: none"> Capacity building Analytical product Technical assistance 	<ul style="list-style-type: none"> Risk Identification Risk Reduction Preparedness
Indonesia				
BNPB Capacity Building	2014–Ongoing	\$800,000	<ul style="list-style-type: none"> Capacity Building 	<ul style="list-style-type: none"> Risk Reduction
Mainstreaming DRR Phase II	2013–Ongoing	\$1.6 million	<ul style="list-style-type: none"> Capacity Building Technical Assistance Analytical Product 	<ul style="list-style-type: none"> Risk Identification Preparedness Financial Protection
Mainstreaming DRR Phase I	2007–2011	\$1.2 million	<ul style="list-style-type: none"> Capacity Building Technical Assistance Analytical Product 	<ul style="list-style-type: none"> Risk Identification Risk Reduction Financial Protection
Mainstreaming DRR into PNPM	2011–Ongoing	\$2.4 million	<ul style="list-style-type: none"> Capacity Building Technical Assistance 	<ul style="list-style-type: none"> Risk Identification Preparedness Risk Reduction
West Sumatra and Jambi PDNA	2009–2011	\$131,000	<ul style="list-style-type: none"> Analytical Product 	<ul style="list-style-type: none"> Resilient Recovery
Mainstreaming DRR into the World Bank's Local Economic Development Project in Nias	2008–2009	\$50,000	<ul style="list-style-type: none"> Analytical Product 	<ul style="list-style-type: none"> Risk Reduction

Appendix D. Country Results Matrices

The tables below present a matrix of achieved and potential results for each country/region. These tables are part of the evidentiary base for the findings presented in the main report.

Note that some outcomes and impacts have yet to be achieved, although the evaluation team found evidence of potential to achieve these results. These potential outcomes and impacts are shown in italics.

D.1. Bangladesh Results Matrix

Pillar(s)	Grant/Activity	Outputs	Intermediate Outcomes / Outcomes	Impacts
Risk Reduction; Risk Identification	Bangladesh Urban Earthquake Resilience Project (BUERP) Phase I & II	<ul style="list-style-type: none"> Convened six field investigations, 22 focus group workshops, two high level fora, four Advisory Committee meetings and four Scientific Consortium Meetings. Prepared seven foundational documents and several related outreach materials: <ul style="list-style-type: none"> Dhaka Profile and Earthquake Risk Atlas (April 2014), and Earthquake Risk in Dhaka Poster and Brochure Dhaka Earthquake Risk Guidebook, also known as the Hazards, Vulnerability, and Risk Assessment (HVRA) Guidebook (February 2014) Risk-Sensitive Land Use Planning Guidebook (February 2014), and RSLUP Brief Information, Education, & Communication Action Plan (February 2014) Training and Capacity Building Action Plan (February 2014) Legal and Institutional Arrangements (LIA) Framework Guidebook (February 2014) Road Map for Disaster Data Sharing Platform (GEODASH) (February 2014) Delivered blended (i.e., combined face-to-face and online) training course on Risk-Sensitive Land Use Planning (RSLUP). Developed a GEODASH platform 	<ul style="list-style-type: none"> Increased understanding and awareness of earthquake risk and RSLUP among key stakeholders in Dhaka, which was previously low. Reached consensus among focus group participants on the need to act jointly to increase resiliency to earthquake risk in Dhaka. Increased understanding of roles and responsibilities stated in the Standing Orders on Disaster of the different actors involved in emergency preparedness and response (including actors outside the so-called DRM system). Developed and strengthened relationships among key individuals in agencies with DRR responsibilities in Dhaka. Raised awareness on the need for open access to data and information through the preparation of the risk atlas and the creation of a GEODASH community. Greater availability of information about earthquake risk in Dhaka. <i>Potential for stronger institutional capacities for DRR among key Dhaka government agencies.</i> <i>Potential for greater application of risk information in public policy and investment planning.</i> Investment made in risk reduction measures that GFDRR has helped leverage the \$182 million World Bank investment project, Bangladesh Urban Resilience Project, approved on March 24, 2015. <i>Potential for improved performance of national/city agencies in the quality and timeliness of emergency response.</i> 	<ul style="list-style-type: none"> <i>Potential for impacts via the URP—this investment project is anticipated to indirectly benefit the 15.5 million people living under the authority of the DNCC, DSCC, and Sylhet City Corporation (SCC) due to access to improved emergency preparedness and response services.</i>
Risk Reduction	Coastal Embankment Improvement Project (CEIP) Research Support	<ul style="list-style-type: none"> Convened stakeholder workshop in Dhaka to identify the main knowledge gaps for CEIP-I's Component C3 on Long Term Monitoring, Research and Analysis of the Bangladesh Coastal Zone. Helped the Bangladesh Water Development Board to develop the ToR for these research activities (Sustainable Polders Adapted to Coastal Dynamics). 	<ul style="list-style-type: none"> Facilitated exchange of information on estuarine and coastal morphology and geomorphology from national and international experts. <i>Potential for better-designed, higher-quality research and monitoring on complex coastal system via the improved ToR.</i> <i>Potential to develop evidence base to inform the design of future investments under the CEIP-I, and potential for sharing of lessons learned to improve coastal management more broadly; GFDRR contribution would be via improvement of the ToR.</i> 	<ul style="list-style-type: none"> <i>GFDRR may indirectly contribute to increased resilience to natural disasters through better designed future projects CEIP-I is expected to provide direct protection to 760,000 people living within the polder boundaries.</i>

Pillar(s)	Grant/Activity	Outputs	Intermediate Outcomes / Outcomes	Impacts
Resilient Recovery	Support Rehabilitation in Cyclone Sidr-affected Areas (ECRRP)	<ul style="list-style-type: none"> GFDRR's inputs to ECRRP were in the form of co-financing. 	<ul style="list-style-type: none"> Introduced improved crop cultivation, aquaculture production and livestock rearing practices to cyclone affected communities. Contributed to the recovery of agriculture livelihoods for cyclone affected populations as a result of Component A outputs, although it is not possible to characterize the extent of this contribution. Fully funded the improvement of 33 existing cyclone shelters in Bagerhat and Barisal districts and partially funded the improvement of 20 existing shelters and 10 <i>killas</i> in Barguna and Bhola districts. <i>Potential to improve current approach to shelter construction as a result of introducing multipurpose buildings.</i> <i>Potential for contributing to reduced risk to cyclone affected population due to improved cyclone shelters.</i> 	<i>GFDRR resources have contributed to increased resilience to natural disaster for cyclone affected populations.</i>
Risk Identification	Climate Change and Flood Risks for Agriculture	<ul style="list-style-type: none"> Delivered the report "Hydrological Modelling for the Implication of Climate Change on Food Security of Bangladesh: A Menu of Adaptation Responses." 	<ul style="list-style-type: none"> Limited evidence suggests this report informed the agricultural adaptation options under ECRRP. 	
Financial Protection	Agriculture Risk Insurance Feasibility Study	<ul style="list-style-type: none"> Delivered report which investigated the viability of agricultural insurance in Bangladesh, particularly for small and marginal farmers, and presented a set of options for the future development of agricultural insurance in the country. 	<ul style="list-style-type: none"> Outcomes were not achieved due to lack of follow up funding and the resulting discontinued engagement with the GoB. 	
Resilient Recovery	Background Studies for Improving Bangladesh's Response and Recovery Activities in the Aftermath of Disasters	<ul style="list-style-type: none"> Prepared background papers and guidelines: (i) Improving Bangladesh's Response and Recovery Activities in the Aftermath of Disasters: An Institutional Assessment; (ii) Improving Bangladesh's Response and Recovery Activities in the Aftermath of Disasters: Review of Administrative Systems; (iii) Evaluation of Safety Net Programs for the Disaster Affected People; and (iv) Bangladesh: Local Government Disaster Management-Social Safety Nets (DM-SSNs) Handbook. Not all outputs were finalized. 	<ul style="list-style-type: none"> Limited evidence is available regarding the results of this grant. The grant was dropped, and not all outputs were finalized, suggesting limited potential for follow-on effects. 	

Pillar(s)	Grant/Activity	Outputs	Intermediate Outcomes / Outcomes	Impacts
Resilient Recovery; Risk Reduction	Support to UK-Bangladesh Climate Change Conference	<ul style="list-style-type: none"> Prepared two background papers: (i) Our Vision is a Climate Resilient Bangladesh; and (ii) procedures and benefits of establishing a Multi Donor Trust Fund for Bangladesh, for a high-level conference on the impacts of climate change in Bangladesh hosted by the United Kingdom Department for International Development in London 	<ul style="list-style-type: none"> Provided technical substance for the conference. Informed the preparation of a) Bangladesh Climate Change Strategy and Action Plan as well as b) the concept note for the Bangladesh Climate Change Resilience Fund. 	
Resilient Recovery	Capacity Building in Damage and Loss Assessment (DaLA)	<ul style="list-style-type: none"> Delivered training guidelines and a four-day training on DaLA. 	<ul style="list-style-type: none"> Limited evidence available regarding any capacity-building outcomes associated with the delivery of this training. Exposure of government staff to DaLA may have generated support for the formation of the Disaster Needs Assessment Cell, which was established within the Department of Disaster Management and supported by ECRRP. 	
Resilient Recovery	Joint Damage, Loss, and Needs Assessment (DLNA) for Cyclone Sidr	<ul style="list-style-type: none"> Led the implementation of a comprehensive assessment of socio-economic impact and recovery and reconstruction needs following the 2007 Cyclone Sidr. Delivered the DLNA report. 	<ul style="list-style-type: none"> Contributed to greater availability of information about needs and quantified financial requirements for DRM. Analysis of the damage and loss assessment informed the government strategy and policy, as well as donor strategy, including World Bank country and sector strategies. Analysis of the damage and loss assessment informed and influenced the preparation of new government and donor development financing. Helped leverage and influence financing for resilient recovery, including more than \$1,234 million in World Bank programs. 	<i>May have contributed to increased resilience to natural disasters as a result of building disaster resilience into the recovery process, or strengthened disaster recovery planning in Bangladesh.</i>

D.2. Eastern Caribbean Results Matrix

Pillar(s)	Grant / Activity	Outputs	Intermediate Outcomes/Outcomes	Impacts
Risk Identification Risk Reduction Financial Protection	Hazard and Disaster Risk Assessment Framework in Saint Lucia: Preparation of Vulnerability Reduction	<ul style="list-style-type: none"> Developed a hazard information database; the evaluation was not able to find evidence of delivery of related outputs described the grant proposal. Developed a specialized survey administered to 1,500 households and field manual relation to climate change adaptation, in support of the design of the CAF. Designed a survey and field manual on the structural assessment of households. Provided capacity building associated with development, implementation, and analysis of the surveys. 	<ul style="list-style-type: none"> Limited evidence on outcomes associated with the hazard information database. Increased capacity of enumerators to develop and carry out surveys. Potential for strengthening adaptation financing through a better-designed CAFF. <i>Potential for pre-emptive DRM decision-making through raising awareness around the infrastructure-related costs of a disaster.</i> <i>Potential to incorporate questions on climate change into the census to track changes over time.</i> 	<i>Potential for indirect impacts if a better-designed CAFF enables citizens of Saint Lucia to better access adaptation funding.</i>
Resilient Recovery	Saint Lucia Damage and Loss Assessment of December 2013 Floods	<ul style="list-style-type: none"> Prepared a Joint Rapid Damage and Needs Assessment. Trained 33 participants on Damage, Loss, and Needs Assessment methodology (DLNA). Prepared an assessment of the hydrometeorological and geotechnical characteristics of the storm. Communicated short- and long-term recommendations for recovery and improved resilience to the Government of Saint Lucia and technical experts within ministries. 	<ul style="list-style-type: none"> JRDNA recommendations helped the GoSL push forward certain prioritized activities. JRDNA used to leverage emergency response resources (\$17 million) from the World Bank's Crisis Response Window. Some recommendations included in the JRDNA are now funded under the DVRP. 	<i>Potential to increase resilient recovery as a result of funds for priorities identified in the JRDNA.</i>

Pillar(s)	Grant / Activity	Outputs	Intermediate Outcomes/Outcomes	Impacts
Risk Identification Risk Reduction	Spatial data management and identification of the most vulnerable schools and shelters in Dominica	<ul style="list-style-type: none"> Incorporated vulnerability into the annual shelter assessment process—including questionnaires, data collection and storage tools, field guides, and an inventory. Provided technical assistance and capacity building for the development of a new amenity component, which included an updated pre-assessment form and revised database to store the pre-assessment information, as well as development of a revised methodology for conducting the structural assessment of shelters. Developed a multi-criteria assessment methodology for prioritizing shelters for vulnerability reduction. Developed building standards. Provided workshops and trainings to build capacity. Provided training for and partial development of spatial data infrastructure. Delivered initial capacity building on use and sharing of spatial data management platforms. Undertook policy dialogue with GoD to develop a data usage and sharing policy. 	<ul style="list-style-type: none"> Raised awareness on open source information sharing platforms and their use. Increased capacity of representatives within the Government of Dominica to collect, harmonize, store, and share geospatial data. Supported the development of an information sharing policy within Dominica. <i>Potential for increasing the capacity within Dominica to use geo-spatial information in decision-making related to DRR.</i> <i>Potential for improved generation and communication of disaster risk information via Dominode (Risk Identification).</i> <i>Potential for greater application of risk information in public policy and investment planning (Risk Identification).</i> Revised and streamlined the approach for seasonal assessment of shelters to better account for vulnerability and increased capacity of Government of Dominica to use the approach. Facilitated exchange of knowledge related to building standards for shelters. Increased the capacity of the Government of Dominica to design resilient shelters. Improved generation and communication of disaster risk/vulnerability information for shelters (Risk Identification). <i>Potential for increased application of risk information in public policy and investment planning for shelters (Risk Identification).</i> <i>Potential for shelters to be made safer through retrofitting or resilient construction (Risk Reduction).</i> 	<ul style="list-style-type: none"> <i>Potential to increase resilience to natural disasters as a result of improved information and decision-making.</i> <i>Potential to increase resilience to natural disasters as a result of more resilient shelters.</i>

Pillar(s)	Grant / Activity	Outputs	Intermediate Outcomes/Outcomes	Impacts
Resilient Recovery	Scoping Mission and PDNA Preparation, Eastern Caribbean	<ul style="list-style-type: none"> Contributed a preliminary assessment of damages and needs for 2010 Hurricane Tomas in Saint Lucia. Provided a report reviewing the World Bank financed DRM projects in the aftermath of Hurricane Tomas. 	<ul style="list-style-type: none"> Preparation of PDNA informed the post-disaster recovery project. 	<i>Potential to increase resiliency through post-disaster recovery project.</i>
Risk Identification Risk Reduction	Management of Slope Stability in Communities (MoSSaiC): Handbook and Resources Publication	<ul style="list-style-type: none"> Provided resources for World Bank publication of the MoSSaiC Handbook. 	<ul style="list-style-type: none"> <i>Potential to contribute to increased dissemination and capacity building using MoSSaiC methodology, via a complementary grant.</i> 	
Risk Identification Preparedness Risk Reduction Financial Protection	Support and participation to the 6th Caribbean Conference on Comprehensive Disaster Management	<ul style="list-style-type: none"> Supported the participation of stakeholders working on physical planning. Contributed to a conference session focused on donor coordination and outreach. 	<ul style="list-style-type: none"> No evidence. 	
Risk Identification Risk Reduction	MoSSaiC Caribbean Community of Practitioners	<ul style="list-style-type: none"> <i>Expected to support a training course for ~30 participants from 6 countries in the MoSSaiC methodology that will be repeated on three occasions.</i> 		
Resilient Recovery Preparedness	Strengthening Capacity in Post Disaster Needs Assessment in the Caribbean	<ul style="list-style-type: none"> <i>Expected to facilitate PDNA workshops for English speaking Caribbean countries.</i> 		
Risk Identification Risk Reduction	Caribbean Risk Information Programme to support the Integration of DRM Strategies in Critical Sectors	<ul style="list-style-type: none"> Developed methodological framework for the generation and application of landslide and flood hazard maps for use in decision-making. Developed case studies on landslides and floods using the methodological framework—including field work, studies, and hazard maps. Developed an on-line handbook containing resources and tools for stakeholders to use in decision-making. Provided capacity building in application of the methodological framework through workshops, training, and technical assistance. 	<ul style="list-style-type: none"> Built ownership and buy-in through continued engagement and capacity building over the course of the program. Created a sense of empowerment and enthusiasm among CHaRIM participants, which has a potential to help facilitate longer-term impacts. Stakeholders adopted hazard maps developed under this project. Increased regional knowledge sharing. Informants reported that CHaRIM participants have started to communicate outside of the workshops to support one another in their day-to-day work. <i>Potential to increase risk identification and integrate risk consideration into development decision-making.</i> 	

D.3. Ethiopia Results Matrix

Pillar	Grant / Activity	Outputs	Intermediate Outcomes/Outcomes	Impacts
Risk identification	Ethiopia Disaster Risk Management Country Plan / Woreda Disaster Risk Profiling	<ul style="list-style-type: none"> Developed 35 WDRPs. Created posters of key themes tailored to each <i>woreda</i>. Compiled a digital library of all documents. Developed a searchable web-based interactive database of all <i>woreda</i> profiles including all raw information hazards, disasters, risks, humanitarian responses, coping mechanisms and contingency plans. Created GIS maps of key indicators based on profiles. Trained regional and federal staff in data collection, analysis, and management. 	<ul style="list-style-type: none"> Increased capacity of government officials at multiple levels to collect information on disaster risk and vulnerability, use it in DRM activities, and monitor changes in risk over time. Facilitated awareness raising and stakeholder involvement of vulnerabilities and risk through data collection. Informed use of non-Bank and Government of Ethiopia resources for the development of additional WDRP Improved generation and communication of disaster risk/vulnerability information (Risk Identification). <i>Potential for increased application of risk/vulnerability information in public policy and investment planning (Risk Information).</i> 	Potential for increased resilience to natural disasters through more comprehensive risk information and more informed decision-making.
Risk Reduction Preparedness Financial Protection	Ethiopia Disaster Risk Management Country Plan / Contingency and DRM Planning	<ul style="list-style-type: none"> Developed contingency plans for 35 <i>woredas</i>. Developed Disaster Risk Mitigation/Adaptation Plans for 35 <i>woredas</i>. Created posters of key themes tailored to each <i>woreda</i>. Developed training manual for development of Contingency Plans and DRM/Adaptation Plans. Conducted training workshops for capacity building. 	<ul style="list-style-type: none"> Increased capacity of government officials at multiple levels to develop contingency scenarios and identify and prioritize DRM measures. Strengthened the ability for government officials to respond to a disaster effectively and efficiently through clearly defined roles and responsibilities. Facilitated awareness raising and stakeholder involvement through development of contingency plans and DRM plans. Informed the PSNP IV through development of contingency fund and public works project. <i>Potential for investments to be made in risk reduction measures (Risk Reduction).</i> <i>Potential for improved performance of national or woreda-level agencies in the quality and timeliness of emergency response options (Preparedness).</i> <i>Potential for improved financial protection against disaster through contingency mechanisms under the PSNP (Financial Protection).</i> 	<i>Potential for increased resilience to natural disasters through local contingency planning and implementation of DRM plans.</i>
Risk Identification Preparedness	Ethiopia Disaster Risk Management Country Plan / Regional Connectivity Implementation	<ul style="list-style-type: none"> Implemented Woreda-net (a satellite-based network with the primary objective to provide IT services, database, Internet connection, voice service, video conferencing) in 35 <i>woredas</i> and three strategic warehouses. Deployed Woreda-net supporting systems, software, and tools. Conducted training workshops for capacity building. Conducted field work assessments. 	<ul style="list-style-type: none"> Strengthened capacity of government officials to disseminate and communicate disaster risk/vulnerability information. Informed and improved government strategy/process for disseminating and communicating disaster risk/vulnerability improved. Strengthened the ability for government officials to respond to a disaster effectively and efficiently through improved communication system. Improved generation and communication of disaster risk/vulnerability information (Risk Identification). <i>Potential for improved performance of national or woreda-level agencies in the quality and timeliness of emergency response options (Preparedness).</i> 	<i>Potential for increased resilience to natural disasters through local contingency planning and implementation of DRM plans.</i>

Pillar	Grant / Activity	Outputs	Intermediate Outcomes/Outcomes	Impacts
Resilient Recovery	Capacity Building in Post Disaster Needs Assessment	<ul style="list-style-type: none"> Developed a curriculum and training module for PDNA training—including HRBA, DaLA, and Recovery, Reconstruction, and Risk Reduction needs assessment. Conducted training and field application on PDNA for 66 participants. Prepared training proceedings report. 	<ul style="list-style-type: none"> Disseminated best practices with participants. Limited evidence of capacity-building effects. <i>Potential for the GoE to inform policy and strategy to respond to disasters.</i> 	
Preparedness	Ethiopia: Weather Risk Management Framework using Weather-Based Indices	<ul style="list-style-type: none"> Conducted training sessions for over 100 GoE staff at national and regional levels. Conducted two overseas study tours for 14 participants on early warning systems. Further developed applications of the LEAP model through a pastoralist index, flood index, output for belg season and meher season, LEAP-HEA interface tool. Funded installation of 10 weather stations. 	<ul style="list-style-type: none"> Developed new innovative approaches to forecasting and applications for the GoE's early warning system. Facilitated exchange of best practices with clients on the use of early warning information and systems. Strengthened the capacity of the GoE and development partners to use LEAP forecasting tools and methods. Stimulated debate among partners about the benefits of using science-based, predictive tools. Helped to make decisions related to response measures and distribution of resources more transparent and objective – including triggering of the contingency fund in the PSNP. 	<p>Increased accuracy and timeliness of early warning information related to drought.</p> <p><i>Potential for increased performance of the GoE in triggering emergency resources.</i></p>
Risk Identification	Facilitating provision of baseline vulnerability information on flood exposed communities in Ethiopia	<ul style="list-style-type: none"> No evidence found. 		
Risk Reduction	Implementation Support for the Ethiopia Disaster Risk Management Investment Framework	<ul style="list-style-type: none"> Provided support to the GoE in development of the draft DRM-SPIF. Assisting in operationalizing the DRM-SPIF through participation in working groups and development of engagement note. Conducted south-to-south knowledge exchange on legal frameworks for risk management. 	<ul style="list-style-type: none"> Limited evidence available. <i>Potential to inform future World Bank engagement on DRM in Ethiopia through collaborative process with GoE.</i> <i>Potential to increase the capacity of GoE to implement and operationalize the DRM-SPIF.</i> 	<i>Potential for GoE to implement and operationalize new DRM policies in order to address disaster risk.</i>
Risk Identification Risk Reduction Preparedness	Mitigating impacts of adverse shocks on nutrition and health	<ul style="list-style-type: none"> International consultants provided technical inputs to develop a NIS connected to EWS. Consulted in the design and implementation of pilot project. Prepared study on local ready-to-use therapeutic food. External consultants supported community-based child growth monitoring. 	<ul style="list-style-type: none"> Strengthened the capacity of the GoE to design and implement health monitoring programs connected to EWS. Enhanced the capacity of Ethiopia's EWS to capture health information, which ultimately helps to improve the timing and targeting or prevention, preparedness, and response to malnutrition. Informed GoE and other partners on new and innovative ways to respond to food shortages. Improved the generation and collection of malnutrition information and increased its application within Ethiopia's EWS. 	<i>Potential for investments to be made in preparedness and risk reduction measures.</i>

D.4. Indonesia Results Matrix

Pillar	Grant / Activity	GFDRR Outputs	Intermediate Outcomes/Outcomes	Impacts
Risk Reduction Resilient Recovery	BNPB Capacity Building	<ul style="list-style-type: none"> Facilitated partnership with World Bank LLI to support request from GoI. Held consultations with high-level BNPB officials to develop a medium-term road map for DRM knowledge sharing. Contributed to drafting guidelines, templates and 10 samples for capturing and packaging DRM knowledge. 	<ul style="list-style-type: none"> Innovative approach developed for knowledge management for DRM. Potential for systematization of Indonesia's training approach for DRM and for systematization of disaster recovery experiences into knowledge products. Potential for stronger institutional capacities for DRR at the local level, contingent on successful delivery and scaling up of the trainings for BPBDs. <i>Potential for institutionalizing a merit system to support the development of staff on the "technical track," if the knowledge management system is successfully institutionalized in this way.</i> <i>Potential for avoided creation of new risks and reduction of existing risks through successful training at the local level.</i> 	<i>Potential for increased resilience to natural disasters through risk reduction and quicker resilient disaster recovery.</i>
Risk Identification Risk Reduction	Mainstreaming DRR / support to prepare the NAP-DRR	<ul style="list-style-type: none"> Prepared analytical studies to support the preparation of the NAP-DRR 2010–2012 (National Risk Assessment Study, and Background Study on Opportunities and Challenges in Consolidating Indonesian Planning Processes related to Disaster Risk Reduction). Conducted workshops and training activities between GFDRR, UNDP SCDRR, BNPB, and BAPPENAS on how to integrate the NAP-DRR within the Medium-Term Development Plan. Supported a facilitator to coordinate the NAP-DRR formulation. 	<ul style="list-style-type: none"> Contributed to the integration of DRR into the Medium-Term Development Plan 2010–2014. Informed GOI's annual DRR work plan 2010-12 by identifying priority investments. Risk Assessment Study also informed the National Disaster Management Plan. 	
Risk Identification Risk Reduction	Mainstreaming DRR / mainstreaming DRR into World Bank investments	<ul style="list-style-type: none"> GFDRR focal point participated in project missions and provided technical advice to improve the DRR content of the community settlement plan process. GFDRR focal point provided expert consultation to WINRIP World Bank project team and the Ministry of Public Works on the inclusion of a component that provides technical assistance and capacity-building support to strengthen disaster risk mitigation in the roads section. The project now also includes a component that serves as a contingency for DRR. 	<ul style="list-style-type: none"> Ministry of Public Works funded a study with its own resources to do a stocktaking of road segments prone to disaster, based on maintenance records and hazard maps. <i>Potential for influencing technical specifications for high-risk areas in transport sector.</i> 	<i>Potential for increased resilience to natural hazards associated with implementation of risk mitigation measures in public roads.</i>
Risk Reduction Preparedness	Mainstreaming DRR / just-in-time support to operationalize BNPB	<ul style="list-style-type: none"> Seconded a STTA (liaison staff) to BNPB. 	<ul style="list-style-type: none"> Contributed to operationalizing the new national DRM agency. 	
Resilient Recovery	Mainstreaming DRR / DaLA training	<ul style="list-style-type: none"> Developed a curriculum and training module for DaLA (2009). Conducted TOT, and then second TOT by Indonesia master trainers. 	<ul style="list-style-type: none"> The training module developed by GFDRR has now been fully institutionalized in Indonesia's national training center, Pusdiklat. Strengthened capacities for conducting DaLA among national and local stakeholders; DaLA can now be conducted without external support. <i>Potential for quicker resilient and sustainable disaster recovery.</i> 	<i>Potential for increased resilience to natural disasters.</i>

Pillar	Grant / Activity	GFDRR Outputs	Intermediate Outcomes/Outcomes	Impacts
Financial Protection	Mainstreaming DRR / disaster risk financing and insurance	<ul style="list-style-type: none"> Prepared a study titled "Indonesia: Advancing a National Disaster Risk Financing Strategy—Options for Consideration" (2011). Consulted with Ministry of Finance and BNPB regarding financial protection options. 	<ul style="list-style-type: none"> Strengthened policy dialogue with national government on DRFI and BNPB. Potential for strengthened financial and response capacity of government and private sector. 	Potential for increased resilience to natural disasters
Resilient Recovery	Mainstreaming DRR / support for Mount Merapi reconstruction	<ul style="list-style-type: none"> Funded three short-term consultants (STC) that provided expert advice to Rekompak related to the livelihood component of the reconstruction and rehabilitation and helped train Rekompak community resilience facilitators for 16 <i>huntap</i> on livelihood strategies. Funded an STC that provided expert advice on 10 demonstration plots for ecosystem restoration. 	<ul style="list-style-type: none"> Contributed to the incorporation of a livelihoods and eco-settlement considerations into Indonesia's broader reconstruction and rehabilitation approach. Potential for more sustainable disaster recovery in future. Nine of the 10 demonstration plots are meeting the daily demand of the people who own them and providing market value of crops grown. 	Potential for increased resilience to natural disasters.
Risk Identification	Mainstreaming DRR / participatory risk mapping in Yogyakarta and Jakarta	<ul style="list-style-type: none"> Collaborated (through an STC) with the Ministry of Natural Resources and Energy, BPBD Yogyakarta, and village officers to develop a collaborative map that could be used for resettling nine villages affected by Merapi pyroclastic flow. Provided TA to develop a Local Climate Resilience Action Plan for Yogyakarta; based on the results, provided TA via a local university (UGM) to prepare the report "Technical Assistance for Riverfront Redevelopment Design Plan in the City of Yogyakarta." Conducted participatory mapping (via an STC) on a zoning level in 8 segments of the Winongo River (about 50,000 people). Prepared a landslide hazard risk map (indicating red, yellow, and green areas), via an STC, in 11 villages in Bantul and explained the risks to the communities. 	<ul style="list-style-type: none"> Increased availability of information and awareness of disaster risks via participatory mapping in Yogyakarta and Jakarta. Helped engage technical experts, local governments and communities, and aided in advancing their understanding on the potential impact of disasters by presenting hazard and exposure information in a useful way. Potential for more efficient and effective use of national urban neighborhood upgrading funds by integrating DRR considerations into mapping, using participatory and open source information and data techniques, including through an SOP for participatory mapping with the national spatial agency. Piloted an innovative approach; first time in Indonesia that a community-based risk assessment had been conducted and that people had been relocated based on the mapping. 69 households in Bantul were relocated by Gol in 2011, and 19 in 2012–13; the government also conducted structural mitigation works in the yellow/green areas; the participatory map also provided the evidence base for the Head of District to request the usage of communal land for relocation through permission from the Governor, through Governor's Regulation 143/1087/R.1/2011 	<p>Increased resilience for about 90 households in Bantul.</p> <p>Potential for increased resilience via DRR in urban neighborhoods.</p>

Pillar	Grant / Activity	GFDRR Outputs	Intermediate Outcomes/Outcomes	Impacts
	Mainstreaming DRR / InaSAFE	<ul style="list-style-type: none"> GFDRR technical staff (in the Innovations Lab) contributed to the development of InaSAFE, a free and open source software tool that produces outputs that could be useful for contingency planning. Facilitated engagement with BNPB and other relevant government agencies. GFDRR resources funded a full position for software development. 	<ul style="list-style-type: none"> Helped engage technical experts, local governments and communities, and aided in advancing their understanding on the potential impact of disasters by presenting hazard and exposure information in a useful way. Raised awareness on open sources information and open data, and their use. Fostered the use of innovative free and open source software tools to support contingency planning and other DRR activities at the local level. Facilitated exchange of knowledge and experiences in the use InaSAFE, mainly as a result of its replication in the Philippines (given the regional hub), but also in Malawi and Sri Lanka. Improved generation and communication of disaster risk information (Risk Identification). Potential for greater application of risk information in public policy and investment planning (Risk Identification). Potential to improve performance of national/city agencies in the quality and timeliness of emergency response (Preparedness). 	<p>Potential to increase resilience to natural disasters as a result of improved efficiency for resource allocation in contingency planning and disaster response, but the tool hasn't been used for that purpose yet.</p>
	Mainstreaming DRR / Safe school pilot program	<ul style="list-style-type: none"> Participated in policy dialogue with the Ministry of Education and Culture (MoEC) and BNPB. Performed a rapid mapping of schools that showed that more than 50% of schools could be located in districts with high risks of earthquakes, volcanic eruption, and landslides. Played a convening and technical advisory role for BNPB in developing Regulation of Head of National Agency for Disaster Management (BNPB) No. 4 in 2012 (Perka BNPB No. 4/2012) on Guideline on Implementation of Safe School/Madrasa from Disaster. The World Bank, with funding from GFDRR and the Basic Education Capacity Building Trust Fund, developed a safe school pilot project to assist school-managed rehabilitation projects in 180 schools in six districts and cities in three pilot provinces. Developed a Practical Guideline for Making Schools Safe from Natural Disaster for School Principals and School Committees. 	<ul style="list-style-type: none"> Improved the knowledge and awareness of students, teachers, and parents on disaster risk and preparedness; raised awareness of some government officials at education offices in the pilot districts. Improved the structural and non-structural disaster preparedness of pilot schools. 	<p>Potential to influence significant capital expenditures through the DAK (approximately \$150 million), if it can use the pilot program experiences and its convening power at the national level to bring about stronger policies and procedures for rehabilitating schools in high-risk areas.</p>

Pillar	Grant / Activity	GFDRR Outputs	Intermediate Outcomes/Outcomes	Impacts
Risk Identification Preparedness Risk Reduction	Mainstreaming DRR into PNPM Urban III	<ul style="list-style-type: none"> Guidelines and training modules for community-based DRR, uploaded to the project website (www.p2kp.org). Mainstreamed DRR into the comprehensive training for more than 7,000 PNPM facilitators through a TOT approach. Provided grant of IDR 500 million (roughly \$38,000) to 16 <i>kelurahans</i> in four cities to prepare a community DRR action plan and implement some of the measures. 	<ul style="list-style-type: none"> Increased understanding of need for disaster risk preparedness and reduction among PNPM facilitators. Potential for strengthened disaster preparedness and risk reduction at-scale, if PNPM facilitators successfully apply the guidelines and their training at the community level to integrate DRM planning into community development plans. Increased awareness of disaster risks in pilot <i>kelurahans</i>. Strengthened capacity for disaster preparedness in pilot <i>kelurahans</i>. Strengthened linkages between local communities and the local agencies for EWS in some pilot <i>kelurahans</i>. Risk reduction measures funded in some pilot <i>kelurahans</i> (e.g., retention wall, drainage improvements). Potential for strengthened response to disasters, especially in pilot <i>kelurahans</i>. 	<i>Potential for improved resilience to natural disasters, especially in pilot kelurahans.</i>
Resilient Recovery	West Sumatra and Jambi PDNA	<ul style="list-style-type: none"> Provided financial support for conducting West Sumatra and Jambi Natural Disasters: Damage, Loss and Preliminary Needs Assessment (2009). 	<ul style="list-style-type: none"> PDNA used as the basis for the Rehabilitation and Reconstruction Plan. Strengthened capacity of BNPB to conduct DaLA. 	
Risk Reduction	Mainstreaming DRR into the World Bank's Local Economic Development Project in Nias	<ul style="list-style-type: none"> Prepared DRM Strategy for the LEPD (2009). 	<ul style="list-style-type: none"> DRM strategy was incorporated into the design of LEDP in Nias. LEDP project training local and provincial governments and beneficiaries on how to integrate disaster resilience measures (including terracing and drainage to protect against landslides, and cleaning irrigation channels to mitigate flooding in rice fields). 	Contributed to increasing resilience to natural disasters for project beneficiaries.

Appendix E. Analysis of Leverage and Influence

This appendix summarizes observed instances of leverage and influence by country, as the evidence base for the leverage and influence analysis.

Table E-1. Evidence of Leverage (US\$ Millions)

GFDRR Grant	Country	GFDRR Grant Value	Leveraged Project(s) or Activities	Total Project Cost	DRM Component	World Bank Financing	How did GFDRR leverage these resources?	What enabling factors contributed to the leveraging?
Technical Assistance that Directly Leads to a World Bank Investment Project								
Bangladesh Urban Earthquake Resilience Project (BUERP) Phase I & II	Bangladesh	2.8	Urban Resilience Project (URP)	182	182	173	Through BUERP, GFDRR engaged all relevant actors for urban resilience in Dhaka and conducted analytical work that helped inform the design of the now-approved URP by the World Bank and the GoB. GFDRR's technical assistance helped the GoB realize the need and value of investing in urban resilience, as evidenced by the GoB's \$9 million pledged co-financing to URP.	<ul style="list-style-type: none"> Proximity of GFDRR to World Bank operations GFDRR's flexibility and ability to manage institutional complexity, including the engagement with non-traditional clients Strong support from stakeholders and high level political buy-in
Contributions to Post-disaster Needs Assessments								
Joint DLNA for Cyclone Sidr	Bangladesh	0.4	RMIP-I, ECRRP, CEIP-I, Multipurpose Disaster Shelters Project	1,610	1,610	1,534	The joint DLNA identified (i) the need for new construction and improvement of existing multi-purpose shelters, which the World Bank then financed through ECRRP and the Multipurpose Disaster Shelters Project; and (ii) the need for a river bank improvement project which was also financed through the RMIP.	<ul style="list-style-type: none"> High quality technical expertise Proximity of GFDRR to World Bank operations
Saint Lucia Damage and Loss Assessment of December 2013 Floods	Saint Lucia	0.05	Disaster Vulnerability Reduction Project (DRVP)	68	68	41	A number of recommendations in the DLNA influenced those funded in the current DVRP Program. DVRP also included a \$17 million Crisis Response Window IDA Credit.	<ul style="list-style-type: none"> High quality technical expertise provided by GFDRR staff Strong support from stakeholders, including donors, and high level political buy-in
West Sumatra and Jambi PDNA	Indonesia	0.13		Not quantified			The PDNA was used as the basis for the formulation of the Rehabilitation and Reconstruction Plan.	<ul style="list-style-type: none"> High quality technical expertise Existing relationship with BNPB
Local Scale Leverage								
Mainstreaming DRR Phase I & II	Indonesia	2.8	In-kind contributions; local government funds	Not quantified			In Bantul, the local government spent its own resources to do structural mitigation works as a result of GFDRR's landslide risk assessment. Some communities and businesses made in-kind contributions, in the form of materials, land, or labor, to supplement GFDRR funding for safe schools and for community disaster risk action plans.	<ul style="list-style-type: none"> Successful demonstration of the value of GFDRR's pilot intervention Community awareness of disaster risk increased

Table E-2. Evidence of Influence (US\$ Millions)

GFDRR Grant	Country	GFDRR Grant Value	Leveraged Project(s) or Activities	Total Project Cost	DRM Component	World Bank Financing	How did GFDRR leverage these resources?	What enabling factors contributed to the leveraging?
World Bank Projects with DRM Components Influenced								
Mainstreaming DRR into the World Bank's Local Economic Development Project in Nias	Indonesia	0.05	Aceh-Nias Livelihoods and Economic Development Program (LEDP)	8.2	-	8.2	A DRM strategy for the LEPD funded by GFDRR informed/influenced the project design. During implementation, local and provincial government and beneficiaries received training on how to integrate disaster resilience measures. These measures increased food security, mitigated against future disasters, and increased resilience.	<ul style="list-style-type: none"> Proximity of GFDRR to World Bank operations High quality technical expertise provided by GFDRR staff Strong support from stakeholders
Mainstreaming DRR Phase I & II	Indonesia	2.8	Community-Based Settlement Rehabilitation for Yogyakarta	61	61	60	The GFDRR focal point participated in project missions and provided training to improve the DRR content of the community settlement plan (CSP) process. GFDRR identified CSP good practices for DRR and provided special assistance to learning villages as models that later informed community-based DRR investment under the PNPM.	<ul style="list-style-type: none"> Proximity of GFDRR to World Bank operations High quality technical expertise provided by GFDRR staff Strong support from stakeholders
			Western Indonesia National Roads Improvement Project (WIN-RIP)	350	1	250	The GFDRR focal point provided expert consultation to the World Bank project team and the Ministry of Public Works on the inclusion of a component that provides technical assistance and capacity-building support to strengthen disaster risk mitigation in the roads section. The project now also includes a component that serves as a contingency for DRR.	<ul style="list-style-type: none"> Proximity of GFDRR to World Bank operations High quality technical expertise provided by GFDRR staff
			Third National Program for Community Empowerment in Urban Areas Project (PNPM-Urban III)	217	-	150	GFDRR provided co-financing for the project in the form of grants to 16 pilot kelurahans in four cities to prepare and partially implement community disaster risk action plans. GFDRR also funded guidelines and training for PNPM community facilitators on DRM. A provisional zero dollar component was added in coordination with the multi-donor Callable Fund under GFDRR's Track 3.	<ul style="list-style-type: none"> High quality technical expertise provided by GFDRR staff Proximity of GFDRR to World Bank operations Strong support from stakeholders and political buy-in
Spatial data management and identification of the most vulnerable schools and shelters in Dominica	Dominica	0.522	Disaster Vulnerability Reduction Program (DVRP)	38	38	17	GFDRR support for spatial data management and sharing platform and a shelter vulnerability assessment helped to inform development of the DVRP.	<ul style="list-style-type: none"> Proximity of GFDRR to World Bank operations GFDRR support for post-disaster assessment
Ethiopia's Disaster Risk Management Country Plan	Ethiopia	1.275	Productive Safety Net Program IV (PSNP IV)	2,616	32	600	PSNP IV allocated a portion of their funds for DRM focused activities. GFDRR's contribution is through supporting strategic initiatives that advance a specific activity or test a concept that can help push the DRM policy dialogue forward. Used in this way, GFDRR grants have significantly informed the design of the PSNP and altered the World Bank's relationship with the government.	<ul style="list-style-type: none"> GFDRR grant was managed by the World Bank TTL for PSNP Political buy-in. High quality technical expertise provided by GFDRR staff to enhance the LEAP model

GFDRR Grant	Country	GFDRR Grant Value	Resources or Activities Influenced	Total Project Cost	DRM Component	World Bank Financing	How did GFDRR influence these resources?	What enabling factors contributed to the influencing?
Coastal Embankment Improvement Project (CEIP) Research Support	Bangladesh	0.2	Coastal Embankment Improvement Project - Phase I (CEIP-I)	400	400	375	GFDRR contributed to the improvement of the ToR guiding long-term research and monitoring, which will be carried out alongside the implementation of the CEIP-I, and will directly inform the design of \$300 million of investments under the project.	<ul style="list-style-type: none"> Proximity of GFDRR to World Bank operations High quality technical expertise
Country Government Financing Influenced								
Mainstreaming DRR Phase I & II	Indonesia	2.8	National level DRM resource allocation	Not qualified			GFDRR contributed to the NAP-DRR, which was an input to country's medium-term development plan and influenced government DRM allocation from 2010-14. GFDRR piloted an approach for livelihood restoration and eco-settlement after the eruption of Mount Merapi that led to the incorporation of these concepts into Indonesia's broader reconstruction and rehabilitation approach, which should influence resource allocation for future post-disaster recovery.	<ul style="list-style-type: none"> Strong relationship with national ministries, including BNPB Proof-of-concept approach
			Local level DRM resource allocation	Not quantified			GFDRR contributed to participatory risk mapping activities in Jakarta that enabled the local disaster risk agency (BPBD DKI) to use their budget more effectively. Before the mapping, BPBD DKI allocated their logistics and human resources evenly across villages, because they could not see risk at a finer resolution.	<ul style="list-style-type: none"> Connecting technical assistance to mandatory government activities
Other Instances of Influence								
Support to UK-Bangladesh Climate Change Conference	Bangladesh	0.1	Bangladesh Climate Change Resilience Fund (BCCRF)	188	188	-	The preparation of analytical products provided technical substance for the conference. These products also fed into the preparation of (i) Bangladesh Climate Change Strategy and Action Plan; (ii) UK-Bangladesh Communique on Climate Change whereby the UK committed 75 million pounds to a multi donor trust fund (later known as BCCRF) and (iii) the concept note for BCCRF.	<ul style="list-style-type: none"> High level political buy-in High quality technical expertise Proximity of GFDRR to World Bank operations
Bangladesh Urban Earthquake Resilience Project (BUERP) Phase I & II	Bangladesh	2.8	Coordination with JICA on urban resilience investments	NA	NA	NA	Through partnership on urban resilience between the World Bank, GFDRR, and JICA.	<ul style="list-style-type: none"> Regular communication between partners Identification of strengths and comparative advantages

Appendix F. Intermediate Outcome Mapping

Table F-1 below presents the mapping of qualitative intermediate outcomes identified through interviews and desk review against the intermediate outcome indicators provided to the ICF evaluation team in Annex 2 of the ToR for this evaluation.

Note that some intermediate outcomes have yet to be achieved, although the evaluation team found evidence of potential to achieve these results. These potential intermediate outcomes are shown in italics.

Table F-1. Results of Intermediate Outcome Mapping

Intermediate Outcomes	Indicators	Related Intermediate Outcomes Observed			
		Bangladesh	Eastern Caribbean	Ethiopia	Indonesia
Knowledge deepened	Facilitated exchange of best practice w/ clients	<ul style="list-style-type: none"> Increased understanding and awareness of earthquake risk and RSLUP among key stakeholders in Dhaka, which was previously low Raised awareness on the need for open access to data and information through the preparation of the risk atlas and the creation of a GEODASH community Greater availability of information about earthquake risk in Dhaka Facilitated exchange of information on estuarine and coastal morphology and geomorphology from national and international experts Joint DLNA contributed to greater availability of information about needs and quantified financial requirements for DRM 	<ul style="list-style-type: none"> Raised awareness on open source information sharing platforms and their use in Dominica Facilitated exchange of knowledge related to building standards for shelters in Dominica Greater availability of information about landslide and flood hazards 	<ul style="list-style-type: none"> Facilitated awareness raising and stakeholder involvement of vulnerabilities and risk through data collection Facilitated awareness raising and stakeholder involvement through development of contingency plans and DRM plans Informed and improved government strategy/process for disseminating and communicating disaster risk/vulnerability improved Demonstrated the value of the LEAP tool for data-informed decision-making 	<ul style="list-style-type: none"> Increased availability of information and awareness of disaster risks via participatory mapping in Yogyakarta and Jakarta Raised awareness in local and national disaster risk agencies around the benefits of open source information as a means of achieving DRR objectives (in Jakarta) Helped engage technical experts, local governments and communities, and aided in advancing their understanding on the potential impact of disasters by presenting hazard and exposure information in a useful way In pilot schools, improved the knowledge and awareness of students, teachers and parents on disaster risk and preparedness; delivered new knowledge on structural and non-structural aspects In pilot PNPM <i>kelurahans</i>, increased understanding of the hazards and vulnerabilities among their residents, as well as strengthened preparedness
	Facilitated exchange of best practice w/ partners				
	Disseminated best practices				<ul style="list-style-type: none"> Facilitated exchange of knowledge and experiences in the use InaSAFE, mainly as a result of its replication in the Philippines (given the regional hub), but also in Malawi and Sri Lanka

Intermediate Outcomes	Indicators	Related Intermediate Outcomes Observed			
	Design capacity strengthened				
Client capacity increased	Implementation capacity strengthened	<ul style="list-style-type: none"> Increased understanding of roles and responsibilities stated in the Standing Orders on Disaster of the different actors involved in emergency preparedness and response (including actors outside the so-called DRM system) Potential for stronger institutional capacities for DRR among key Dhaka government agencies 	<ul style="list-style-type: none"> Increased capacity of representatives within the Government of Dominica to collect, harmonize, store, and share geospatial data Potential for increasing the capacity within Dominica to use geospatial information in decision-making related to DRR Revised and streamlined the approach for seasonal assessment of shelters to better account for vulnerability and increased capacity of Government of Dominica to use the approach Increased the capacity of the Government of Dominica to design resilient shelters and identify and retrofit vulnerable shelters 	<ul style="list-style-type: none"> Increased capacity of government officials at multiple levels to collect information on disaster risk and vulnerability, use it in DRM activities, and monitor changes in risk over time Increased capacity of government officials at multiple levels to develop contingency scenarios and identify and prioritize DRM measures Strengthened the ability for government officials to respond to a disaster effectively and efficiently through clearly defined roles and responsibilities and improved communication system Strengthened capacity of government officials to disseminate and communicate disaster risk/vulnerability information Enhanced capacity of Ethiopia's EWS to capture early signals of disaster through health information 	<ul style="list-style-type: none"> Potential for systematizing Indonesia's training approach for DRM Potential for institutionalizing a merit system to support the development of staff on the "technical track," if the knowledge management system is successfully institutionalized in this way Potential for stronger institutional capacities for DRR at the local level, contingent on successful delivery and scaling up of the trainings for BPBDs Improved operational capacity of BNPB through seconded staff Strengthened capacities for conducting DaLA among national and local stakeholders; DaLA can now be conducted without external support, and training module developed by GFDRR has now been fully institutionalized in Indonesia's national training center, Pusdiklat Strengthened disaster preparedness in pilot PNPM <i>kelurahans</i> Strengthened linkages between local communities and the local agencies for EWS in some pilot PNPM <i>kelurahans</i>
	M&E capacity increased				

Intermediate Outcomes	Indicators	Related Intermediate Outcomes Observed			
Innovative approaches & solutions generated	New innovative approach fostered	<ul style="list-style-type: none"> Introduced improved crop cultivation, aquaculture production and livestock rearing practices to cyclone affected communities Potential to improve current approach to shelter construction as a result of introducing multipurpose buildings 		<ul style="list-style-type: none"> Further refined, developed, and tested LEAP model, which enabled the model to be more accurate, operational, timely, and better integrated into the government's risk management framework (early warning) 	
	New innovative approach developed				<ul style="list-style-type: none"> Innovative approach developed for knowledge hub for DRM Innovative approach developed and utilized for community-based landslide risk assessment in Bantul Developed and encouraged the use of innovative free and open source software tool (InaSAFE) to support contingency planning and other DRR activities
Development financing informed	Preparation of new operation informed	<ul style="list-style-type: none"> Reached consensus among focus group participants on the need to act jointly to increase resiliency to earthquake risk in Dhaka Analysis of Cyclone Sidr damages and losses informed the preparation of new government and donor development financing 	<ul style="list-style-type: none"> Rapid assessment of damages and needs from St Lucia's December 2013 events helped mobilize funds for disaster recovery under the World Bank's Crisis Response Window Preparation of PDNA for 2010 Hurricane Tomas in St Lucia informed the post-disaster recovery project 	<ul style="list-style-type: none"> Informed the PSNP IV through development of contingency fund and public works project, and LEAP model integration 	<ul style="list-style-type: none"> DRM components planned for Indonesia National Urban Slum Upgrading Program (currently in draft PCN form)
	Existing operations informed	<ul style="list-style-type: none"> Potential for better-designed, higher-quality research and monitoring on complex coastal system under CEIP; GFDRR contribution is improved ToR guiding this effort 	<ul style="list-style-type: none"> Developed and implemented household surveys on climate change adaptation and structural assessment that can inform the development of a Climate Adaptation Finance Facility (DVRP) in St Lucia 		<ul style="list-style-type: none"> Provided a DRM strategy that was incorporated into the design of LEDP in Nias Advised on the inclusion of DRR components in WINRIP Mainstreamed DRR into PNP Urban; DRM now incorporated into Neighborhood Development guidelines and technical guidelines
	Mobilization of non-Bank resources informed	<ul style="list-style-type: none"> Coordinated with JICA regarding urban resilience technical assistance and investments 		<ul style="list-style-type: none"> Informed use of non-Bank and Government of Ethiopia resources for the development of additional WDRP Contributed to improving the LEAP model, after which other development partners and the Government have picked up and continued the model improvement and expansion process 	<ul style="list-style-type: none"> Pilot scale leverage observed in Safe School pilots and in Bantul relocation

Intermediate Outcomes	Indicators	Related Intermediate Outcomes Observed			
	Government expenditure informed	<ul style="list-style-type: none"> GoB committed \$9 million in cofinancing for the Urban Resilience Project, based on the results of GFDRR technical assistances 			<ul style="list-style-type: none"> More efficient allocation of BPBD DKI Jakarta disaster response budget, based on GFDRR-supported participatory mapping
Policy/ strategy informed	Government policy/ strategy informed	<ul style="list-style-type: none"> Initiated and strengthened policy dialogue on DRFI Provided policy advice on the procedures and benefits of establishing a multi-donor trust fund for Bangladesh (BCCRF) Analysis of the Cyclone Sidr DaLA informed the government strategy and policy, as well as donor strategy, including World Bank country and sector strategies 	<ul style="list-style-type: none"> Supported the development of an information sharing policy in Dominica 		<ul style="list-style-type: none"> Contributed to the integration of DRR into the Medium-Term Development Plan 2010-2014 Informed GOI's annual DRR work plan 2010-12 by identifying priority investments Initiated and strengthened policy dialogue on DRFI Contributed to the incorporation of a livelihoods and eco-settlement considerations into Indonesia's broader reconstruction and rehabilitation approach Contributed to the development of an SOP for participatory mapping by BIG West Sumatra and Jambi PDNA that GFDRR supported was used as the basis for the Rehabilitation and Reconstruction Plan
	Public debate stimulated/ initiated				
	Contributed to stakeholder involvement	<ul style="list-style-type: none"> Developed and strengthened relationships among key individuals in agencies with DRR responsibilities in Dhaka 	<ul style="list-style-type: none"> Facilitated regional collaboration on the use of hazard information in spatial and infrastructure decision-making 		<ul style="list-style-type: none"> Stakeholders engaged via participatory mapping in Yogyakarta and Jakarta Stakeholders engaged via PNP pilot <i>kelurahan</i> grants and community planning and socialization
	Development community/ partner policy/ strategy informed	<ul style="list-style-type: none"> See above 			
	Bank country strategy informed				<ul style="list-style-type: none"> GFDRR focal point informed the DRM related components of the World Bank's country partnership strategy
	Bank sector strategy informed				

Appendix G. List of Stakeholders Consulted

The table below lists the stakeholders consulted for this evaluation.

Table G-1. Stakeholders

Institution	Name
GFDRR	Francis Ghesquiere
	Luis Tineo
	Vica Rosario Bogaerts
	Jack Campbell
World Bank	Niels B. Holm-Nielsen (GFDRR Regional Coordinator for Latin America and the Caribbean)
	Marc Forni (GFDRR Regional Coordinator for South Asia)
	Jolanta Kryspin-Watson (GFDRR Regional Coordinator for East Asia and the Pacific) (via email)
World Bank/GFDRR DRFI Program	Daniel Clarke Olivier Mahul
Bangladesh Country Visit	
United Kingdom Department for International Development (DFID)	Dan Ayliffe
	Helen O'Connor
Dhaka North City Corporation (DNCC)	Dr. A. Razzak
	Dr. Tariq Bin Yousuf
Dhaka South City Corporation (DSCC)	Kazi Hasiba Jahan
	Md. Sirajul Islam
European Commission	Abdul Awal
Food and Agriculture Organization (FAO)	Nur Khondaker
Japan International Cooperation Agency (JICA)	Md. Anisuzzaman Chowdhury
	Naoki Matsumara
Rajdhani Unnayan Katripakha (RAJUK)	Abdul Latif Helaly
Swiss Agency for Development and Cooperation (SDC)	Farid Hasan Ahmed
United Nations Development Programme (UNDP)	Md. Khurshid Alam
	Mohammad Sifayet Ullah
Comprehensive Disaster Management Programme II (CDMP II)	Peter Medway
Local Government Engineering Department (LGED)	Md. Abdur Rashid Khan
	Mohammad Atikul Islam
	Sheikh Anisur Rahman
Ministry of Disaster Management and Relief	Dr. Mohammad Abdul Wazed
	Md. Hasanuzzaman
Ministry of Finance	Rownaq Jahan
Ministry of Planning	Engr. Md. Nazrul Islam
	Md. Mojibur Rahman
Save the Children	M. Kamran Jacob
	Md. Mohiuddin
	Md. Mostak Hussain

Institution	Name
Bangladesh Water Development Board (Project Director, CEIP)	Md. Sarafat Hossain Khan
World Bank	Mohammed Anis
	Shahpar Selim
	Steven Rubinyi
	Swarna Kazi
	Winston Yu (via email)
	Maria Sarraf (via email)
Dominica Country Visit	
Dominica Water & Sewer Company (DOWASCO)	Magnus Williams
Forestry Division: Ministry of Agriculture and Fisheries	Bradley Guye
ICT Department	Jermaine Jean-Pierre
Land and Surveys Division: Ministry of Housing, Lands, and Water Resources	Kendell Barrie
	Nick LaRocque
	Vivian Eugene
Ministry of Social Services, Community Development, and Gender Affairs	John Fontaine
Office of Disaster Management	Don Corriette
	Mandella Christian
Peace Corps	Rebecca Sweetland
PCU: Ministry of Environment and Health	Andrea Marie
	Collin Guiste
Physical Planning Division	Lyn Baron
Public Works: Ministry of Public Works and Ports	Kendell Johnson
World Bank	Nicholas James Callender
	Bradley Michael Lyon
	Zoe Elena Trohanis
Ethiopia Country Visit	
CordAid	Dr. Woldehanna Kinfu
	Ton Haverkort
DRM Consultant for the World Bank	Sarah Coll-Black
DRMFSS	Ato Mitiku Kassa
	Ato Muluneh Woldemariam
	Mr. Tadesse Bekele
	Mr. Tesfaye
	Ms. Engdawork Minass
	Ms. Zenith

Institution	Name
DRMFSS-Emergency Coordination Centre (ECC)	Beletu Tefera
	Yonas Daniel
	Dejene Mebratu
	Almaz Daniessie
	Tamrat Tsefaye
	Mebrat Senusi
	Tesfaye Cheminet
ECHO	Yohannes Regassa
LASTA Woreda Administration	Desta Mamo
	Molla Tsegaye
	Zelalem Berhanu
LASTA Woreda Department. of Ag and Woreda-net rep.	Girma Berhana
	Tatek Berheen
Ministry of Health	Ato Biarata Lelese Yalew
	Birara Melese
UNICEF	Adam Bailes
	Fikre Negussie
United Nations Development Programme (UNDP)	Dillip Dumar Bhanja
USAID	Jason Taylor
World Bank	Ahmed Alkadir
	Asmita Tiwari
	Bradley Lyon
	Michel Matera
	Ahmed Mohammed
	Wolter Soer
World Food Program	Ezgimelese Tecleab
	Hakan Tongul
	Mr. Teshome Erkneh
Indonesia Country Visit	
Australia-Indonesia Facility for Disaster Reduction (AIFDR)	Dr. Charlotte Morgan
	Dr. David Robinson
BAPPENAS	Pak Kuswiyanto
	Rudy Pakpahan
BPBD DKI Jakarta	Idham Mugabe
	Pak Basuki
	Pak Masadi
	Rian Sarsono
	Bambang Surya Putra
DRR Indonesia (formerly BNPB)	Bakri Beck
	Sugeng Triutomo
Government of City of Yogyakarta	Danang Subagyo

Institution	Name
Humanitarian OpenStreetMap Team (HOT)	Kate Chapman
	Yantisa Akhadi
Kelurahans Batang Harau, Bungo Pasang, Lolong Belanti, and Lubuk Buah	Focus group with Edrian Edward, approximately 4 neighborhood volunteers, about 5 facilitators at the village level, Murni, SPT, and approximately 6 members of the LKM
KOGAMI	Tommy Susanto
	Patra Rina Dewi
Local Agency for Disaster Management (BPBD), Yogyakarta	Province
	Doma F.P.
	Dwiarto S
	Gatot Saptadi
Ministry of Education	Heny Hursilowait
	Gogot Suharwoto
Ministry of Finance	Bhramantyo Isdijoso
	Fajar Hasri Ramadhana
Ministry of Public Works	Didiet Akhdiat
	Eki Arsita
	Ibu Mita
National Agency for Disaster Management (BNPB)	Dody Ruswandi and two deputies
	Pak Suhiharto
Padang Elementary Schools	School headmasters Mariyetmi, Sawiri, and Badrial, and 3 additional current/former headmasters. Also met with teachers, facilitators, and head of neighborhood security in one village.
PNPM	Meri Amelia, SE and two other senior facilitators
PT. Reasuransi Maipark Indonesia	Prof. M.T Zen (ITB)
Rekompak	Arif Budi Wahyono
	Pak Sutomo
	Wiji Utomo
Rekompak; Universitas Islam Indonesia (UII)	Ibu Hanin
Safe School Pilot Program facilitators	Ardialisman
	Sepris Yonaldi
	Yuni Martini
Universitas Gajah Mada (UGM)	Dr. Trias Adhitya
	Prof. Sumardi
United Nations Development Programme (UNDP)	Kristanto Sinandang
United Nations for the Coordination of Humanitarian Affairs (UNOCHA)	Faizal Thamrin
Universitas Gajah Mada (UGM) / Rekompak	Makhmudun Ainuri
Universitas Islam Indonesia (UII)	Dr. Sri Aminatun
Universitas Kristen Duta Wacana (UKDW); Consultant to World Bank	Dr. Paulus Bawole
	Tri Dwi Budi Rianto
University of Andalas	Dr. Fauzan

Institution	Name
World Bank	George Soraya
	Iwan Gunawan
	Risye Dwiyani
	Abigail Baca
Yogyakarta: Site visits to 3 Merapi huntap and kelurahan Bumijo on the Winongo River	Approximately 15 community leaders (lurah) and residents. Accompanied by Trias Adhitya, Arif Budi Wahyono, Pak Sutomo, and Wiji Utomo
Saint Lucia Country Visit	
Central Statistics Office: Ministry of Finance, Economic Affairs, Planning and Social Security	Edwin St. Catherine
Ministry of Finance and Economic Affairs	Calus Monchery
	Cheryl Mathurin
Ministry of Infrastructure, Port Services, and Transport	Answorth Charlemagne
	Lydia Glasgow
	Mary Augustin
	Rachel Skeele
	Renata Philogene-Mckie
Ministry of Physical Development	David Alphonse and team
National Emergency Management Organization Office of the Prime Minister	Ivaline Joseph
Organization for Eastern Caribbean States	Chamberlin Emanuel
Sir Arthur Lewis Community College	Thomas Bouloque
Sustainable Development and Environment; Division: Ministry of Sustainable Development, Energy, Science, & Technology	Chrispin D'Auvergne
	Dawn Pierre-Nathaniel
	Susanna de Beauville-Scott
Water Resource Management Agency: Ministry Of Sustainable Development, Energy, Science, and Technology	Farzana Yusuf
	Michael Andrew
World Bank	Tiguest Fisseha

Appendix H. List of Documents Consulted

H.1. GFDRR Program and External Documents

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