DEVELOPMENT COMMITTEE
(Joint Ministerial Committee
of the
Boards of Governors of the Bank and the Fund
on the
Transfer of Real Resources to Developing Countries)

**DC2016-0004**
March 25, 2016

# PROGRESS REPORT ON MAINSTREAMING DISASTER RISK MANAGEMENT IN WORLD BANK GROUP OPERATIONS

Attached is a document entitled "Progress Report on Mainstreaming Disaster Risk Management in World Bank Group Operations" prepared by the World Bank Group for the April 16, 2016 Development Committee meeting.

.

* * *

# PROGRESS REPORT ON
# MAINSTREAMING DISASTER RISK MANAGEMENT
# IN WORLD BANK GROUP OPERATIONS

**February 17, 2016**

# Table of Contents

## LIST OF ABBREVIATIONS AND ACRONYMS

| | |
|---|---|
| Cat-DDO | Catastrophe Deferred Draw-down Option |
| CDD | Community-Driven Development |
| CCSA | Cross-Cutting Solution Area |
| CCRIF | Caribbean Catastrophe Risk Insurance Facility |
| CERC | Contingent Emergency Response Component |
| CPF | Country Partnership Framework |
| CREWS | Climate Risk and Early Warning Systems |
| CRW | Crisis Response Window |
| DECCT | Development Research Group |
| DMU | Decision Making under Uncertainty |
| DPO | Development Policy Operations |
| DRF | Disaster Risk Financing |
| DRFI | Disaster Risk Financing and Insurance |
| DRM | Disaster Risk Management |
| DRM Hub, Tokyo | The Hub |
| EWS | Early Warning Systems |
| EU | European Union |
| FY | Fiscal Year |
| GDP | Gross Domestic Product |
| GENDR | Gender |
| GFDRR | Global Facility Disaster Reduction and Recovery |
| GFMDR | Finance & Markets |
| GIIF | Global Index Insurance Facility |
| GP | Global Practice |
| GRIF | Global Resilience Investment Fund |
| GSURR | Global Practice Social, Urban, Rural and Resilience |
| GVPDR | Global Practice Poverty |
| IBRD | International Bank for Reconstruction and Development |
| IDA | International Development Association |
| IEG | Independent Evaluation Group |
| IFC | International Financial Corporation |
| IRM | Immediate Response Mechanism |
| JICA | Japan International Cooperation Agency |
| KSB | Knowledge Silo Breaker |
| NDC | Nationally Determined Contribution |
| NGO | Non-Governmental Organization |
| NMHS | National Meteorological Hydrological Service |
| OECD-DAC | Organization for Economic Cooperation and Development – Development Assistance Committee |
| PCRAFI | Pacific Catastrophe Risk Assessment and Financing Initiative |
| PforR | Program for Results |
| PPCR | Pilot Program for Climate Resilience |
| PDNA | Post-Disaster Needs Assessment |
| PSNP | Productive Safety Nets Program |
| SCD | Systematic Country Diagnostic |

| | |
|---|---|
| SDG | Sustainable Development Goal |
| SECO | Swiss State Secretariat of Economic Affairs |
| SEECRIF | Southeast Europe Catastrophe Risk Insurance Program |
| SISRI | Small Island States Resilience Initiative |
| UNICEF | United Nations International Children's Emergency Fund |
| UNISDR | United Nations International Strategy for Disaster Reduction |
| UNDP | United Nations Development Programme |
| UNESCO | United Nations Educational, Scientifically and Cultural Organization |
| UR | Understanding Risk |
| USAID | United States Agency for International Development |
| UTE | Uruguay National Administration of Power Plants and Electric Transmissions |
| WBG | World Bank Group |
| WE'Resilient Cities | Women Entrepreneurship Resilient Cities |
| WMO | World Meteorological Organization |

**Progress Report on Mainstreaming Disaster Risk Management in World Bank Group Operations**

## A. INTRODUCTION

**1. In October 2012, the World Bank Group (WBG) presented the 'Sendai Report: Managing Disaster Risks for a Resilient Future' to the Development Committee.** This report[1] recognized that, while natural or manmade hazards cannot be eliminated, reducing socio-economic vulnerability to disasters is an essential aspect of ending extreme poverty and boosting shared prosperity[2]. The report set out 11 priorities and opportunities for mainstreaming DRM to integrate disaster and climate risk across WBG engagements with developing countries. This is the second report on progress achieved in addressing those priorities.[3] It draws on data for the period FY12-15 to assess progress in mainstreaming across the WBG: (i) in lending operations; (ii) in strategies; (iii) across global practices; and (iv) through investment in key dimensions of DRM; and (v) through partnership. Annex 1 provides a summary of progress against the Sendai Report priorities, and further detail is available in Annex 2.

**2. Economic and poverty impacts of disasters will likely increase in the coming decades, a trend that will be exacerbated further by climate change.** Estimated global losses due to adverse natural events between 1980 and 2014 were US$ 4.2 trillion[4]. Climate change could push an additional 100 million people into extreme poverty by 2030[5]. The recent El Niño event – one of the strongest recorded – is already exacerbating many weather-related disasters, such as floods and droughts in East Africa, South Asia and Asia-Pacific.

**3. Three international agreements secured in the past months provide important context for this report.** First, the Sendai Framework for Disaster Risk Reduction[6] set global targets to reduce economic and human losses from disasters by 2030. Second, a new focus on resilience to natural, manmade, and other hazards was incorporated into the Sustainable Development Goals[7]. Third, at the Paris Conference on Climate Change, 185 countries agreed to act collectively to address climate change and build resilience, with 100[8] prioritizing economy-wide adaptation to climate change as part of their Nationally Determined Contributions (NDCs)[9]. Collectively these international agreements will generate increasing demand for WBG services and products in DRM through the commitments they contain.

---

[1] The Sendai Report: Managing Disaster Risks for a Resilient Future. World Bank, 2012.
[2] In line with the twin goals of the World Bank Group
[3] The first report was presented in 2014: https://www.gfdrr.org/sites/gfdrr/files/publication/DC2014-0003(E)DRM.pdf
[4] Significant Natural Disasters since 1980. Munich Reinsurance Company, 2015.
[5] Shock Waves: Managing the Impacts of Climate Change on Poverty. World Bank, 2015.
[6] www.unisdr.org/we/coordinate/sendai-framework
[7] See in particular SDGs 1, 9 and 13: www.un.org/sustainabledevelopment/sustainable-development-goals/
[8] Moving Toward Climate-Resilient Transport: The World Bank's Experience from Building Adaptation into Programs. World Bank, 2015.
[9] More than 145 countries submitted a Nationally Determined Contribution (NDC) ahead of the Paris Climate Change Conference in December 2015. The NDCs are national plans of action to address climate change, and will be subject to five-yearly reviews under the Paris Climate Agreement.

## B. PROGRESS ON MAINSTREAMING DRM

### Mainstreaming Disaster Risk Management in Lending Operations

**4. The WBG has made encouraging progress on mainstreaming DRM, both in terms of volume and type of operations.** Annual financing contributing to DRM increased from US$ 3.7 billion in FY12 to US$ 5.7 billion in FY15 (see Figure 1).[10] This represents an increase in proportional share of total financing provided by the Bank from 9.4% to 12.3%. Strong demand from client countries has driven this growth, through requests for assistance in addressing specific disaster risk, alongside sector-specific mainstreaming needs, for example in agriculture, water, energy and transport.

**5. The growth in financing reflects broad-based demand for DRM across regions.** Demand for DRM investments in sub-Saharan Africa has remained consistently high, while financing commitments in South Asia increased nearly fourfold from FY12 to reach US$ 2.1 billion by FY15. Building upon the political momentum created by disasters, new commitments have supported preparedness and risk reduction measures in South Asia aimed at reducing future impacts – including emergency shelters in Dhaka and flood control in Andhra Pradesh. Latin America and the Caribbean was the region that committed the highest proportion to risk financing, including the expansion of the successful Caribbean-wide catastrophe risk insurance pool to include Central American countries and to cover for excessive rainfall. In East Asia and the Pacific, responses to Typhoon Haiyan and Cyclones Pam and Ian catalyzed investments in stronger early warning, preparedness and risk reduction in in the Philippines, Tonga, Samoa, Vanuatu, and recently in Myanmar following devastating floods and landslides in mid-2015.

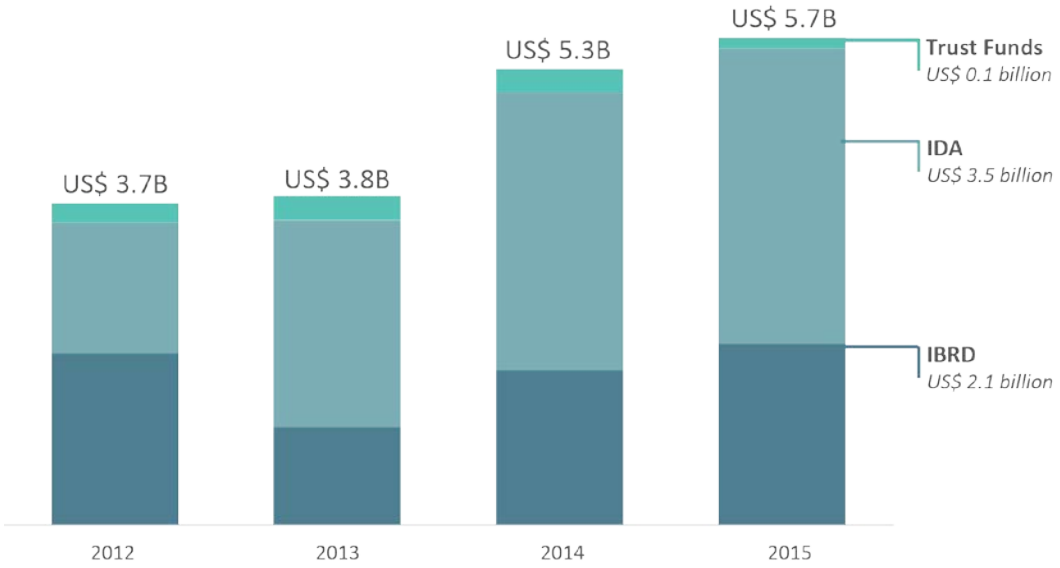
**6. Mainstreaming has promoted a more favorable balance between ex ante risk management and post-disaster response financing.** Economic research, including from the Independent Evaluation Group, finds that disaster prevention and preparedness pay high economic dividends, but has often been underfunded relative to post-disaster response[11]. In FY12-15, three times as much World Bank financing supported ex ante measures – such as early warning systems or resilient infrastructure – compared to post-disaster recovery. Growing attention to ex-ante disaster risk management in large sector portfolios such as transport, energy and environment reflect this trend. At the same time, the World Bank continues to play a key role in post-disaster recovery. In FY12-15, it deployed teams to 36 countries affected by natural disasters channeling US$ 4.5 billion for recovery and reconstruction. As an example, the World Bank supported the Government of Nepal in assessing damage and needs following a magnitude 7.8 earthquake that struck in April 2015 causing 9,000 fatalities. As part of its response, the WBG helped coordinate an ongoing home owner reconstruction and a school reconstruction program funded by multiple donors.

[10] The methodology for tracking DRM co-benefits is described in Annex 2.
[11] Hazards of Nature; Risks to Development. Independent Evaluation Group, 2006.

**Incorporating DRM in WBG Strategies and Instruments**

**7. Regional strategies are increasingly informed by – and responsive to – better knowledge on disaster risks.** WBG strategies for client engagement in Africa, East Asia and the Pacific, and South Asia now include specific pillars to address risk and resilience. Analytical work led by the World Bank's core team of DRM specialists underpins much of this increased focus on resilience. For example, the publication "East Asia's Changing Urban Landscape", used large datasets to track urbanization and map out hazard areas in the region. In South Asia, the flagship study "Building a Climate Resilient South Asia", focuses on understanding future climate change in the context of poverty and shared prosperity to enable countries to develop policies and investments for resilience.

*Figure 1. World Bank financing commitments with DRM Co-benefits (by approval fiscal year)*




**8. The growing focus on risk in country strategies is shaping policies and investments in resilience.** The IDA17 financing round (covering FY15-17) deepened commitment to resilience through the new requirement to include an assessment of climate and disaster risks in the preparation of all IDA Country Partnership Frameworks (CPFs). Amongst IDA-eligible countries, all new CPFs completed during FY15 screen for climate and disaster risks. In Myanmar, for example, the CPF included a cross-cutting theme on climate and DRM, and prioritized measures such as improved flood control. In Bolivia, climate and disaster risk is addressed in a pillar 'Support Environmental and Fiscal Sustainability and Resilience to Climate Change and Economic Shocks.' In Haiti, the strategy focused on disaster preparedness. In addition, 90 percent of the CPFs for International Bank for Reconstruction and Development (IBRD)-eligible countries incorporate climate and disaster risks.

**9. Screening requirements are helping to embed resilience into project design.** IDA17 commitments require screening of World Bank projects for climate and disaster risk. To help operational teams, the WBG made tools available at the start of IDA17 to screen for risks in agriculture, water, roads, coastal flood protection, energy, and health, with a general tool addressing other sectors. In accordance with IDA17 commitments, all of the 255 IDA operations

undergoing Project Concept Note reviews in FY15 were screened for climate and disaster risks (of which 59 percent used the screening tools, and the remainder used other methods). In addition, 48 projects funded under other sources (primarily IBRD) have used the screening tools. The International Finance Corporation (IFC) is similarly developing climate risk management tools that will help it assess and manage potential negative effectives of climate change impacts on its investments initially covering ports, waterways, forestry, pulp and paper, and insurance sectors. Finally, a new project-level tool linked to hazard sets - ThinkHazard! - is expected to be introduced in FY16 to help task teams identify specific project exposure to tsunamis, earthquakes, droughts, volcanic eruptions, coastal and river flooding, storms and storm surges, and droughts, as well as actions to mitigate the associated risks.

**10. The WBG has harnessed and refined various instruments to advance DRM impacts on the ground**. In FY12-15, the World Bank delivered approximately 65 percent of financing with DRM co-benefits was delivered through investment lending instruments (see Box 1 for an innovative example). While this has remained the favored instrument to advance disaster resilience, the World Bank has also responded to demand for increased flexibility in accessing project funding to meet pressing liquidity and recovery needs in the immediate aftermath of disasters. The Immediate Response Mechanism (IRM), launched in 2011, pools uncommitted resources from IDA projects that include a Contingent Emergency Response Component (CERC). While the IRM has had low uptake, 68 IDA and IBRD operations have included a stand-alone CERC, which is a feature that allows client countries to reallocate funding swiftly when disaster occurs. Since IDA15, when it was initially piloted, the Crisis Response Window (CRW) has become the key instrument in organizing IDA's disaster response. Most recently, the CRW allocated US$ 300 million to Nepal following the 2015 earthquake.

**11. Development Policy Financing and Program for Results are also emerging as effective instruments for building resilience.** Direct budgetary support through Development Policy Operations (DPOs) accounted for 20 percent of World Bank DRM financing in FY12-15. Of this, DPOs with a Catastrophe Deferred Drawdown Option (Cat-DDO) made up an important share, with 9 countries (mostly in Latin America and Caribbean) holding an active Cat-DDO credit line. First introduced in 2008, the Cat-DDO instrument provides IBRD countries with a pre-approved credit line that can be accessed when a national emergency is declared following a natural disaster as long as they commit to developing an integrated DRM strategy. Sri Lanka and Seychelles both triggered Cat-DDOs in 2014, pioneering the use of the instrument within South Asia and Sub-Saharan Africa respectively. Cat-DDOs have provided a strong platform for IBRD countries to advance national policy frameworks and DRM investments, which has also led to increased interest from IDA countries in accessing similar contingent credit arrangements. A new Cat-DDO type of instrument for IDA countries could, if agreed, become a high impact instrument to limit the impacts of disasters that frequently set back nascent poverty reduction efforts in lower income countries. Finally, lessons are accumulating on how to best deploy Program for Results (PforR) financing for resilience. Of 29 PforR projects approved as of January 2016, four included DRM

measures explicitly, and one planned operation – the Morocco Integrated Disaster Risk Management and Resilience Program – specifically promotes a resilience fund.

**Box 1: Insulating Uruguay's economy against climate shocks through innovative IBRD financing**

Uruguay's energy mix is dominated by hydropower. When water levels in key reservoirs fall due to lack of rains, the state hydro-electric company must turn to more expensive thermal sources for electricity generation, pushing up costs. Indeed, Uruguay's fiscal deficit increased from 0.9 to 2.8 percent of GDP from 2011 to 2012 partly due to severe drought and high oil prices. Through the Drought Impact Mitigation Project, an innovative US$ 200 million operation, the World Bank is supporting Uruguay's comprehensive approach to managing the risks posed to the economy by drought. The project marks the first time that IBRD investment project financing has been provided as a contingent credit line, which can be accessed when weather conditions are adverse and funds in the national Energy Stabilization Fund fall below a minimum level. This innovative financing structure helps to shield households, businesses and the public accounts from the impacts of drought and offers a model that may be replicated in other countries.

**Integrating Disaster Risk Management across the Global Practices**

**12. The World Bank has made concerted efforts to strengthen internal capacity and facilitate collaboration across multiple GPs to better mainstream DRM.** The Social, Urban, Rural and Resilience Global Practice (GSURR) houses the World Bank's core DRM specialists and leads engagement with client countries on disaster risk and resilience. During FY15, about 55 percent of World Bank commitments for DRM, were delivered by GSURR and 45 percent by other GPs (see Figure 2). The Global Facility for Disaster Reduction and Recovery (GFDRR), a global partnership managed by the World Bank and supported by 34 countries and 9 international institutions, acts as a financing and technical body that supports DRM across the WBG. In addition, a number of specialist thematic teams work across GPs to advance mainstreaming by offering specialist knowledge to team leaders across the institution[12].

**13. All GPs within the Sustainable Development Practice Group[13] have built specialized capacity to address disaster risk in core activities.** This includes teams that address agricultural risk management, watershed management, resilience in the power sector, climate-resilient road and river transport, amongst others. This mainstreaming effort has translated into higher financing volumes, with three GPs – Agriculture, Water, and Energy & Extractives – providing more than US$ 300 million each in financing with DRM co-benefits in FY15. The Environment and Natural Resources GP in turn promotes natural resource practices that help prevent disasters. For example,

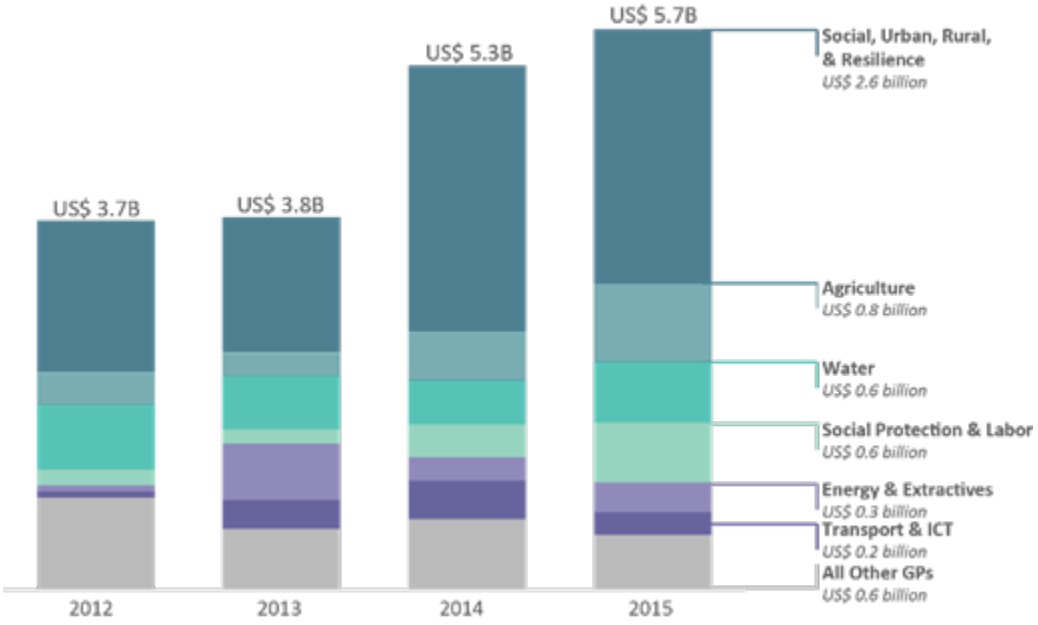
[12] Specialist thematic groups or knowledge silo breakers (KSB) include: City Resilience Platform; Disaster Risk Management Analytics and Solutions; Disaster Risk Financing and Insurance; Responding to Disasters Together; Hydromet, Climate Services and Resilience; Resilient Recovery; Small Island States Resilience; Urban Floods; Safer Schools Program; Community Resilience; and the Pilot Program for Climate Resilience. All of these KSB have cross GP/cross VP co-leadership.

[13] The Sustainable Development Practice Group comprises six GPs: Agriculture; Energy & Extractives; Environment & Natural Resources; Social, Urban, Rural & Resilience; Transport & ICT; and Water.

integrated watershed management and sustainably managed forests in the upper part of a watershed reduces run-off and flood risk, while integrated coastal zone management is key to minimizing impacts of storm surges. GPs manages several climate adaptation programs with relevance to DRM, such as the West Africa Coastal Areas Program, established in 2015 in response to requests from Benin, Cote d'Ivoire, Ghana, Mauritania and Togo in containing coastal erosion.

**14. Adaptable social protection and disaster risk financing have emerged as key transformative aspects of DRM**. Informed by experiences such as the Productive Safety Nets Program in Ethiopia, social protection programs are shielding poor households from the effects of disasters. Experience in Ethiopia and Malawi suggest that the cost of a drought to a household can rise from zero to about US$ 50 per household if support is delayed by four months, and to about US$ 1,300 if support is delayed by six to nine months[14]. Rapid response through scalable safety nets can avoid this rapid escalation in costs, which is due to irreversible impacts on children and distress sales of assets (especially livestock). In Kenya, the government responded to the impending drought in 2015 by scaling up targeted cash transfers, reaching 90,000 more households than the safety net system normally covers. To ensure that the financial sector and social safety nets work efficiently to cushion poor households from disasters, the Social Protection and Labor GP, GSURR and Finance and Markets GP (which hosts the Disaster Risk Financing and Insurance program – DRFI) cooperate closely. A World Bank community of practice, 'Responding to Disasters Together' – aims to capture and share experience on disaster-responsive safety nets. Efforts are underway to expand the approach in Uganda, the Sahel region, Colombia, Pakistan, the Philippines, Colombia, Madagascar, Mauritania, Jamaica and several Small Island States (such as Comoros, and São Tomé and Príncipe).

*Figure 2: World Bank commitments with DRM co-benefits by Global Practice*




[14] Cost-benefit analysis of the Africa Risk Capacity Facility. Clarke and Hill, 2013.

**Driving Progress in the key dimensions of Disaster Risk Management**

**15. Effective DRM requires attention to all elements of the DRM cycle: from disaster preparedness to resilient recovery.** The WBG is investing in multi-disciplinary expertise in key dimensions of DRM, from risk modelling and assessment, to early warning and weather and climate services, to risk financing and insurance, amongst others. Under GSURR's leadership, the WBG has invested in specialized expertise and operational capacity to offer services in all these areas to member countries. GFDRR has supported progress through specialized thematic teams, as well as grant financing that has informed the design and support of investment operations led by the GPs.

**16. New tools and methods are improving how disaster risks are identified and tackled.** The Innovation Lab program, hosted by GFDRR, has promoted open data platforms, citizen-led data collection with smart-phones, and other innovative approaches deploying remote sensing and hazard datasets. Such tools have increasingly supported policy and investments. As an example, the Open Data for Resilience platform facilitated a community-led mapping exercise in Malawi during 2015, identifying at-risk structures for future flood preparedness. The Disaster Risk Management Analytics and Solutions group[15] offers state of the art disaster risk modeling techniques for a range of different applications including: economic valuation of cities; national disaster risk profiles; and rapid post-disaster loss assessments, as was done following the earthquake in Nepal in 2015. Hazard data, as well as consideration of future climate change impacts, has increasingly informed investment projects that might otherwise fail to account for extreme events.

**17. Early warning constitutes a crucial 'missing link' for disaster resilience in many countries.** Early Warning Systems (EWS) – combined with observation system and evacuation preparedness – can save many lives at a low cost. National Meteorological and Hydrological Services (NMHSs) in many countries have deteriorated since the 1990s, with Low-Income Countries facing particular shortfalls[16]. WBG commitments to early warning and preparedness reached US$ 583 million per year in FY12-15, with a new Climate Risk and Early Warning Systems (CREWS) initiative launched in late 2015. The WBG works with partners such as the World Meteorological Organization and often helps to build capacity on a regional basis – as with support to hydrometeorology modernization through initiatives in Central Asia and Sub-Saharan Africa.

**18. Disaster risk financing strategies are helping countries build layers of protection against disasters.** As of January 2016, the World Bank was providing advisory support to more than 44 countries to develop national-level risk financing strategies and was involved in strengthening regional collaboration in disaster risk financing and insurance in Sub-Saharan Africa, the Caribbean, the Pacific Islands, the southwest Indian Ocean, and more recently in East Asia. In 2012, Colombia developed a national-level disaster risk financing strategy, and Peru, the Philippines and Panama have since followed suit. Work is ongoing to develop similar national

[15] Hosted in the Social, Urban, Rural and Resilience Practice (GSURR), the Disaster Risk Management Analytics and Solutions group is primarily composed by members from GSURR, Finance & Markets (GFMDR), Poverty (GPVDR), Development Research Group (DECCT), Gender (GENDR), Treasury and GFDRR.

[16] Rogers, D. and Tsirkunov, V. *Weather and Climate Resilience: Effective Preparedness through National Meteorological and Hydrological Services.* World Bank (2013).

strategies in Serbia, Laos, Vietnam, and Kenya. In Sub-Saharan Africa, the World Bank is implementing a thematic program, the Africa Disaster Risk Financing Initiative, to scale up the development of such strategies and maximize their impact. Collaboration between the Social, Urban, Rural and Resilience GP, Finance & Markets GP, Treasury, IFC and others helps equip clients with analysis and implementation support in this innovative area.

**19. Ex ante planning has assumed greater prominence in how countries approach recovery from natural disasters.** Since 2008, the World Bank, the European Union (EU) and the United Nations Development Programme (UNDP) have responded in a coordinated manner to requests for post-disaster needs assessment (PDNA) support. This has been further strengthened with the launch of a Recovery Framework at the Second World Reconstruction Conference in September 2014 which place PDNAs within a stronger and longer-term recovery context. Potential benefits include improved clarity on roles and responsibilities during recovery, legal frameworks to expedite procurement in a disaster, and data baselines to expedite recovery planning. PDNAs have been instrumental to leveraging additional resources, such as at the International Conference for Nepal's Reconstruction after the April 2015 earthquake where the international community pledged US$ 4.4 billion for post-earthquake recovery and reconstruction.

**Building resilience through partnerships**

**20. Internal and external partnerships have proven crucial for reinforcing DRM capabilities.** To strengthen the capacity of National Meteorological and Hydrological Services in Sub-Saharan Africa, an operational partnership with the World Meteorological Organization and leading Meteorological and Hydrological institutes is being formed, supported by the US$ 80 million CREWS program launched in June 2015. Other technical disciplines relevant to disaster resilience are also marked by the geographic dispersion of expertise. In this context, south-south learning and structured knowledge management approaches can result in learning and process improvements that raise the effectiveness of public expenditures. A key example is the World Bank Program for Mainstreaming DRM in Developing Countries and the DRM Hub, Tokyo (The Hub), established in 2014. Given Japan's extensive experience in addressing disaster risk, creation of the hub offers a significant opportunity to strengthen WBG internal capacity in areas such as risk engineering, while stepping up the transfer of relevant knowledge to developing countries – as exemplified by recent workshops on business continuity practices in the water utility sector in Bangladesh and the Philippines.

**21. Effective models for national, regional and global partnerships continue to support the DRM agenda– but more can be done.** The Pilot Program for Climate Resilience (PPCR), which supported resilience in 18 countries during its first 7 years, has demonstrated the importance of coordination across multiple sectors – supported by leadership from the highest levels of government – to shape effective national resilience programs. The Small Island States Resilience Initiative (SISRI), launched by the World Bank in 2014, is building a community of practice amongst internal and national experts working on DRM and climate adaptation, and aims to deliver scaled-up and more harmonized support for resilience to Small Island States. GFDRR also hosts thematic programs that help connect the World Bank with multiple actors such as the: tri-partite agreement with UNDP and the EU on coordinated post-disaster needs assessment support; and a Safer Schools Partnership building on comparative strengths of the United Nations International Children's Emergency Fund (UNICEF), Non-Governmental Organizations and private sector participants. Through international events like the Understanding Risk Forum and the Resilience

Dialogue series, GFDRR continues to provide a space for collaboration across a diverse set of actors—from DRM experts to leaders from academia, government, and the private and non-profit sectors.

## C. CHALLENGES AND OPPORTUNITIES

**22. Post-2015 policy frameworks present a clear call for greater attention on building resilience to disaster risks through development programs.** The WBG will continue to emphasize the need for rapid, inclusive and risk-informed development. Additionally as outlined in the Climate Action Plan, the WBG has an opportunity to contribute to the implementation of the Paris Agreement by supporting client countries in fulfilling the ambitions in NDCs through bringing climate and disaster risk considerations into all CPFs; ensuring that all World Bank projects, including for IBRD countries, contribute to resilient development and do not create new vulnerabilities; addressing the specific challenges of deltas, coastal areas and small island states; and working towards universal access to hydro-meteorological information and effective early warning systems.

**23. WBG's impact on DRM could be increased through greater development and use of a variety of financial instruments to address current gaps.** Financial products that alleviate countries' fiscal vulnerability by transferring risk to the markets – exemplified by innovative IBRD financing in Uruguay and insurance solutions – would help to address growing exposure of both low- and middle-income countries at sovereign and sub-sovereign levels. In response to calls from IDA countries[17], the World Bank could explore opportunities to provide contingent credit lines such as the Cat-DDO instrument already offered to IBRD countries. In the context of IDA18, such instruments could offer a platform and incentive to build strengthened national policy frameworks for disaster risk reduction. Enabling the WBG to better serve subnational governments with additional technical and financial services will be necessary to scale up resilience into the national development priorities of IDA countries.

**24. Specific country groups such as Small Island States require dedicated assistance to bring their DRM investments to scale.** Small Island States make up two-thirds of the countries that suffer the highest relative losses due to natural disasters – between 1 and 9 percent of their Gross Domestic Product (GDP) each year – and the costs are rising with climate change. The recurrent losses create a 'leaking bucket' effect that undermines growth and adds to debt. The WBG could address implementation bottlenecks by stepping up operational support and sharing experiences across regions; pilot innovative approaches such as debt-for-resilience swaps; consolidate funding sources to reduce fragmentation; and scale up financing for risk reduction, the area of greatest financial needs.

**25. In conclusion, the WBG has the opportunity to address several key challenges in the years ahead, further consolidating its role as a partner of choice on disaster risk management.** These opportunities include: (a) bringing risk reduction investments to the scale necessary to enable countries to achieve the Sendai Framework targets by 2030 and prevent disasters undermining progress on the SDGs; (b) supporting client countries to implement the resilience objectives specified in their NDCs; (c) harmonizing results measurement for DRM; (d) increasing

[17] IDA and Blend Countries like Kenya, Mozambique, Cote d'Ivoire, Ghana, Senegal, Pakistan and the Pacific Islands have expressed interest in a similar financial instrument.

the availability and effectiveness of resilience financing for Small Island States; (e) strengthening DRM tools and expanding financial solutions for fast-growing cities in the context of rapid urbanization, populations growth, and climate change; (f) increasing access to early warning and risk information; (g) working with the private sector to address gaps in risk financing; (h) assisting countries transfer risk to the markets through the intermediation of risk management transactions; and (i) working with the humanitarian community to address pressing needs, ahead of the World Humanitarian Summit in May 2016.

## Annex 1: Summary Progress Report by Sendai Report Priorities

| *Sendai Report Priorities* | *Summary of Progress* |
|---|---|
| Priority 1. Enhance the understanding of disaster risk as a first step to informing effective policy and investment decisions | ***More systematic integration of resilience at the initial stages of development planning.***<br>• The inclusion of climate and disaster risks in CPFs grew from 85% in FY13, to 95% in FY15.<br>• The WBG is currently engaged in more than 48 countries to help them better understand their exposure to disaster risks.<br>• New climate and disaster risk screening tools have been developed to identify key vulnerabilities and corresponding adaptive capacities. |
| Priority 2. Scale up technical assistance and financial support for building resilience to disasters and climate change in vulnerable countries | ***Increased mainstreaming of Disaster risk management across all regions and sectors of development.***<br>• World Bank DRM-related commitments grew from US$ 3.7 billion in FY12 to US$ 5.7 billion in FY15.<br>• A growing proportion of DRM-related commitments support ex-ante risk reduction, representing nearly 77% of all DRM commitments in FY15 (US$ 4.2 billion).<br>• The World Bank is working with more than 94 countries to mainstreaming disaster resilience. |
| Priority 3. Increase attention to disaster resilience at the local level | ***Strengthened resilience at the local level through greater citizen engagement.***<br>• WBG is supporting community driven development in more than 110 countries.<br>• A new Resilient Cities Program has been established targeting smart and inclusive planning to increase local resilience. |
| Priority 4. Further align the disaster risk management and climate adaptation agendas | ***Greater synergy between climate change adaptation and disaster risk management agenda.***<br>• Between FY12 and FY15, 67% of the operations supporting climate change adaptation also supported disaster risk management.<br>• WBG institutional reform, including the creation of the Climate Change Cross-Cutting Solutions Area, has facilitated collaboration and coordination between the climate change and disaster risk management communities.<br>• The increased alignment of the two agendas has better positioned the WBG for implementation of the Paris Climate Agreement. |
| Priority 5. Increase support for the design and implementation of financial protection strategies | ***Increased demand from countries for WB assistance in developing comprehensive financial protection strategies.***<br>• WBG is providing support to more than 44 countries to develop financial protection strategies for disaster risk. |

| | |
|---|---|
| | • A new capacity building program for Africa was launched at the Understanding Risk and Finance conference in Addis Ababa to help government officials improve their understanding of disaster risk financing strategies and instruments.<br>• Contingent financing operations have recently been signed for Sri Lanka, the Seychelles and the Philippines. |
| Priority 6. Promote the use of contingent components within its projects, including Immediate Response Mechanism | ***Greater access for developing countries to quick financing post-disasters.***<br>• As of FY15, 68 operations included CERCs.<br>• IRMs are being implemented in a number of African countries |
| Priority 7. Expand the use of market-based solutions and broaden the scope of intermediation services | ***Increased access to risk transfer solutions for less developed markets.***<br>• The World Bank provided support for the expansion of the National Agricultural Insurance Scheme in India to cover 34 million farmers.<br>• Between 2009 and 2014, the Global Index Insurance Facility committed US$ 25 million in grants to support the development of indexed/catastrophic insurance in developing countries, reaching over 644,000 beneficiaries.<br>• As of January 2016, the Caribbean Catastrophe Risk Insurance Facility, created in 2007, had made 12 payouts totaling US$ 34 million to 8 member countries.<br>• In collaboration with donors, the Bank Group helped set up the Pacific Catastrophe Risk Insurance Pilot, which has provided two payouts totaling US$ 3.4 million. |
| Priority 8. Enhance support for accelerated recovery planning | ***Enhanced resilient recovery and reconstruction after disasters.***<br>• Between FY12 and FY15, the World Bank assisted more than 28 countries in conducting Post-Disaster Needs Assessments.<br>• Since FY12, the World Bank committed nearly US$ 4.5 billion to support resilient reconstruction and recovery in more than 36 disaster-affected countries.<br>A Disaster Recovery Framework Guide was recently developed, in partnership with the UN and EU, to help ensure post-disaster assessments inform recovery planning.<br>CRW allocations for the first year of the IDA17 cycle reached US$863 million. |

| | |
|---|---|
| Priority 9. Promote further convergence of donor efforts to support disaster resilience | ***Greater donor harmonization on reporting and tools for mainstreaming.***<br>• The Disaster Aid Tracking Initiative is currently working to assess DRM-related development planning and aid flows, helping better inform governmental and institutional arrangements supporting DRM.<br>• The World Bank is working to promote the integration of DRM in the Sustainable Development Goals and the Community of Parties. |
| Priority 10. Extend Knowledge and partnerships to support disaster risk management policies and programs | ***Stronger partnerships and increased knowledge exchange of disaster and climate resilience.***<br>• Through the Tri-partite partnership, the World Bank, EU, and UNDP work together to conduct post-disaster needs assessments in the aftermath of a natural disaster.<br>• Through GFDRR, the WBG manages a number of 'Special Programs' and maintains hubs in Europe and Japan that are instrumental in facilitating exchange of DRM knowledge.<br>• The bi-annual Understanding Risk conference brings together more than 3,500 experts in the field of disaster resilience. |
| Priority 11. Strengthen internal WBG capacity to better respond to client demand | ***A strong cadre of DRM specialists within the WBG help mainstream DRM.***<br>• Global leads have been appointed for DRM and DRFI<br>• As of October 2015, 130 staff belonged to the DRM community of practice and 239 staff to the Resilience and DRM Global Solutions Group.<br>• A knowledge management system is currently under development to increase access to DRM knowledge products and data. |

## Annex 2: Detailed progress report by Sendai Report Priorities

**Priority 1.** *Enhance the understanding of disaster risk as a first step to informing effective policy and investment decisions*

**Nearly 100 percent of all Systematic Country Diagnostics (SCDs) and CPFs for IDA countries integrate climate and disaster risk considerations**. Following the IDA17 commitments[18], the inclusion of disaster risks in IDA CPFs grew from 89 percent in FY13 to 100 percent in FY15. This increased emphasis on resilience has also influenced development planning for middle-income countries. More than 90 percent of IBRD CPFs now include disaster risk considerations, up from 85 percent in FY13. New risk screening tools also help to systematically consider short and long-term climate and disaster risks in project and national/sector planning processes. These include the National/Policy Level Tool, which addresses national and sector-level plans as well as institutional strengthening. They also include project-level tools that help World Bank task teams identify climate and disaster risks affecting IDA operations.

**Demand for support on risk identification is growing.** Analytical and advisory services on disaster risk enable countries to develop informed policies and investments for resilience. The World Bank is supporting the development and use of climate and disaster risk information in 48 countries, with commitments increasing by an average 26 percent per year during the period covered by this report, reaching US$ 191 million in FY15. In FY15, GFDRR grants supporting risk identification reached US$ 26.2 million, a doubling of support since FY12.

**Box 2. The Japan-World Bank program for Mainstreaming DRM in Developing Countries**

In 2014, Japan and the World Bank launched a US$ 100 million program to improve the management of disaster risks in developing countries. The World Bank's DRM Hub, Tokyo, which runs the Program, leverages good practice from Japan and around the world to support technical assistance and knowledge management activities aimed at mainstreaming DRM in World Bank policies and investments. As of February 2016, the Hub's portfolio of active projects ($44.8 million) is supporting 32 countries, implemented through seven World Bank Global Practices. The Hub has convened nearly 1,300 experts and practitioners from Japan and around the world through over 40 events in Japan and in partner countries. Key to the role of the Hub is engagement of Japanese centers of excellence, academic and research institutes and private sector actors, who all contribute on a regular basis to these events and overseas exchanges. For example, the Hub has helped connect over 30 Indian dam operators with Japanese counterparts through in a series of knowledge exchanges to improve planning for safety checks after earthquakes.

[18] The IDA-17 policy commitments call for the integration of climate and disaster risk considerations into IDA operations by "(a) requiring all IDA country partnership frameworks (CPFs) to incorporate climate and disaster risk into the analysis of the country's development challenges and priorities and, when agreed with the country, incorporate such considerations in the content of the programs and results framework (target: 100 percent of all new IDA CPFs); (b) screening all new IDA operations for short- and long-term climate change and disaster risks and, where risks exist, integrate appropriate resilience measures (target: 100 percent of all new IDA operations screened)."

**Additional efforts to increase the accessibility of natural hazard information are underway.** A new online tool, *ThinkHazard!,* will help development practitioners to identify any relevant natural hazards, their likelihood of occurrence, and possible actions to mitigate them. In this initial phase of development, *ThinkHazard!* will identify vulnerabilities to earthquakes, tsunamis, volcanic eruptions (ash), floods, storm surges, strong winds and droughts on low-income countries. In subsequent phases vulnerability assessments may include additional hazards and be extended to middle-income countries.

**The World Bank is tailoring and applying state of the art tools – labeled Decision Making under Uncertainty (DMU) -- to help countries plan for resilience, despite deep uncertainty about the future and competing priorities.** These approaches rely on answering the question - "Which investment option best meets our goals given that we cannot accurately predict what the future will bring?" These methods seek to identify decisions that satisfy decision makers' objectives in many plausible futures and over multiple time frames. The methodology favors flexible options to avoid the maladaptation that occurs when infrastructure investment choices create lock-in, increasing the exposure of population due to the protection provided. Such maladaptation risks creating adverse outcomes if new risks arise due to climate change or poor maintenance. In addition, DMU methodologies encourage decision-makers to look beyond within-sector interventions, as optimal approaches may lie in contingent finance, social safety nets and livelihoods diversification for exposed populations rather than in engineering options. The World Bank has recently applied the context of hydropower investments in Nepal; water and energy investments in Africa; water resources planning in Lima, Peru; and transport network vulnerability in Peru, Colombia and Ecuador.

**Work is also underway to develop tools to measure resilience.** As a first step, the World Bank, through the Climate Change Cross-Cutting Solution Area, has developed an approach to measure socio-economic vulnerability at national level. Based on a simple economic model of disaster impacts – initially piloted for river floods in 90 countries – it provides a scorecard of 14 indicators that moderate disaster impacts on well-being and resilience. Beyond the measurement of the socio-economic capacity to cope with shocks, this tool will help identify the most promising policy choices and enhance resilience by reducing the impact of disasters on communities and the national economy. Further work is planned to apply the approach to other hazards – such as storms, coastal floods, and non-extreme climate changes – and pilot the tool at country or provincial level.

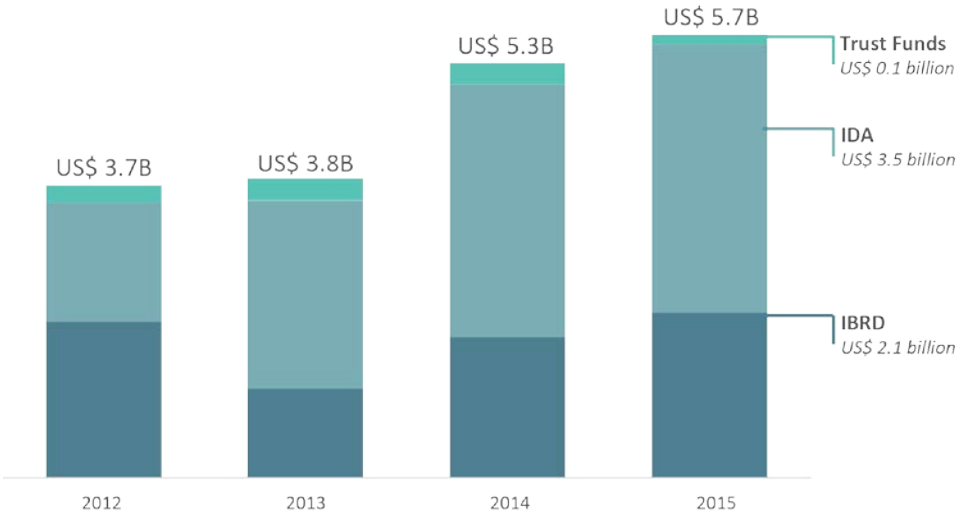
**Priority 2.** *Scale up technical assistance and financial support for building resilience to disasters and climate change in vulnerable countries*

**World Bank operations contributing to DRM continue to grow across all regions and all sectors of development.** Operations with DRM co-benefits – those which contribute to DRM objectives even if this is not their main objectives – accounted for nearly US$ 5.7 billion of World Bank approved commitments in FY15, an increase of more than 50 percent from FY12[19]. This

[19] In 2015, the World Bank adopted a new methodology to track funding that contributes to DRM. This methodology was retroactively applied to Bank commitments between FY12-FY14, and implemented Bank-wide in FY15. DRM co-benefits are defined as development activities which contribute to DRM as a main objective or as a supportive component. In order to differentiate between DRM and development, activities were only recorded as contributing to DRM if the following eligibility criteria are met: (i) there is explicit DRM reasoning in the project's appraisal and/or supporting documents, and (ii) the activity directly addresses vulnerability resulting from natural disasters.

growth was driven by increasing demand from client countries for support in addressing disaster risks, as well as mainstreaming of DRM across sectors such as agriculture, water, and transportation. IDA has continued to be the main source of commitments towards DRM, accounting for more than 61 percent (US$ 3.5 billion) of such financing in FY15, followed by the IBRD (US$ 2.1 billion).

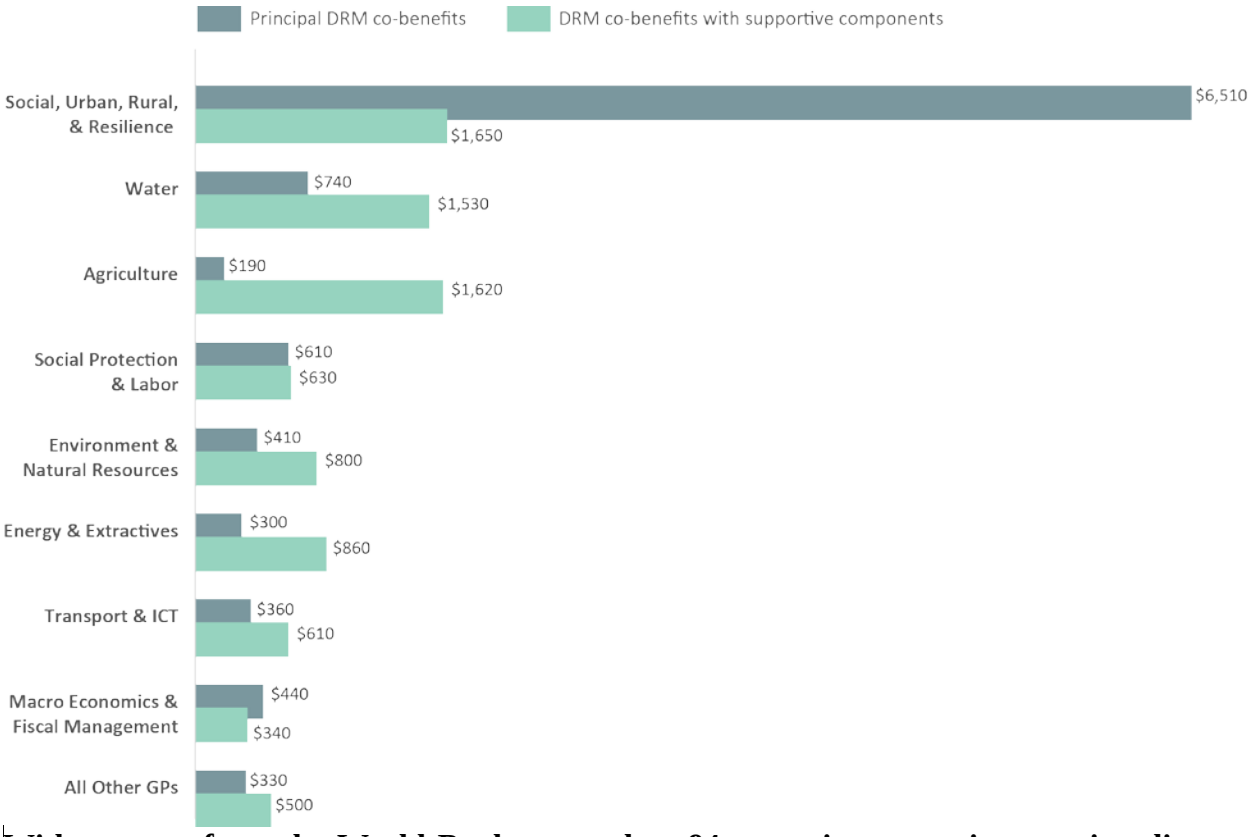
*Figure 3. World Bank financing commitments with DRM Co-benefits (by approval fiscal year)*




**An increasing number of GPs are incorporating resilience measures into project design and broader development planning.** The Social, Urban, Rural, and Resilience Global Practice (GSURR) continues to lead the thematic engagement on disaster risk, representing nearly 66 percent of all principal DRM co-benefits[20] between FY12-FY15 (US$ 6.5 billion). The Water GP also accounted for a significant portion of the FY12-FY15 principal DRM co-benefit portfolio (US$ 0.7 billion), followed by the Social Protection and Labor GP (US$ 0.6 billion). Of particular significance is the increasing portfolio of development operations that integrate DRM as a supportive component[21]. This increased integration of DRM across the Global Practices has helped broaden the scope of activities supporting resilience to include sectors of development with traditionally limited focus on DRM. Other than GSURR, the Agriculture GP had the highest number of commitments supporting DRM between FY12-FY15 (US$ 1.6 billion), followed by the Water GP (US$ 1.5 billion), and the Energy and Extractives GP (US$ 0.9 billion).

[20] Operations are considered part of the principal DRM co-benefit portfolio when disaster resilience is one of the primary objectives.
[21] Operations are considered to support DRM when disaster resilience measures have been integrated into stand-alone development activities already planned for implementation.

*Figure 4. DRM Co-benefits with principal and supportive components in the Global Practices (approval in FY12-FY15, US$ millions)*

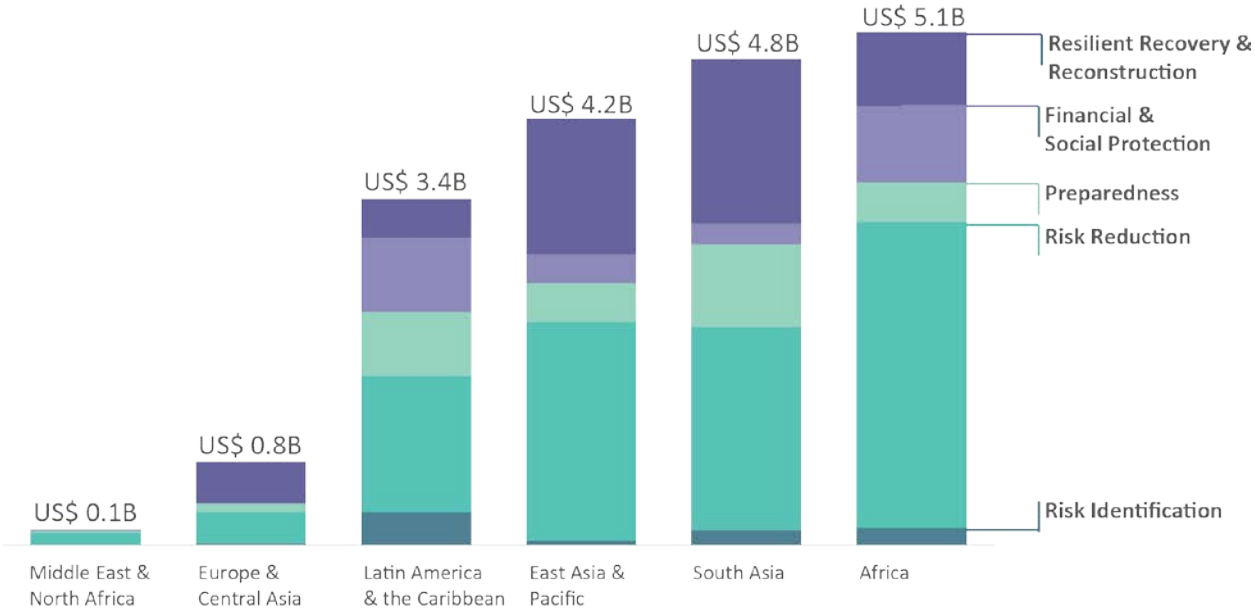



**With support from the World Bank, more than 94 countries are mainstreaming disaster resilience into their development priorities.** The Africa region has had the largest portfolio of commitments with DRM co-benefits in recent years, a position now overtaken by the South Asia region. DRM-related commitments in South Asia have nearly quadrupled, reaching US$ 2.2 billion in FY15 from just US$ 0.5 billion in FY12. This growth is largely due to increasing engagement in both India, Nepal, and Bangladesh to support long term resilience following a series of natural disasters. DRM co-benefit commitments in the Africa region reached US$ 1.2 billion in FY15, with more than half of the commitments supporting social safety nets for disaster resilience. Commitments with DRM co-benefits in East Asia and Pacific fluctuated between FY12-FY14, mainly in response to recovery needs following natural disasters, with commitments shifting towards ex-ante risk reduction and preparedness in FY15. Latin America and the Caribbean DRM co-benefit commitments totaled US$ 1.0 billion in FY15, with a significant proportion of funding allocated towards financial protection.

**New instruments are increasingly used to mainstream DRM into client governments' policies, legislation, and budgetary planning.** Direct budgetary support through Development Policy Operations (DPO) is increasingly being used as a tool to mainstream DRM within client governments' institutional frameworks. Between FY12-FY15, DPOs made up more than 20 percent of World Bank commitments with DRM co-benefits. Program-for-Results (PforR) is a new investment lending instrument that has the potential to support the integration of DRM throughout a client's institutional framework and, by disbursing against results, provide incentives for system-wide changes that take risk management into account. Four out of the 29 PforR operations approved as of October 2015 already include DRM- targets while the first full DRM

PforR operation, the Morocco Integrated Disaster Risk Management and Resilience Program, was recently approved.

*Figure 5. World Bank financing commitments with DRM Co-benefits by region (approval in FY12-FY15)*




**Priority 3.** *Increase attention to disaster resilience at the local level*

**The WBG continues to engage in DRM activities at municipal, community, and household level.** Increased attention is paid to targeting both physical and social aspects of strengthening disaster resilience at the local level. Efforts are ongoing to work with local governments to make cities resilient to disruptions caused by natural hazards, climate change, and other systemic shocks. In parallel, Bank Group operations continue to recognize communities and households, especially women, as valued partners in disaster and climate risk management initiatives and not simply as beneficiaries that are on the receiving end of information and projects.

**Citizen-led initiatives play a growing role in building disaster resilience.** The WBG continues to support community-driven development (CDD) with continued engagement in more than 110 countries. One area where the WBG has continued to prioritize citizen engagement is to 'build back better' in the aftermath of disasters. More recently, following the 2013 Typhoon Haiyan, the World Bank invested US$ 479 million to support resilience-strengthening efforts through the National Community Driven Development Project, which covers 5.4 million households. The WBG also continues to support communities to understand their vulnerabilities through risk mapping and empowers them through owner-driven construction in post-disaster scenarios. In 2015, the WBG partnered with local communities of Nsanje and Chikwawa in Malawi, where participants from the Government of Malawi and the Humanitarian OpenStreetMap Team mapped nearly 450 residential areas. In Nsanje, these exercises allowed for collaboration between

government units and villages, as well as the collection of more than 15,000 waypoints (such as village locations, road access, dwellings, and village facilities).

**Box 3. Citizen-centered approach promotes efficient reconstruction following Uttarakhand floods**

The Uttarakhand Disaster Recovery Project was put in place to help with recovery after the 2013 flash floods in Uttarakhand, India. World Bank teams helped communities better understand the recovery policies and engage in the project by communicating more the local language, promoting transparency and accountability. Additionally, model pre-engineered houses were constructed in each district headquarters and communities were invited to examine them. With a greater sense of ownership and understanding of available options, more than 50% of the project beneficiaries started rebuilding their own houses within six months of the project cycle.

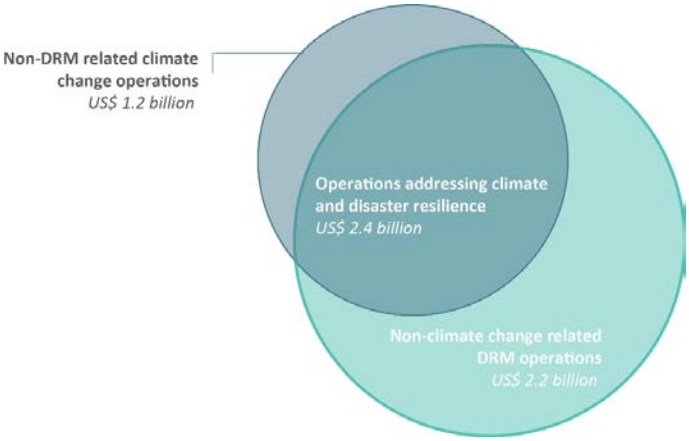
**DRM projects are showing an increased emphasis on empowering women as 'resilience leaders.'** In FY15, 74.3 percent of DRM investments integrated gender considerations, an increase from 56 percent in FY13. With Japan's financial support of USD 1.8 million, the WBG launched the Global Resilience Investment Fund (GRIF). Through this fund and in partnership with the IE Business School and private sector companies, WBG is developing the Women Entrepreneurship Resilient Cities (WE'Resilient Cities) Initiative, a start-up competition that aims to transform women-led ventures in the Middle East and North Africa region into sustainable business opportunities. The initiative brought together more than 150 teams from Djibouti, Beirut and Cairo and has helped mobilize US$ 200,000 from partnering investment funds and venture capitalists to help women-led start-ups supporting urban-resilience efforts.

**The World Bank has worked to scale up programs on urban resilience and risk-sensitive planning.** Urban resilience is fast becoming a major adaptation issue. The World Bank Group could become a leading partner in this space due its expertise and services managing different types of risk and its cross-sectoral technical and operational experience. Some of WBG's ongoing efforts include the Resilient Cities Program, through which the World Bank also participates in the Medellin Collaboration on Urban Resilience. The CityStrength Diagnostic, developed as part of the Resilient Cities Program, is a rapid diagnostic tool, which aims to help cities identify source of vulnerability to a variety of shocks. In June 2014, WBG worked with stakeholders in Can Tho, Vietnam to identify priority actions and investments that will enhance the city's developments to current and future challenges. This informed a US$250 million investment project, which will include resilience measures for flood-prone areas and improve important services such as sanitation and transport, and upgrade living conditions. In addition, a knowledge product on resilient building code regulation, with technical contributions from UN-Habitat, UNESCO, and the Japan International Cooperation Agency (JICA), is expected to drive new opportunities to engage client countries on managing the safety and resilience of their building stock. In addition, a new initiative, the Inclusive Community Resilience Program, was launched to broaden the scope and reach of citizen engagement.

**Priority 4:** *Further align the disaster risk management and climate adaptation agendas*

**There is substantial synergy between the World Bank's DRM and climate adaptation portfolios.** Since FY12, more than two-thirds of the operations supporting climate adaptation also addressed disaster risk management (see figure 6), reflecting share attention to weather-related events such as floods, droughts, and storms. The portfolio of World Bank financing that contributes to DRM objectives is larger than that of climate adaptation, with additional financing of around US$ 2.2 billion per year addressing seismic risk, disaster response and other priorities. Together, they contribute to a steadily growing portfolio of climate and disaster resilience operations, which grew from US$ 5.8 billion in FY12 to US$ 7.1 billion in FY15.

*Figure 6. World Bank financing commitments with climate change adaptation and DRM Co-benefits (annual average, FY12-FY15)*




**The increasing alignment of DRM and climate adaptation is reflected in the delivery of IDA17 commitments and in development of new tools.** Increased collaboration between DRM and climate adaptation experts and country teams, climate and disaster resilience has been increasingly reflected in Systematic Country Diagnosis (SCDs) and Country Partnership Frameworks (CPFs). On the second IDA17 commitment to develop multi-sectoral plans and investments for managing climate and disaster risk, the Climate Change Cross-Cutting Solutions Area (CCSA) and GSURR allocated staff and resources complementarily in order to cover all 25 countries. Close collaboration between the two communities of experts has also recently resulted in a consistent coding system to record DRM and climate adaptation co-benefits; the development of a country-level resilience indicator; a framework for results-based monitoring consistent with that of global climate funds; and expansion of a framework for integrating uncertainty into decision-making.

**Box 4: IFC and Rockefeller Foundation have developed a "Resilience screen" to ensure that infrastructure investments are risk-informed.**

The International Finance Corporation (IFC) investments in more than 100 infrastructure and natural resources projects each year. To ensure the longevity of its investments, IFC and the Rockefeller Foundation established a Facility aimed at ensuring that the investments are risk-informed. The Facility will pay for legal, technical and other advisors for a government, when IFC is involved in a transaction. The facility will complement the assessment of risks associated with the changing climate as required by the IFC's Performance Standards.

**The resilience agenda increasingly brings together climate and disaster risk, better positioning the WBG for the implementation of the Paris Climate Agreement.** The WBG has made a commitment to increase the share of the portfolio supporting climate resilience from 21 to 28 percent over the next five years (reaching a potential US$ 29 billion a year by 2020). Demand for climate and disaster resilience as a business line is therefore expected to grow, propelled by its prominence in developing countries' NDCs, and its increased visibility in CPFs. To guide this investment, the WBG is finalizing a Climate Change Action Plan that aims to facilitate the delivery of comprehensive packages of financing, technical assistance and knowledge. The Africa Climate Business Plan and the Small Island States Resilience Initiative have developed pipelines of potentially scalable investments, which together cover many of the most vulnerable countries. At the thematic level, climate and disaster resilience is also expected to be enhanced by two new partnership initiatives: the Climate Risk and Early Warning Systems (CREWS), supporting hydromet and preparedness in Least Developed Countries and Small Island States, and InsuResilience, supporting disaster risk financing and insurance in Africa, Caribbean and the Pacific.

**Priority 5:** *Increase support for the design and implementation of financial protection strategies*

**WBG is currently advising 44 countries to develop a comprehensive approach to manage the financial costs of disasters.** In 2012, Colombia developed a national level disaster risk financing (DRF) strategy. In 2014 Peru, the Philippines, and Panama followed suit. Work is ongoing to develop similar national strategies in Serbia, Lao, Vietnam, and Kenya. In Africa, the WBG is implementing an EU-supported program, the Africa Disaster Risk Financing Initiative, to provide technical assistance on this topic. There is also dialogue in all of the countries participating in the Caribbean Catastrophe Risk Insurance Facility and the Pacific Catastrophe Risk Assessment and Financing Initiative to design comprehensive national level policies for disaster risk financing.

**Box 5: CAT DDOs guarantee immediate liquidity once a disaster strikes, and provide an important platform to strengthen DRM frameworks.**

**The case of Peru:** Since 2009, Peru has developed a series of policy reforms in its DRM institutional and legal system. The WBG has supported these through two Cat-DDOs (FY11 – US$100 million and FY15 – US$400 million) and technical assistance. Through increased public investment in ex-ante measures, the government of Peru has been able to mainstream DRM across sectors. For 2016, national and sub-national governments in Peru will invest more than US$ 650 million in prevention and risk reduction measures such as in infrastructure and in non-structural measures like including DRM in the primary and secondary school curricula.

**The case of the Philippines:** In 2011, the Government of the Philippines set up a contingent credit line with the WBG through a US$ 500 million Cat-DDO. In the aftermath of Tropical Storm Sendong (Washi) which hit on December 29, 2011, the Philippines was able to immediately access the full amount of the Cat-DDO to reduce the fiscal burden following the disaster. The funds provided immediate budget support in the recovery planning process through technical assistance for key areas, such as infrastructure and housing. In December 2015, World Bank approved a second Cat-DDO, which will increase the post-disaster financial response capacity to ensure that budget resources are not diverted from ongoing development program.

**Analytical tools have been instrumental in building government capacity to help vulnerable countries make the shift from 'emergency borrowers' to 'effective risk managers'.** In recent years, WBG has received growing requests for technical expertise, such as risk information and financial analysis, to help government officials better manage financial impacts from disasters. A Swiss State Secretariat of Economic Affairs (SECO) supported program, which provides technical assistance to middle-income countries has seen a high demand for analytical tools and services to help countries make better-informed decisions to implement disaster risk financing strategies. This included advisory services to Colombia, Peru, and the Philippines, with a particular focus on analyzing the opportunity costs of different financial solutions. In addition, a recently launched capacity building program helps government officials to improve their understanding of disaster risk financing strategies and instruments. A first training took place during the Understanding Risk and Finance conference in Addis Ababa in November 2015.

**The growing demand for immediate liquidity post-disasters is increasingly being financed by instruments such as Cat-DDOs and the Crisis Response Window.** Contingent financing instruments such as Cat-DDOs, which were introduced in 2008, have shown a growing demand in IBRD countries, with a total of 12 active Cat-DDO operations as of 2016. The most recent of Cat-DDOs have been Sri Lanka and Seychelles in 2014, with both countries pioneering the use of this instrument in their regions. Continued efforts to broaden the menu of financial solutions are important since customization is often necessary to meet a specific country's needs. A second Cat-DDO was approved for the Philippines in December 2015. In IDA countries in the Caribbean, Pacific, and in Africa, there is demand for contingent financing tools, such as the IBRD Cat-DDO. A contingent loan for IDA countries could help complement the focus of engagement from post-disaster operations, currently through the CRW or Emergency Response Loans, towards ex-ante preparedness and risk management. It could also provide a platform for policy reforms, something

that has proven to be a key driver of efforts to strengthen institutional frameworks, as well as investments, for DRM in IBRD countries.

**Crisis responsive safety nets are instrumental in providing vulnerable populations immediate assistance after disasters.** In 2015, the Government of Kenya effectively responded to a drought by scaling up one of its existing social safety nets to provide cash transfers directly into the bank accounts of 165,000 households, 90,000 more than those who receive assistance in normal times. Efforts to develop social protection systems - through better targeting, identification, and payment systems - are key to be able to scale-up a safety net program in the event of a disaster. Efforts are underway to expand the approach in Uganda, the Sahel region, Pakistan, the Philippines, Madagascar, Mauritania, and several Small Island States (such as Comoros, Jamaica and São Tomé and Príncipe).

**Box 6. Scalable social safety nets prove to be effective time and again.**

The Productive Safety Nets Program (PSNP) in Ethiopia has proven its effectiveness multiple times since it was set up in 2005. This program has been financed by the Government of Ethiopia, the World Bank, and 11 development partners. A unique feature of the program is that it triggers in place to respond to local and larger scale shocks. After the 2011 drought that affected East Africa, the program expanded coverage to an additional 3.1 million, reaching 9.6 million beneficiaries in 2 months. Ethiopia was the only county in the region that did not see a rise in poverty rates as a result of a drought. More recently, PSNP has yet again reacted effectively to the 2015 drought, by providing three rounds of cash transfers to 624,000 people in the country's highlands.

**Priority 6**. *Promote the use of contingent components within its projects, including Immediate Response Mechanism*

**Under IDA 16, the World Bank attempted to expand the use of contingent components by launching the Immediate Response Mechanisms (IRMs) in 2011.** The IRM is a mechanism for pooling uncommitted resources across projects that include an IRM contingent emergency response component (CERC). IDA countries can make use of this mechanism to access USD 5 million or 5% of undisbursed funds from included projects for immediate financing after disasters.

**CERCs within operations allow for strategic restructuring of project funds to meet immediate financial needs.** There are two types of CERCs: (i) a self-standing CERC at project level in IDA and IBRD countries; and (ii) an IDA IRM CERC, which is a CERC in an IDA project under the IRM as described above. In both cases, CERC funds can be quickly disbursed in the event of an eligible crisis without prior restructuring. A CERC provides the bridge financing for an emergency recovery loan, and is highly relevant in a context where the IDA Crisis Response Window (CRW) would be available for providing additional funds to address a disaster. The mechanism could thus facilitate utilization of the latest CRW top-up of US$900 million in IDA17.

**Increasing demand for CERCs has helped open the dialogue for deeper engagement on contingency planning with ministries engaged in WBG operations.** As of now, there are 68projects that have included a CERC. The first IRM Operational Manual in the Africa region was

approved by the World Bank and adopted by the Government in Niger, regulating the pooling of funds from IRM CERCs in three projects. Niger, Mali, and Burkina-Faso have already included IRM CERCs in a number of projects and are exploring inclusion in pipeline projects. IRM Operational Manuals are under development in Mozambique, Mauritania, Mali, and Nigeria. Several World Bank country offices are exploring the possibility of restructuring relevant projects to scale-up the potential of the IRM. This would make larger resources available, reduce the variability in financing and harness the benefits of IRM implementation arrangements.

**Priority 7**. *Expand the use of market-based solutions and broaden the scope of intermediation services*

**The WBG provides a growing range of market-based solutions that directly address financing needs related to disaster risk.** This includes a range of practical solutions through financial products that strengthen financial resilience for governments, farmers, home and business owners, as well as the poorest communities. The National Agricultural Insurance Scheme in India, expanded with support from the WBG, enabled 34 million farmers to benefit from faster claims and payments. Additionally, the Global Index Insurance Facility (GIIF) is a multi-donor trust fund, financed by the EU, Japan and the Netherlands. GIIF supports the development and growth of local markets for weather and disaster index insurance in developing countries, primarily Sub-Saharan Africa, Latin America and the Caribbean and Asia-Pacific. GIIF's regional implementing partners have insured over 1 million small farmers, pastoralists and small businesses, with $130 million in sums insured.

**Weather derivatives and catastrophe bonds are among recent growth areas.** In 2012, the National Administration of Power Plants and Electrical Transmissions (UTE) withdrew US$ 150 million from Uruguay's Energy Stabilization Fund to respond to high oil prices resulting from drought. In response to this, WBG provided customized weather derivative coverage of US$ 450 million for a period of 18 months in Uruguay. This has increased the capacity of the tariff stabilization scheme to manage extreme droughts that would otherwise adversely affect households, businesses and the public finances.

**Box 7. The Capital-at-Risk Notes has been used to provide reinsurance to the Caribbean Catastrophe Risk Insurance Facility countries.**

The Capital-at-Risk notes program facilitates risk transfer solutions for the World Bank and its partners using capital markets. Capital-at-Risk Notes are a type of debt security that IBRD may issue to the Global Debt Issuance Facility. Under this program, the World Bank issues notes such as catastrophe bonds ('Cat bonds'). In 2014, the program issued its first Cat bond which will provide the 16 Caribbean Catastrophe Risk Insurance Facility (CCRIF) countries, a US$ 30 million protection cover to losses from hurricane and earthquake risk for a period of three years. This financial solution will allow CCRIF multi-year access to insurance at a fixed price, achieving a more competitive and stable financial solution for disaster losses.

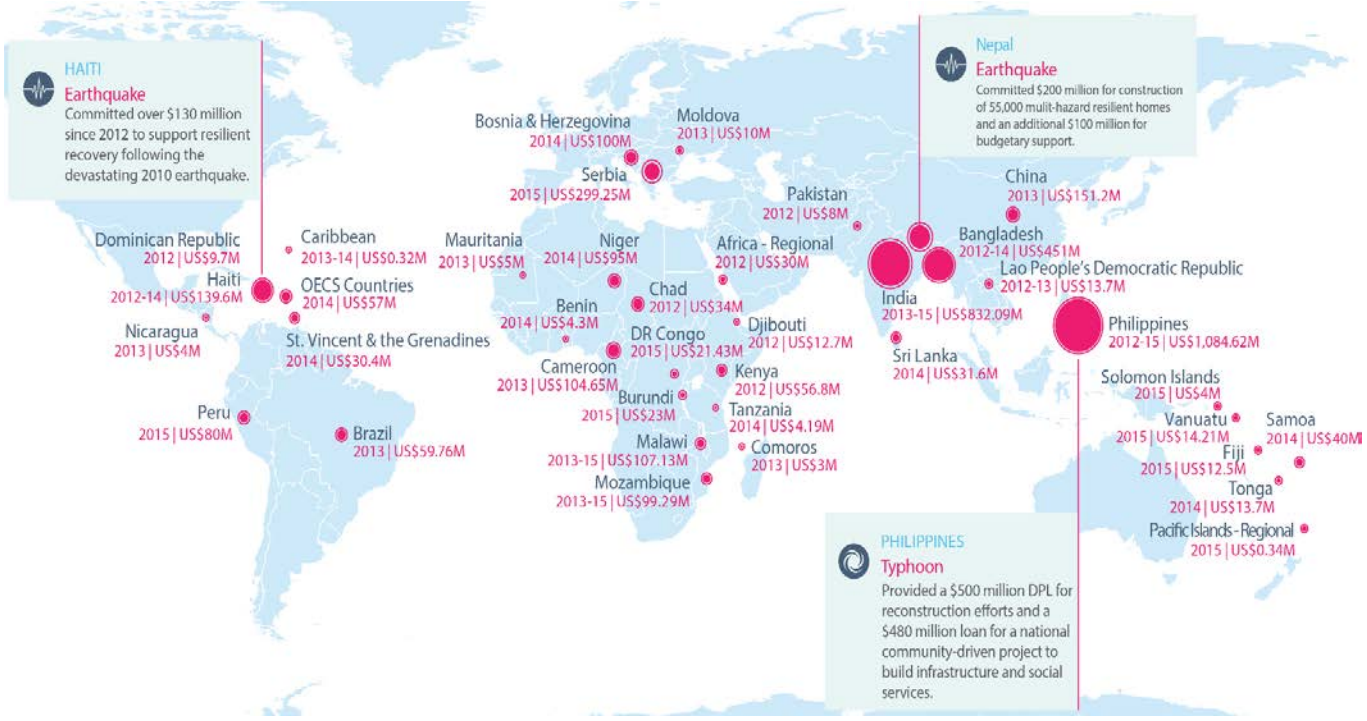
**The World Bank is helping to increase financial protection against catastrophe risks through insurance pooling mechanisms**. The Caribbean Catastrophe Risk Insurance Facility (CCRIF) offers hurricane and earthquake coverage to 16 participating governments in the Caribbean. As of

2016, CCRIF has made 12 payouts totaling US$ 34 million to 8 member governments. Work is ongoing to expand CCRIF to Central America. The Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI), which still depends on the WBG as an intermediary between participating governments and reinsurance markets, is currently being set up as a separate entity, expected to be functioning by 2016. In collaboration with other donors, the Bank Group helped set up the Pacific Catastrophe Risk Insurance Pilot, which has provided two payouts totaling US$ 3.4 million. In Europe and Central Asia the Bank Group is supporting the Southeast Europe Catastrophe Risk Insurance Program (SEECRIF) in Albania, Macedonia and Serbia, which aims to provide access to reliable catastrophe insurance products for homeowners, small medium enterprises and farmers in Southeast Europe that cover earthquake, flood and multiple climatic hazards. In the Philippines, the World Bank is supporting the development of the world's first sub-national insurance pool, expected to become operational in 2016.

**Priority 8**. *Enhance support for accelerated recovery planning*

**The World Bank continues to respond to clients' requests for assistance in the aftermath of major natural disasters.** Resilient recovery and reconstruction approaches are increasingly viewed as part of a strategic disaster risk reduction continuum, inseparable from risk reduction and preparedness. During FY12-15, the World Bank deployed teams to more than 36 countries affected by natural disasters, mobilizing nearly US$ 4.5 billion for resilient recovery and reconstruction. Post-disaster needs assessments informed recovery efforts and helped ensure the integration of resilient measure in 28 of these disaster-affected countries. Post-disaster needs assessments have also been instrumental to leveraging additional resources, such as at the International Conference for Nepal's Reconstruction after the April 2015 earthquake where the international community pledged US$4.4 billion for post-earthquake recovery and reconstruction.

*Figure 7. The global scope of the World Bank's commitments for post-disaster reconstruction and recovery*
*World Bank financing commitments with DRM Co-benefits by region (approval in FY12-FY15)*



**The World Bank is helping client countries to mainstream post-disaster recovery into their development planning.** This has included development of a Disaster Recovery Framework Guide in partnership with the United Nations Development Programme (UNDP) and the European Union. The Guide, published at the World Reconstruction Conference in September 2014, aims at ensuring that post-disaster assessments inform recovery planning and influence long-term paths towards development goals. The Guide builds upon a Joint Declaration on Post-Crises Assessments and Recovery Planning, signed by the World Bank, UNDP and the EU in 2008, to improve the coordination of support offered to governments affected by crises.

**The CRW has proven to be an important source of financing to support accelerated post-disaster recovery in IDA countries.** CRW allocations provide IDA countries with additional resources that will help them respond to major natural disasters and severe economic crises and return to their long-term development paths. Allocations from CRW resources for the IDA 17 cycle reached US$863 million in the first year of the cycle, as compared with an entire allocation of US$937 million during IDA16.

**Work is ongoing to measure results in the integration of risk reduction within recovery planning.** The World Bank contributed a chapter, among several other contributions, to the United Nations International Strategy for Disaster Reduction's (UNISDR) Global Assessment Report that documented the progress made around the world toward the integration of disaster risk reduction into disaster recovery measures, the obstacles to integration, and the crucial role recovery efforts play in promoting and institutionalizing longer-term disaster risk reduction measures in government systems. The report was launched at the World Conference on Disaster Risk Reduction held in Sendai, Japan in 2015.

**Priority 9.** *Promote further convergence of donor efforts to support disaster resilience*

**The WBG played an instrumental role in bringing partners together for the Sendai Framework for Disaster Risk Reduction.** At the World Reconstruction Conference, the WBG brought together 36 countries and development partners that drafted and signed a declaration calling for strengthened resilient recovery that informed the Sendai Framework. During the drafting process, WBG technical experts provided regular inputs. Additionally, World Bank continued to support the post-2015 process through inclusion of disaster resilience into SDGs as well as by supporting the climate adaptation agenda at the Paris Climate Agreement.

**The development of common tools to report and measure progress on DRM mainstreaming into development aid will help increase donor harmonization.** Technical work has taken place towards development of a DRM policy marker as part of the OECD-DAC Creditor Reporting System. Following agreement on the SDGs in September 2015, further progress is expected to resume, with the market offering an opportunity to track financial flows for DRM (as is currently done for climate change). The discussion on this marker emerged because funding for DRM is often incorrectly tracked as humanitarian funding. To fill this gap, a Disaster Aid Tracking initiative was also initiated, aiming to identify DRM-related aid flows to facilitate coordination and informed decision-making among donors and development partners.

**Priority 10.** *Extend knowledge and partnerships to support disaster risk management policies and programs*

**The WBG works with an array of development actors to support risk-sensitive development.** GFDRR, which is hosted by the WBG, maintains thematic programs that help connect the Bank Group with multiple actors including: with UNDP and EU on post disasters engagements; with WMO and Met Offices around the world on Hydromet services; with UNICEF, UNESCO a consortium of NGOs and private sector, on safer schools; and a wide community of experts on risk assessment through the GFDRR Innovation Labs, the Understanding Risk Community. GFDRR acts as a policy anchor by coordinating expertise across different partners and channeling them to the global community as it develops policies and monitoring measures to build disaster resilience. In the aftermath of disasters, the World Bank, EU and UNDP through the tri-partite partnership work together to conduct post-disaster needs assessments (PDNAs). Technical expertise from these partnerships serve to build capacity of countries to build disaster resilience. A key example is through the Knowledge Program of the DRM Hub Tokyo, which builds linkages between the needs of developing countries to mainstream DRM across policies, with solutions available in Japan and across the globe.

**Box 8. Promoting collaboration through the Resilience Dialogue Series**

The Resilience Dialogue series, coordinated by GFDRR brings together major voices in development including partnering organizations like the European Union, the Government of Japan, USAID, and the WBG. With nine successful instances to date, the Resilience Dialogue provides a unique space for topical, in-depth conversations around the resilience agenda. Typically held alongside the IMF-World Bank Spring and Annual Meeting, the Resilience Dialogue is being scaled up to intervene in major international forums, including WCDRR in March 2015 an the upcoming and Habitat III in October 2016 – in addition to emphasizing media visibility and a wider, more diverse demographic of speakers from relevant fields in science, business, academia, and civil society. The series helps important players in disaster risk management exchange ideas and better align strategic policies and programs.

**The Understanding Risk Community provides a platform for sharing knowledge and building partnerships.** In 2010, the World Bank founded the Understanding Risk (UR) Community based on a recognized need for a place to share knowledge and facilitate partnerships in the field of disaster risk assessment. Since its creation, UR has grown to nearly 3,500 members comprised of experts and practitioners who convene every two years at UR Forums to share technical knowledge. UR Forums have contributed to the establishment of new partnerships, such as one between the World Bank/GFDRR and the Government of Nepal to map all health facilities and schools in the Kathmandu Valley. The most recent Forum in 2014 brought together 840 attendees from 60 countries and 285 institutions. UR events have also been held at national and municipal level, including in Brazil and Haiti. To expand the focus of this community, the first ever Understanding Risk and Finance conference was held in Addis Ababa, Ethiopia, in November 2015.

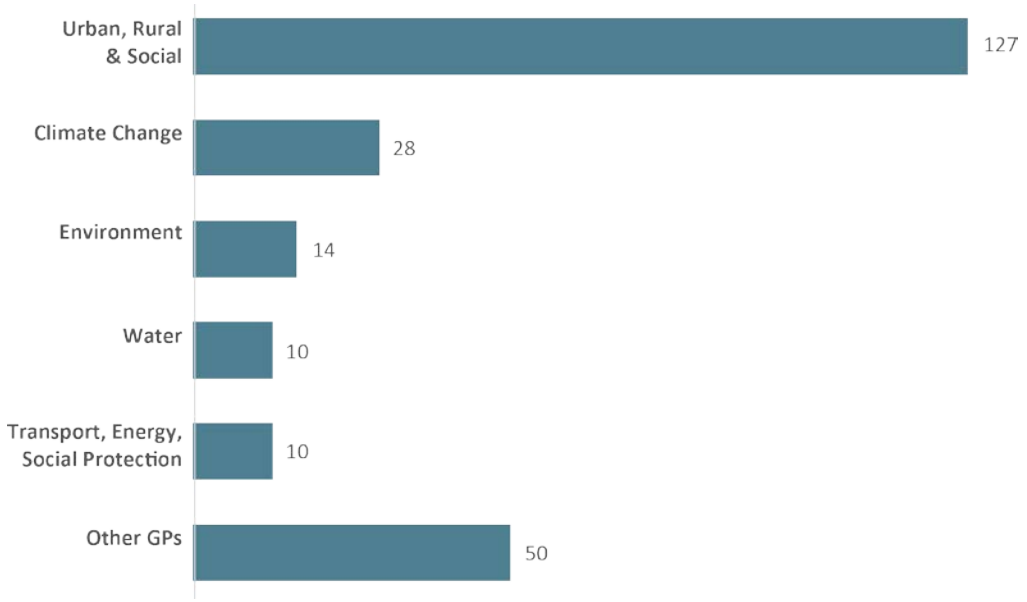
**In FY15, the World Bank DRM community produced around 60 publications that contribute to the global knowledge base on disaster risk.** Four key publications that informed the 2015 Global Assessment Report, coordinated by UNISDR include: (i) Understanding Risk in an

Evolving World; (ii) Building Social Resilience: Protecting and Empowering those most at-risk; (iii) Financial Protection against Disasters: An Operational Framework for Disaster Risk Financing and Insurance; and (iv) Resilient Recovery: An Imperative for Sustainable Development. Other publications include: Valuing Weather and Climate: Economic Assessment of Meteorological and Hydrological Services prepared in partnership with World Meteorological Organization, World Bank, GFDRR, USAID; the Triple Dividend of Resilience: Realizing Development Goals through the Multiple Benefits of Disaster Risk Management in partnership with ODI, and Towards Safer Schools Construction: a community-based approach in partnership with Global Alliance for Disaster Risk Reduction & Resilience in the Education Sector. Although work is ongoing to scale up efforts to collate and share best practices, gaps remain in assessing long term impacts from under-investment in disaster resilience, and its impacts on poverty reduction and shared prosperity.

**Priority 11.** *Strengthen internal WBG capacity to better respond to client demand*

**The World Bank reorganization around GPs and CCSAs has helped to create a stronger DRM community across the WBG.** Bringing together the various regional teams under the umbrella of the Global Practice for Social, Urban, Rural and Resilience (GSURR) has helped create a strengthened team of specialized staff to support operations. This group benefits from support from GFDRR, which is housed in the Climate Group CCSA and also provides support to other GPs. In FY15, the number of core-DRM staff has increased to 130 staff, a 40 percent jump from FY11. GSURR also maintains a number of knowledge management initiatives related to DRM including on urban floods, urban resilience, and risk assessment. For instance, broader community of 239 individuals across the GPs self-identify as part of the DRM and Resilience Global Solution Group.

*Figure 7. World Bank Group staff distribution in the DRM and Resilience Solutions Group*




**Knowledge management systems are helping to strengthen the availability of expertise on DRM.** A growing number of trainings are being made available to WBG staff and clients including on risk assessments, financial protection, PDNAs and hydromet services. To better share

knowledge across different teams, communities of practice have been established to bring together experts from different GPs. At present, a DRM as well as Climate Change Knowledge portal is being developed to connect task team leaders with DRM and climate experts to strengthen knowledge flow across the GPs.