



Integrating Disaster Risk Reduction into the Fight Against Poverty

Global Facility for Disaster Reduction and Recovery
Annual Report 2008

GFDRR Contributions

Fiscal Year 2007–2009

	Donor	Total Pledged (June 30, 2008)
	Australia	\$5,157,000
	Canada	\$3,511,000
	Denmark	\$9,234,000
	European Commission	\$400,000
	Italy	\$5,000,000
	Japan	\$6,000,000
	Luxembourg	\$2,936,000
	Norway	\$6,337,000
	Spain	\$6,000,000
	Sweden	\$9,102,000
	Switzerland	\$1,024,000
	United Kingdom	\$8,761,000
	The World Bank	\$15,000,000

Tribute to GFDRR Partners

Since its establishment in September 2006, the Global Facility for Disaster Reduction and Recovery (GFDRR) has evolved into a partnership of 18 countries and international organizations that are committed to helping developing countries reduce their vulnerability to natural hazards and adapt to climate change.

Special thanks go to the partners who support the GFDRR's work to protect livelihoods and improve lives: Australia, Canada, Denmark, European Commission, Finland, France, Germany, Italy, Japan, Luxembourg, Norway, Spain, Sweden, Switzerland, United Kingdom, UN International Strategy for Disaster Reduction, USAID Office of Foreign Disaster Assistance, and the World Bank.

©2008 Global Facility for Disaster Reduction and Recovery
1818 H Street NW, Washington, DC 20433, USA

The text in this publication may be reproduced in whole or part and in any form for educational or nonprofit uses, without special permission, provided acknowledgment of the source is made. The GFDRR Secretariat would appreciate receiving a copy of any publication that uses this book as its source. Copies may be sent to the GFDRR Secretariat at the above address.

No use of this publication may be made for resale or other commercial purposes without prior written consent of the GFDRR Secretariat. All images remain the sole property of the source and may not be used for any purpose without written permission from the source.

The GFDRR does not guarantee the accuracy of the data included in this work. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgement on the part of GFDRR concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

Cover photo: Curt Carnemark/World Bank.
Cover design: Patricia Hord.Graphik Design.

Contents

Tribute to GFDRR Partners	iii
Foreword	1
Katherine Sierra	1
John Holmes	3
GFDRR Partnership Highlights	5
Highlights of GFDRR Global and Regional Partnerships (Track I)	5
Highlights of the GFDRR Partnership for Mainstreaming Disaster Risk Reduction in Development (Track II)	6
Highlights of the GFDRR Partnership for Accelerated Disaster Recovery (Track III)	8
The Standby Recovery Financing Facility: Making Risk Reduction an Intrinsic Part of Disaster Recovery	10
Guest Viewpoints	17
ASEAN'S Leadership Role in the Myanmar Catastrophe	17
From the Sahel to the Copenhagen Climate Change Negotiations	19
Highlights from the GFDRR Portfolio	21
GFDRR's Work in Africa	22
GFDRR's Work in East Asia and the Pacific	28
GFDRR's Work in Eastern Europe and Central Asia	34
GFDRR's Work in Latin America and the Caribbean	38
GFDRR's Work in the Middle East and North Africa	44
GFDRR's Work in South Asia	48
Strong Global Advocacy and Regional Partnerships for a Safer, More Resilient World	56
GFDRR Innovations: Catalyzing South-South Cooperation	65
Assessment of the Economics of Disaster Risk Reduction	69
Measuring Disaster Risk Reduction Results: GFDRR Monitoring and Evaluation	72
Resource Management	75
Boxes	
Mainstreaming Disaster Risk Management in Poverty Reduction and Country Assistance Strategies	15
Making Nepal Schools Earthquake Safe	51
Increasing Access to Rural Finance in Bangladesh: The Forgotten Missing Middle	52
Pooling the Risks	54
GFDRR: Focus on Gender	59
GFDRR and a Safer World	62
Moving Forward with the Stockholm Plan of Action	64
Oslo Consultation	67
Vulnerability Tracking Initiative	73
GFDRR Results Management Council	74
Annex: GFDRR Interventions in Natural Disaster Hotspot Countries	81
Abbreviations	94



Foreword

The nature and frequency of disasters are changing. Climate change, galloping urbanization, food insecurity, and conflicts are magnifying not only the impacts of natural hazards but also the risks that underlie them. The poor are hardest hit, especially in disaster-prone regions in Asia and Africa.

Just in the past few months, the world has witnessed how easily disasters can wipe out decades of progress in poverty reduction and sustainable development. The powerful earthquake that rocked China's Sichuan province lasted only two minutes but killed 69,000 people and affected more than 45 million others. Economic losses and crumbling infrastructure are estimated to exceed \$86 billion. In Myanmar, the deadly cyclone that struck in early May lasted less than two days, but, when it subsided, the official casualty count was more than 84,500 people. Disasters such as these attack the poor at several levels—interrupting livelihoods, draining productive and personal assets, destroying essential public infrastructure, and heightening social and economic uncertainty.

Reducing vulnerability in today's changing global landscape requires an unprecedented effort: the best knowledge and skills; greater innovation; strengthened human and institutional capacity; and much more efficient organization at the country, regional, and international levels.

Since it was established in September 2006, the Global Facility for Disaster Reduction and Recovery has emerged as a unique, long-term global partnership for mainstreaming disaster risk reduction and climate change adaptation in development. Strategic GFDRR collaborations that thrive on diversity and synergies are the lifeblood of those efforts. Increasingly, strategic partnerships with organizations in Africa, Asia, Europe, and Latin America are expanding regional, national, and local capacities to respond to disaster risks and adapt to the impacts of climate change, both *ex ante* and *ex post*.

GFDRR's impact comes to life when high-risk countries take advantage of the technical and financial assistance that is available. GFDRR is providing \$43.5 million to 54 countries for risk assessment, risk mitigation, risk financing, emergency preparedness, and institutional capacity-building programs to strengthen resilience. Government disaster risk management officials are involved in all 75 GFDRR projects; local UN offices are important partners as well.

GFDRR is working with diverse partners to leverage the greatest impact. Our partnership with the International Federation of the Red Cross and Red Crescent Societies and its National Societies will enable a greater focus on community-based disaster risk reduction in national development policies and plans. And working hand-in-hand with the World Meteorological Organization, GFDRR is supporting comprehensive risk assessment studies in South Eastern Europe.

GFDRR is leveraging the World Bank's disaster-related portfolio to elevate disaster risk reduction and climate change adaptation in country dialogues. The momentum of these

activities is already having an effect. We are seeing a trend toward mainstreaming risk reduction in national strategies and plans—for example, in Burundi, Eritrea, Haiti, Niger, Rwanda, São Tomé and Príncipe, Togo, and other countries. This is a direct result of GFDRR's contributions to the World Bank's reviews of poverty reduction and country assistance strategies. In all, GFDRR has provided recommendations on effective risk reduction practices to nearly 40 disaster-prone low- and middle-income countries. This is making a real difference in how they develop their policies and plans for reducing risks to natural hazards, better respond to disaster risks within their borders, and prepare for an accelerated recovery when disasters do occur.

Because of GFDRR's promising early results, the World Bank has decided to elevate its commitment to this partnership for accelerated implementation of the Hyogo Framework for Action (HFA). Beginning in fiscal 2009, the Bank's annual \$5 million contribution to the GFDRR is included in its long-term grant funding program. Other donors are also taking notice of the accomplishments of this partnership on many fronts. As of June 30, 2008, less than two years after it was established, GFDRR contributions totaled more than \$77 million.

Three bold new initiatives in fiscal year 2008 signal the innovative direction of GFDRR's work.

- The launch of an urgently needed global disaster recovery fund—the Standby Recovery Financing Facility—is accelerating long-term recovery efforts in disaster-stricken nations and communities, such as China and Myanmar.
- A new GFDRR South-South Cooperation Program is encouraging intercountry partnerships of southern governments and institutions that hold great promise of more effective risk reduction solutions.
- The joint World Bank–UN Assessment of the Economics of Disaster Risk Reduction, now under way, will culminate in the first-ever comprehensive evaluation of the economic arguments for making disaster risk reduction a core component of sustainable development.

GFDRR has become a model World Bank-UN partnership for working on an urgent global challenge, and we are very proud of this. The success of this partnership in the disaster-prone regions and countries would not have been possible without the generous support and confidence of our donors.

Major disasters are never welcome news but they offer lessons that we can learn. Sensible and cost-effective risk reduction programs—such as those ingrained in the long-term recovery and reconstruction activities that GFDRR supports—are the best defense against future catastrophe. As more and more countries recognize this and make disaster risk reduction a sustainable solution for the future, the demand for GFDRR assistance will continue to grow.



Katherine Sierra, *Chair, GFDRR; Vice President, Sustainable Development, World Bank*



Helping communities build their resilience to disasters is not an easy task. The many challenges faced by people in informal urban settlements or poor rural areas around the world include lack of access to water, sanitation, and basic health services and a minimum level of food security. Progress is often slow and fragile. Yet time and time again, years of painfully gained development achievements are dramatically wiped out by disasters, often in a way that places an intolerable burden on the poorest and most vulnerable. Cyclone Sidr in Bangladesh, Cyclone Nargis in Myanmar, and the Wenchuan earthquake in China are only the most recent examples. Each time, we are reminded that cost-effective and relatively simple measures, if applied before the disaster strikes, can save lives, homes, and livelihoods.

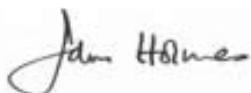
Addressing this challenge requires the long-term engagement of many actors. Communities themselves need to campaign for safer living environments that can withstand natural hazard events. These include safer schools and hospitals, as well as effective early warning systems and preparedness plans. Local and national authorities need to take a leading role. Disaster risk reduction needs to be prioritized as an integral part of broad development plans. The international community also has an important role to play. This is where the partnership between the World Bank and the United Nations can play such a vital part, not least in helping to reverse current trends in disaster impacts and assisting governments to make the right decisions.

With support from the Global Facility for Disaster Reduction and Recovery in 2008, 54 countries have seen an increase in the investment of the World Bank in disaster risk

reduction. These investments are diverse and widespread. For example, support is being provided for institutional strengthening in Bolivia, while anti-cyclonic building norms are promoted in Madagascar. The partnership is also helping to advance the Hyogo Framework for Action in countries where recent disasters have caused particular devastation, with support to recovery efforts that promote a “building back better” approach. I would like to express my personal appreciation to GFDRR for sustaining its financial support to the International Strategy for Disaster Reduction (ISDR) and therefore contributing to our common efforts in building a disaster reduction agenda.

The success in achieving the objectives of this partnership in highly vulnerable and low-capacity countries has been founded on the mutual recognition and support by the World Bank and the UN of each other’s roles in helping governments implement disaster risk reduction measures. The ISDR is, for example, tasked to provide the framework for joint programming; for monitoring progress in our common achievements; and for increasing commitments by governments, intergovernmental regional organizations, donors, and international partners.

Looking ahead and building on the successes of GFDRR, we have an important opportunity in 2009 to take stock of progress in the implementation of the Hyogo Framework, with a common reporting framework and related update on levels of risk—the ISDR system *Global Assessment Report*. The report will help set priorities for the next biennium at the second session of the Global Platform for Disaster Risk Reduction, to be held June 15–19, 2009, in Geneva. This forum will provide an excellent opportunity to review, with governments and partners, how effective we have been, as an international community, in supporting countries and communities as they build their resilience to disasters and draw the appropriate lessons for the future.



John Holmes, UN Under-Secretary General for Humanitarian Affairs; Chair, ISDR System



GFDRR Partnership Highlights

Highlights of GFDRR Global and Regional Partnerships (Track I)

- *Greater awareness and political support exist in disaster-prone countries* due to the GFDRR-supported Safe Schools and Hospitals Campaign managed by the ISDR, WHO, and the World Bank. The “Safe Schools and Hospitals” tool kit includes guidelines to help policy and decision makers develop and implement cost-effective action plans and practical strategies aimed at ensuring that investments in the social sector are sustainable.
- *Cities prone to climatic risks now have access to practical and proven strategies* for assessing their climatic risks, developing a “hot spot” matrix to prioritize investments, and building on good practices adopted by other cities. This has been possible due to GFDRR-supported programs for Climate Resilient Cities. This included development of *Climate Resilient Cities: A Primer on Reducing Vulnerabilities to Climate Change Impacts and Strengthening Disaster Risk Management in East Asian Cities*. This valuable tool is helping local officials mainstream climate change adaptation and disaster risk reduction in urban planning and development.
- *Disaster risk reduction is included in the regional cooperation agenda* as a result of GFDRR support through ISDR. The Organization of American States, League of

Arab States, and African Union are among the regional partners that have broadened their areas of cooperation.

- *Global accessibility to information and the latest expertise on efficient risk reduction is expanding because of the ongoing improvement of state-of-the-art tools, such as the GFDRR-supported PreventionWeb.net. More than 30 disaster risk reduction networks and communities rely on PreventionWeb.net to promote professional disaster risk management collaborations.*
- *Key African disaster management practitioners are better equipped to implement specific activities to reduce long-term risks and limit dependence on humanitarian assistance as a result of a GFDRR-supported regional workshop in Dakar, Senegal. The workshop focused on practical applications of existing tools for disaster risk reduction and offered training in damage and loss assessments. The 100 participants represented 30 countries in the Africa region.*

Highlights of the GFDRR Partnership for Mainstreaming Disaster Risk Reduction in Development (Track II)

- *An increasing number of poverty reduction and country assistance strategies include disaster risk reduction components as a result of GFDRR's upstream engagement with PRSPs and CASs. GFDRR has provided technical guidance on mainstreaming to nearly 40 countries and is actively helping them with Track II Technical Assistance programs to advance the disaster risk reduction agenda in national development plans and programs.*
- *Two-thirds of the world's least developed countries are improving their capacity for disaster risk management, emergency preparedness, and institution building. GFDRR technical and financial assistance enables them to advance this agenda more systematically.*
- *An increasing number of countries have expanded their legal frameworks to include disaster risk reduction in national and sectoral policies. In Costa Rica, for example, citizens and businesses are better able to protect their assets against disaster losses because of groundbreaking legislation to change the regulatory environment of the insurance industry.*
- *In partnership with the World Bank, UNDP, and other development partners, Madagascar has given the highest possible profile to disaster risk management. A \$1.2 million GFDRR grant is helping the government develop a National Disaster Risk Reduction and Climate Change Adaptation Plan, strengthen national and regional risk assessments, develop cyclone-proof standards for major infrastructure, establish a disaster contingency fund, and expand emergency planning capacity.*
- *The Republic of Yemen has emerged as a flagship country for institutional capacity and consensus building on the importance of disaster risk reduction. With GFDRR support, the government is developing a national strategy for disaster risk management, new*



national risk reduction laws, a national risk assessment, disaster risk reduction awareness and education programs, and improved coordination between public and private partners, including civil society.

- *Indonesia is implementing landmark disaster management legislation and documenting best practices* in risk reduction at the community level. In response to the Asian tsunami and subsequent earthquakes in Aceh, Nias, Yogyakarta, and Central Java, GFDRR has provided extensive support to strengthen the country's overall capacity to respond to emergencies. Priorities include incorporating disaster risk reduction in the country's project development cycle and creating an enabling environment for greater investments in disaster mitigation practices within a sustainable legal and financial framework.
- *Nepal is demonstrating that schools can be powerful entry points for advancing the national disaster risk management agenda.* With World Bank and GFDRR support, the government is developing a national strategy aimed at improving the seismic safety of schools; helping schools craft earthquake preparedness plans; encouraging teachers, students, and government officials to be more proactive in reducing risks; and training construction workers to use earthquake-resistant building materials.
- *GFDRR interventions in the Middle East and North Africa have been instrumental* in bringing about the development of national disaster risk reduction action plans and the Arab Region Disaster Management Plan.
- *Risk assessments are becoming recognized as a key building block* of sustainable risk reduction strategies. For example, Malawi and Mozambique are implementing measures to ensure economic resiliency to natural hazards because of greater awareness of macroeconomic risks.
- *Ethiopian households are being insulated against drought-related production shortfalls* through the country's weather risk management framework. And Costa Rica and

Nicaragua have a stronger capacity to respond to natural disasters based on the Central American Probabilistic Risk Assessment (CAPRA). GFDRR is providing \$13.4 million for risk assessment projects.

- *Disaster risk reduction and climate change adaptation are being integrated in national strategies.* For example, Morocco's national drought management strategy addresses the plight of drought-affected farmers and herders as well as long-term climatic challenges. Bangladesh, East Africa, and the Caribbean are analyzing their climate change risks and identifying adaptation options for mitigating the impacts of floods, sea level rise, and tropical cyclones. GFDRR is providing \$11.1 million for climate change adaptation projects.
- *Governments are reducing their fiscal burdens when catastrophes strike* through innovative new risk financing mechanisms. These tools are made possible through GFDRR and include catastrophe bonds in Central America, Chile, and Mexico; regional risk pooling in the Pacific Islands, Central America, and South Eastern Europe; and national agricultural insurance schemes in Nepal. GFDRR is providing \$5.8 million for risk financing projects.
- *More countries are taking concrete steps* to implement proactive disaster risk reduction strategies. For example, Vietnam is improving drainage systems in coastal cities; the Republic of Yemen is expanding its flood protection infrastructure; the Pacific Islands are adopting building codes that address sea level rise; Burkina Faso is developing hazard warning and monitoring systems; Senegal is undertaking hazard mapping and land use planning; and Liberia is adopting integrated coastal zone management. GFDRR is providing \$13.2 million for risk mitigation projects.
- *Compelling economic arguments* for the integration of disaster risk considerations in sustainable development policies are emerging from the first-ever joint World Bank–UN Assessment of the Economics of Disaster Risk Reduction.
- *Tailored and country-specific risk reduction solutions* are being created through the inter-country partnerships supported by GFDRR's South-South Cooperation Program. One hundred organizations from 28 countries expressed interest in forming partnerships in response to the first South-South Call for Proposals.

Highlights of the GFDRR Partnership for Accelerated Disaster Recovery (Track III)

- *Disaster-affected countries have access* to more comprehensive recovery planning and accelerated financial support through the establishment of GFDRR's Standby Recovery Financing Facility (SRFF). More than two-thirds of the SRFF's support benefited low-income countries; over 70 percent of the countries assisted are Track II priority countries.
- *The governments of Bangladesh, Bolivia, Madagascar, and Myanmar* are better prepared to coordinate and lead postdisaster Joint Damage, Loss, and Needs

Assessments. The Post-Nargis Joint Assessment in Myanmar is the most memorable as a joint initiative of ASEAN, the UN, and the Government of Myanmar, with support from the Asian Development Bank and the World Bank.

- *ASEAN's capacity to coordinate disaster recovery* is stronger in the aftermath of Cyclone Nargis, enabling the organization to serve as the bridge between the Government of Myanmar and the international community. ASEAN managed the Post-Nargis Joint Assessment and leads the Post-Nargis Recovery and Reconstruction Planning Process.
- *Disaster-affected countries are benefiting* from improved global knowledge tools as a result of the development of 13 sector-specific good-practice notes on earthquake recovery and 2 reconstruction and guidance notes on cyclones and earthquakes.
- *Local governments in Bangladesh have access* to \$2.3 million in recovery support through the Callable Fund that was activated after Cyclone Sidr. This GFDRR grant leveraged an additional \$109 million for a postcyclone recovery and reconstruction project in the country.
- *The World Bank mobilizes disaster management expertise* more quickly and systematically, in accordance with its newly adopted policy on Rapid Responses to Crises and Emergencies. This is a direct result of the establishment of the Quick Response Team roster at the Bank.
- *The international community's capacity to respond to crisis situations is more harmonious* as a result of the UN-World Bank Partnership Framework, which was developed in collaboration with the UNDP Bureau for Crisis Prevention and Recovery and the European Commission. The partnership supports the use of internationally agreed mechanisms to mobilize staff, conduct assessments, and establish disaster recovery frameworks, while at the same time offering enough flexibility to deliver timely results on the ground.
- *Countries are better prepared* to conduct postdisaster assessments as a result of training in postdisaster DaLa (damage and loss assessment) methodologies. More than 170 disaster recovery experts at the World Bank, regional banks, UN agencies, civil protection agencies, and international NGOs, as well as 260 workshop participants from Indonesia, Madagascar, Myanmar, and Vietnam completed DaLa training in fiscal year 2008.



The Standby Recovery Financing Facility: Making Risk Reduction an Intrinsic Part of Disaster Recovery

Major disasters have traditionally triggered an immediate and generous humanitarian response. However, in recent times, affected governments and communities have increasingly viewed postdisaster recovery and reconstruction as an opportunity to build a more resilient society by, among other things, taking a longer-term development approach to rebuilding lives, livelihoods, infrastructure, and institutions. They are making stronger commitments to “build back better.”

GFDRR’s Standby Recovery Financing Facility is helping disaster-affected countries initiate disaster recovery needs assessments based on international good practices and determine the underlying risks and vulnerabilities. SRFF offers an efficient and well-coordinated donor funding mechanism to mobilize additional supplementary financing, where necessary, for medium- and long-term recovery, and risk reduction in the immediate aftermath of a disaster, when the opportunity to introduce risk reduction in the recovery phase is the greatest.

Financed through a Multi-Donor Trust Fund, the SRFF bridges the gap in international disaster recovery financing and fast-tracks effective disaster recovery resources to catalyze coherent and coordinated international assistance. The SRFF leverages the World Bank’s unique global expertise in disaster impact assessments, building on lessons and experiences from the Bank’s portfolio of more than \$28 billion in disaster recovery and reconstruction.

Its two innovative financing mechanisms—the **Technical Assistance Fund**, which supports the development of international protocols for recovery operations to strengthen national capacities for recovery planning and implementation, and the **Callable Fund**, a fund in readiness that provides an ex post pooling of financial resources for transitional recovery—can be directly activated by national governments or regional and international organizations.

When severe disasters struck **Bangladesh, China, Madagascar, and Myanmar**, the SRFF provided the countries with technical and financial assistance to conduct comprehensive assessments of physical damages and economic losses, the first step toward meaningful recovery and reconstruction.

In the wake of the cyclone that struck **Bangladesh's** southwest coast in November 2007, GFDRR supported the deployment of international experts and the World Bank's Quick Reaction Team to work closely with the government and UN agencies to undertake a comprehensive Joint Damage, Loss, and Needs Assessment. Thirty-four hundred people died in the harsh storm and more than 55,000 were injured. Total losses topped \$1.1 billion. Officials believe the country was able to cope better than in previous catastrophes as a result of sustained risk reduction measures, such as radio evacuation warnings, the construction of public shelters, and the conservation of coastal mangroves. Because the country's low-lying coastal areas are particularly vulnerable, the joint assessment strongly recommended a strategic approach to building a climate-resilient nation. Based on the assessment, GFDRR supported development of a longer-term climate change strategy for Bangladesh, which was later presented to an international conference jointly organized by the governments of Bangladesh and the United Kingdom. Through the Callable Fund, GFDRR is investing \$2.5 million for a livelihoods recovery program implemented by the Unnayan Parishads in the worst-affected areas. This program will be complemented by a larger cyclone emergency recovery and reconstruction project financed by the World Bank.





In **Madagascar**, GFDRR provided financial support and expertise for a Joint Damage, Loss, and Needs Assessment after three consecutive cyclones struck the island in early 2008. More than 340,000 people were affected, but Madagascar's enhanced disaster preparedness is credited with keeping death and damage tolls down. After the disasters, more than 60 national government, disaster management, World Bank, and UN staffers received training in damage and loss assessments under GFDRR auspices. The training was a prelude to the assessment itself, which the government led and the prime minister officially launched. Madagascar also received a \$1.2 million GFDRR grant to develop a National Disaster Risk Reduction and Climate Change Adaptation Plan, strengthen national and regional risk assessments, develop cyclone-proof standards for major infrastructure in high-risk areas, establish a disaster contingency fund, and "train the trainers" in emergency planning.



Following **China's** Wenchuan earthquake in May 2008, which killed 69,000 people and injured 360,000 others, GFDRR provided a \$1.8 million grant to support accelerated recovery and earthquake disaster risk reduction during the reconstruction phase. GFDRR is supporting the Chinese government's detailed economic impact assessment and review of ongoing damage assessments, the development of a short-term action plan for immediate recovery from the impact of the earthquake, and the development and dissemination of good-practice notes for housing, urban planning, and other priority sectors. GFDRR also supported a successful workshop on good practices in recovery and reconstruction, which was held in Beijing in June. And, at the request of the Chinese government, GFDRR prepared a report on good practices in 56 earthquake operations in which the World Bank assisted its client countries.

中华人民共和国财政部
Ministry of Finance, People's Republic of China

September 28, 2008

Mr. Saroj Kumar Jha
Program Manager
Global Facility for Disaster Reduction and Recovery (GFDRR)
The World Bank Group

Dear Mr. Jha:

On May 12, 2008 the People's Republic of China was struck by a devastating earthquake in Sichuan Province measuring 8.0 on the Richter scale, causing widespread damage and losses to people's lives, livelihoods and assets. Within two days of the earthquake, the Global Facility for Disaster Reduction and Recovery, through the World Bank, offered condolences and direct support to the Government and people of China. Funds were made available to provide tents to shelter the homeless as well as provide resources to conduct the post-earthquake damage and loss assessment and to ensure that recovery planning is sustainable and resilient to future natural disasters.

To support the achievement of this goal, one month after the earthquake, the Ministry of Finance, GFDRR and the World Bank organized an international workshop on best practice examples from past recovery efforts following major disasters from around the world. Following the workshop, a comprehensive set of sectoral good practice notes were prepared to provide background information to the Government in the preparation of its National Masterplan for the Rehabilitation and Reconstruction of Wenchuan Earthquake, approved by the State Council on August 28, 2008, following public consultation.

The Government of China appreciates the timely assistance and guidance provided by GFDRR and the World Bank, which helped to shape the contents of the Masterplan and to guide the recovery program.

Sincerely yours,



Zheng Xiaosong
Director-General
International Department

San Li He Street, Xicheng District, Beijing 100820, People's Republic of China
Tel: (86-10) 68551124 Fax: (86-10) 68551125

In **Myanmar**, SRFF assistance was channeled through the Association of Southeast Asian Nations. After the deadly cyclone struck Myanmar’s major rice-growing region in early May, GFDRR provided technical assistance to bolster the ASEAN staff’s disaster risk management capacity and enable it to play a pivotal role in coordinating recovery and reconstruction efforts by the government and the international community. More than 133,000 people were dead or missing in the storm, and 2.4 million others were affected. Witnesses said 95 percent of structures along the delta were damaged or destroyed. GFDRR provided a \$1.5 million grant for capacity coordination, training in damage and loss assessments, capacity building for disaster risk reduction, and best practices in recovery. In close cooperation with the government, UN, World Bank, and Asian Development Bank, ASEAN led the Post-Nargis Joint Needs Assessment. This comprehensive documentation of physical damages and economic losses was presented at the ASEAN ministerial meeting in Singapore in July as the basis for garnering support from the international community.

“ASEAN has won a great deal of confidence, legitimacy, and recognition only because of the World Bank’s full backing. The new, robust ASEAN is better prepared to face all the challenges coming our way, natural or man-made.”

—**Dr. Surin Pitsuwan**, *Secretary General, ASEAN*

Under the ASEAN-led mission in Myanmar, the partnership between the Bank, UN, Asian Development Bank, and government helped reinforce the region’s capacity for disaster response. Similarly, assessments in the three other disaster-struck countries—conducted by the governments in partnership with the UN, World Bank, and other stakeholders—were an invaluable tool for national leaders. Not only did the assessments provide credible and reliable estimates of physical damages and economic losses, they also identified social, environmental, and economic needs, and prioritized recovery and reconstruction activities. The information they gleaned is making informed decision making possible.

Despite the stark contrasts, each of the four countries shared one common dilemma in the aftermath of its tragedy: a lack of financial and material resources for recovery and difficulty accessing funds to be better prepared in the future.

GFDRR’s global Standby Recovery Financing Facility was established to meet these exact needs. As the successful experiences in Bangladesh, China, Madagascar, and Myanmar show, SRFF may be new, but it can deliver results where and when it matters most.

Mainstreaming Disaster Risk Management in Poverty Reduction and Country Assistance Strategies

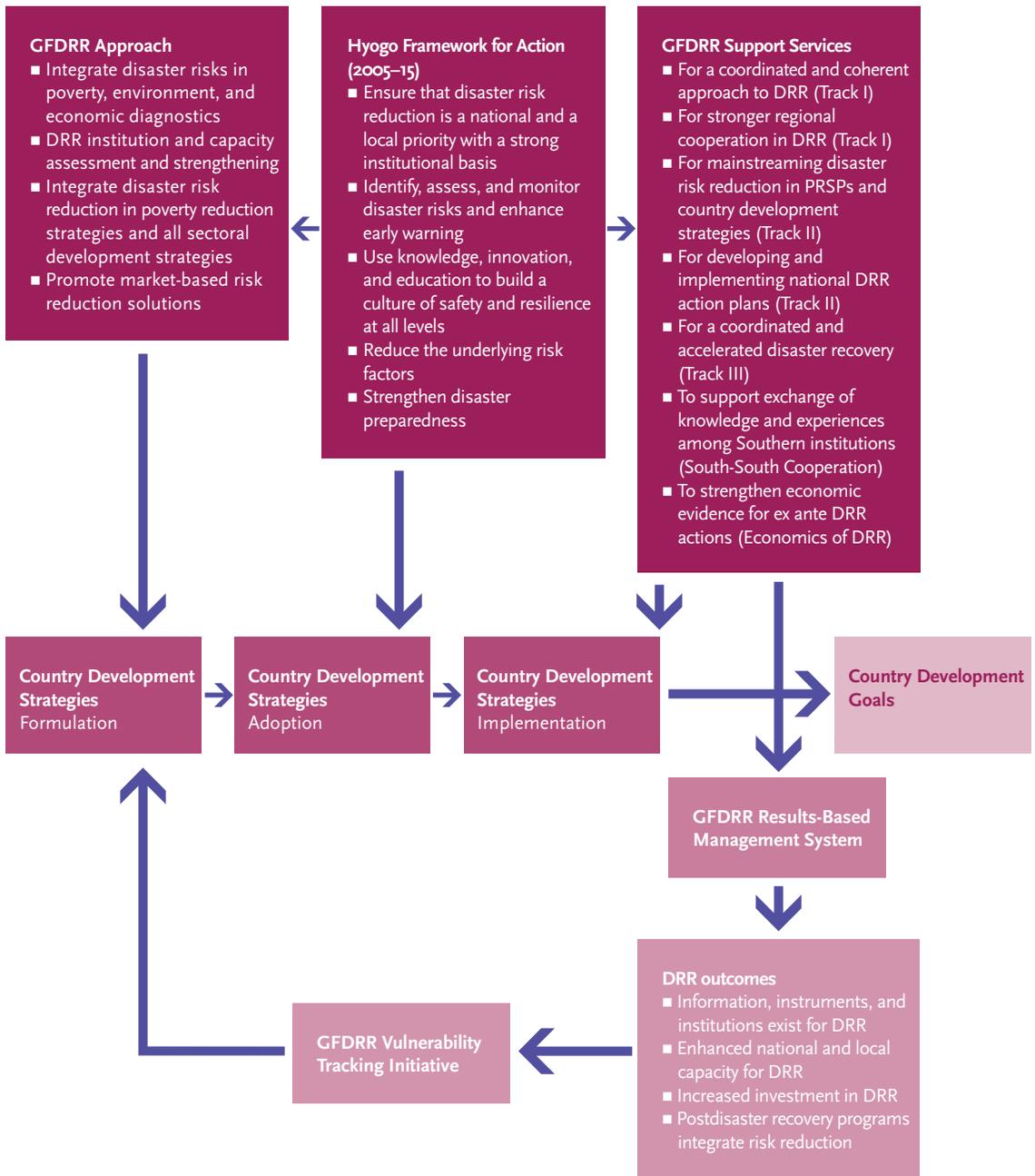
Mainstreaming disaster risk reduction in country assistance strategies (CAS) and poverty reduction strategy papers (PRSP) is an important and expanding work program for GFDRR. GFDRR offers technical advice to country task teams through a proactive and upstream review of pipeline CAS/PRSP documents to reflect underlying risks and vulnerabilities and to develop policy actions to mitigate those risks. GFDRR has flagged disaster “hot spots” among low- and middle-income countries for systematic dialogue through the formulation and implementation stages of these strategies.

GFDRR will continue to elevate and integrate the disaster risk reduction agenda in poverty reduction strategies, country assistance strategies, and sector strategies through a three-pronged approach:

- Using country level diagnostic tools, such as Country Economic Memorandums and Poverty Assessments, to demonstrate the adverse impact of disasters on development gains
- Supporting legislation, strategies, institutions, risk assessments, risk mitigation, risk financing, and other activities geared towards climate change adaptation
- Helping develop disaster risk financing strategies for recovery and market-based risk transfer.

Reviews of CAS and PRSP documents during the preparatory phase have provided valuable entry points for GFDRR engagement in respective countries to integrate disaster risk reduction in all sectors of economic development. Early experience from its engagement in nearly 40 disaster hot-spot countries shows that GFDRR advisory services have been well received. This includes refinement of the results matrix (Honduras, Turkey); recognition of countries as potential leaders for regional leadership on disaster risk management (Costa Rica, Mexico); detailed treatment of natural disasters to “disaster-proof” the strategy and to accommodate government requests for assistance after any future natural disasters (Haiti); identification of GFDRR as a potential disaster risk management instrument for institution building (Burundi, Costa Rica, Eritrea, Guatemala, Rwanda); stronger recognition of natural disasters as risks to the strategy (Guatemala, Niger, Uruguay); and the need to promote economic recovery by preventing and managing disasters (Togo). Through this dialogue, several countries have expressed willingness to engage in disaster risk reduction (Burundi, Eritrea, Rwanda).

GFDRR Approach and Assistance for Mainstreaming Disaster Risk Reduction in Development





Guest Viewpoints

ASEAN'S Leadership Role in the Myanmar Catastrophe

By Dr. Surin Pitsuwan, Secretary-General, ASEAN

Cyclone Nargis was the most devastating disaster in Myanmar's history, but it taught the world an unforgettable lesson—that building stronger regional resilience to disasters is urgent.

Asia is the world's most disaster-prone region, and this past year has severely tested the region's economic stability. This reality has placed enormous pressure on regional organizations, such as ASEAN. I am pleased that ASEAN has been able to face those challenges and contribute to the region's growing resilience, strength, and integration.

ASEAN played a leading role in the unprecedented but crucial response to the Myanmar catastrophe. At the government's request, we helped coordinate the Tripartite Core Group, a "coalition of mercy" comprising representatives of the government, UN agencies, and ASEAN, who spearheaded recovery efforts.

With assistance from the World Bank, through GFDRR, ASEAN immediately opened a coordination office in Yangon with some of our most experienced staff at the helm. They

were supported by experts and specialists deployed from the World Bank, UN, and other organizations, who selflessly gave their time and energy to support recovery efforts. This proactive, hands-on approach is unprecedented in ASEAN's 41 years of service. But it was necessary to effectively ensure the welfare and recovery of the hundreds of thousands of villagers who survived the storm but lost everything and who were so heavily dependent on ASEAN and our international partners.

I am especially proud of ASEAN's role in the Post-Nargis Joint Assessment of damages, losses, and needs in the country. It was undertaken in partnership with the government and UN, with technical support from the World Bank and Asian Development Bank. The assessment was conducted according to international standards, using tested Bank and UN methodologies. A rapid household and community survey of more than 290 villages in the affected areas and an economic assessment of the damage and losses by sector provided the critical data underlying the findings. The final assessment report was presented to the ASEAN foreign ministers meeting in July. The ministers accepted it as a comprehensive, credible, and viable assessment based on the objective needs of the cyclone victims. Not only did the report meet the expectations expressed by the donor community at the ASEAN-UN International Pledging Conference in Yangon in late May, it also proved enormously useful in guiding the relief and recovery efforts so that the medium- and longer-term needs of the Nargis victims could be sufficiently addressed.

In any disaster, what we should aim for—in partnership with the international community, aid agencies, international NGOs, ASEAN dialogue partners, and governments—is to build back better than before. This should be our guiding principle, reflecting our commitment as a regional organization to take the lead in recovery efforts. In Myanmar, our vision is to rebuild the cyclone-struck delta as the rice bowl not only for the entire country but for all Southeast Asia, helping to relieve the food crisis the world is facing.

What ASEAN did for the cyclone victims exemplifies what should be expected of a regional organization that is a community of sharing and caring, with people at the center. The decision to start the ASEAN-led operation in Myanmar was made by ASEAN foreign ministers in the immediate aftermath of the disaster. It has become a model for how ASEAN will assist its member states in times of desperation and despair.

ASEAN has won a great deal of confidence, legitimacy, and recognition only because of the World Bank's full backing in Myanmar. Because of that support and trust, the new, robust ASEAN that emerged from Myanmar is better prepared to face all the challenges coming our way, natural or man-made. That is why I am fond of saying that in the case of Cyclone Nargis, we aim at building back better for the people of the Ayerawaddy Delta and ASEAN.

From the Sahel to the Copenhagen Climate Change Negotiations

By Jan Egeland. Special Advisor to the UN Secretary General

The large, dried-up Lake Faguibine in western Mali is a place world leaders should visit before they go to the December 2009 Climate Change Conference in Copenhagen. This conference is arguably a make-or-break event for all of humanity. World leaders either rise to the challenge or we all will suffer, sooner or later. In the Sahel on the border of the relentlessly growing Sahara desert, they already suffer. Millions fight for their lives while environmental degradation depletes their livelihoods, livestock, and wells.

The journey to Copenhagen starts in the Sahel because the dried-up lakes, the dwindling Niger River, and the intensifying resource conflicts among farmers, pastoralists, and other groups seeking water, pastures, and farmland graphically illustrate what is now, already, at stake. If we Europeans, Americans, Chinese, Japanese, and other industrial nations go to the Copenhagen summit meeting to mitigate future climate change to save our own selves, without investing in adaptation for the already affected peoples of the South, it would be the moral and political failure of the century.

I have just traveled thousands of miles in Mali, Niger, and Burkina Faso on the edge of the Sahara. Here, climate change is no academic exercise. A generation ago, Lake Chad covered 4,000 square kilometers of the southeastern corner of Niger. As I could see after many hours of travel through sand, dirt, and desert covered with seashells, the lake is totally gone from Niger. In an old fishing village, I heard the sad story: "There were once dozens of species of fish to harvest here and plentiful farming. Now, our whole way of life is dying. You must help."

There are three main reasons for the environmental disasters we witnessed across the Sahel: First, climate change is leading to less rainfall, and it is more erratic. Second, deforestation and desertification are letting loose the wandering sand dunes that are filling waterways and draining rivers. Third, rapid population growth is leading to unsustainable water usage.

It is not true that climate change has to signal "climate wars," where desperate people struggle for scarce water and resources. Climate change can and should lead to more local, regional, and international cooperation. The "water wars" that were predicted a decade ago for this time and age have largely been avoided, because most countries learned to cooperate along the rivers they share and jointly explore new and additional water resources.

The African countries along the Niger River and in the Lake Chad Basin are already cooperating to save their rivers and lakes. Much can be done. Water may even be channeled from the abundance of the Congolese rivers to refill Lake Chad.

The United Nations and other international organizations, such as the World Bank, stand ready to help vulnerable communities reverse environmental disasters and adapt to climate change. And as this 2008 GFDRR annual report demonstrates, disaster risk reduction tools and good practices offer an excellent opportunity to advance the climate change agenda. We can help prevent conflict and promote reconciliation among farmers and pastoralists. But there is a need for investments far beyond the level donors currently provide. That is the challenge before, during, and after the Copenhagen Conference.





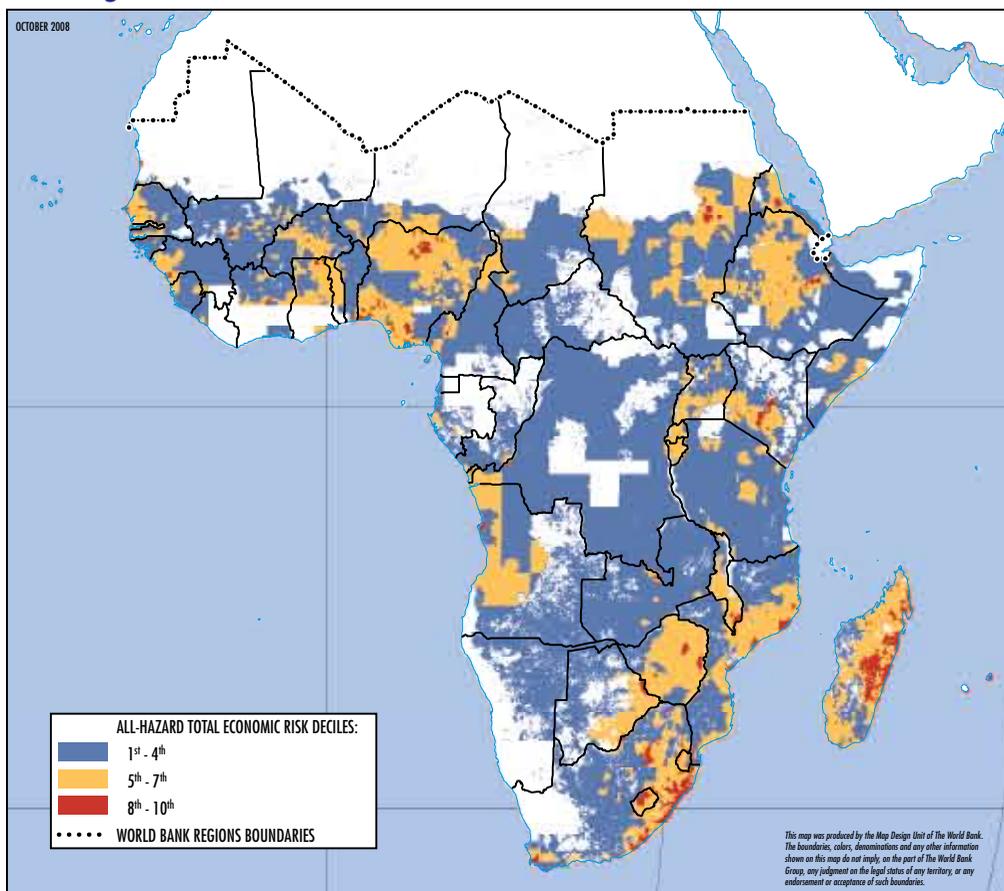
Highlights from the GFDRR Portfolio

Visionary leaders established GFDRR in September 2006 in response to a mandate from the international community to make the world safer from natural disasters: the Hyogo Framework for Action (HFA), the 10-year plan to reduce disaster losses and mitigate their social, economic, and environmental effects, ratified by 168 governments.

GFDRR's mission is to mainstream disaster risk reduction and climate change adaptation in country development and poverty reduction strategies. Initially focusing on Malawi, Mozambique, Nepal, Nicaragua, and Vietnam, GFDRR today works in 54 low- and middle-income countries that are highly vulnerable to natural hazards. In support of the accelerated implementation of the HFA, GFDRR's core mandate is to assist disaster-prone developing countries to substantially reduce disaster risks and vulnerabilities.

GFDRR's Work in Africa

Africa Region: Economic Loss Risks

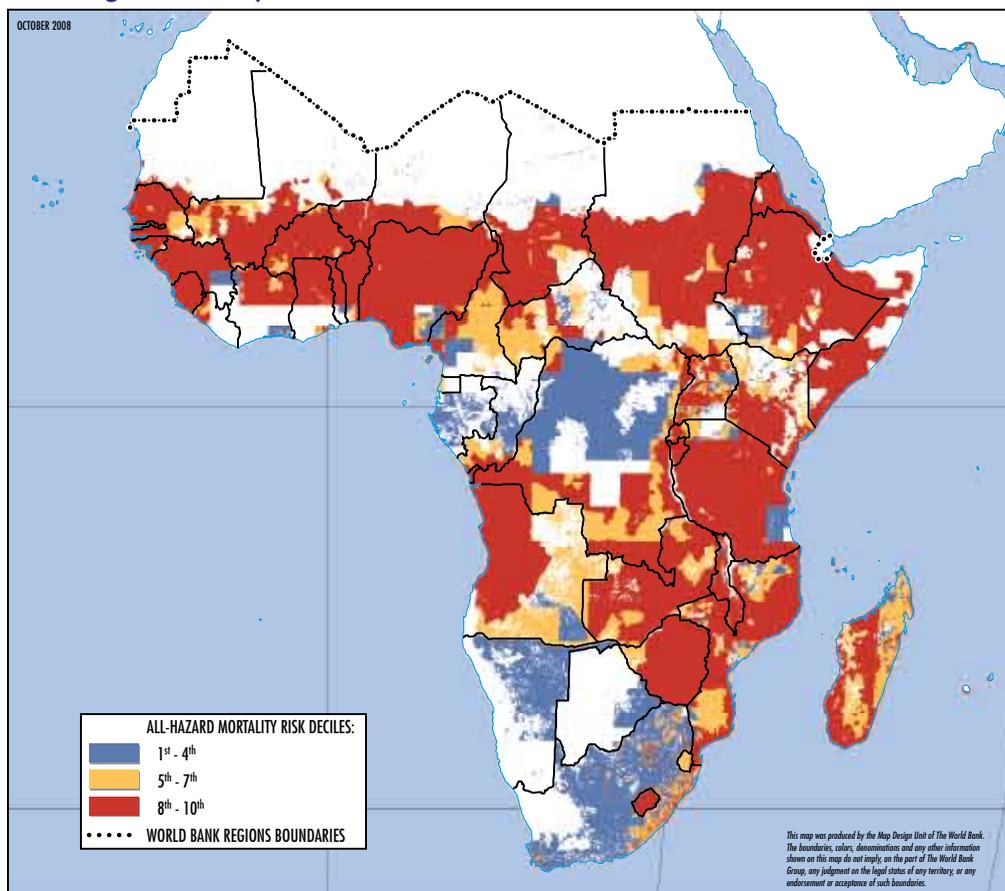


Source: Maps were updated from *Natural Disaster Hotspots: A Global Risk Analysis*, by Maxx Dille et al., published by the World Bank, Washington, DC, pp. 82–83.

In 2008, GFDRR initiated 10 new projects in Sub-Saharan Africa, bringing the total to 15 projects spread across 29 countries. GFDRR commitments totaled \$7.8 million, with an additional \$10.1 million in cofinancing from concerned governments and implementing partners.

Building institutional capacity, improving governance, assessing macroeconomic vulnerability to natural hazards, better managing natural resources, building community-based capacity for risk management, and strengthening safety nets are some examples of the GFDRR priorities in the region.

Africa Region: Mortality Risks



Source: Maps were updated from *Natural Disaster Hotspots: A Global Risk Analysis*, by Maxx Dillely et al., published by the World Bank, Washington, DC, pp. 82–83.

The region's major challenge is translating disaster risk reduction into sustainable programs and investments that tangibly reduce long-term risks and limit dependence on humanitarian assistance. To this end, strategic partnerships with the African Union, the New Partnership for Africa's Development, and regional economic commissions are essential.

At the national level, the emphasis on risk assessment and risk mitigation reflects the existing lack of information, uncertain climate variability, and absence of community planning. At subregional levels, capacity building is needed for cyclone preparedness and flood management in southeastern Africa, drought management in eastern Africa and the Horn of Africa, and coastal resource and risk management in western Africa.

Rationale

Not only are disasters and climate extremes increasing in Sub-Saharan Africa, they are frequently combining with other shocks that precipitate complex emergency situations. Higher food and energy prices, conflicts, and fragile environmental conditions, for example, can compound the effects of droughts. Unplanned and unregulated land use, such as rapid urbanization, weak environmental controls, and other development-related factors, further increase the vulnerability of people, property, and infrastructure. Since 1985, the region has seen a significant increase in the frequency of large-scale disasters—from floods to sequential droughts-floods-droughts. Tropical cyclones and strong winds, such as those that pummeled Madagascar in 2008, are also prevalent.

“Of equal importance is the implementation of the Disaster Risk Reduction Strategy in Africa. A Strategy and Action Plan has been developed and adopted by the relevant organs of the African Union, and an implementation plan is in the process of being elaborated. The African Union Commission is now partnering with the Global Facility for Disaster Reduction and Recovery and the U.N. International Strategy for Disaster Reduction on the capacity reinforcement of the Regional Economic Communities and the Member States.”

—H. E. Jean Ping, *Gabon, Chairperson, African Union Commission*

Highlights of GFDRR's Sub-Saharan Africa Portfolio

The devastating consequences of the 2004 Asian tsunami were a wake-up call to countries around the world. In the Seychelles, the government has made disaster risk reduction a priority and established a Department of Risk and Disaster Management to develop a national strategy. With GFDRR support and UNDP collaboration, the country is refining legal frameworks, undertaking risk assessments, developing early warning systems, and setting up national and district-level emergency operation centers.

In 2008, GFDRR conducted extensive consultations with the government of Swaziland and international partners to assess progress on implementing disaster risk management policies in the National Action Plan. A key goal is expanding opportunities to mainstream disaster risk reduction in country investment operations in all sectors.

In **West Africa**, GFDRR is supporting a multicountry initiative to help local fishing communities cope with sea level rise and other impacts of climate change. The Commission Sous-regionale des Peches, which is developing a subregional plan to improve the monitoring and conservation of fish stocks through community comanagement, is a key partner. The initiative also supports the Comprehensive Africa Agriculture Development Program, which has been endorsed by African heads of state.

The GFDRR portfolio emphasizes innovative risk mitigation throughout Africa. In **Malawi and Mozambique**, for example, GFDRR supported extensive consultations to identify priority activities, such as determining the long-term impacts of disasters on water resources and flood management.

In Malawi, a multilevel risk program is the first step toward expanding Bank-government collaboration on the Lower Shira Valley. Among the goals are determining the long-term impacts of disasters on water resources and flood management; promoting economic growth and poverty reduction in the region, one of the country's most flood-prone areas; and proposing flood risk management measures. The project will provide a preliminary analysis of the hydrology system and an overview of the social and economic impacts on communities directly threatened by the floods. A state-of-the-art Economic Vulnerability and Disaster Risk Assessment is being developed to help the government conduct a nationwide risk analysis of the economic impacts of droughts and floods, identify priority mitigation activities, and review existing strategies. Nearly 50 representatives of government ministries participated in a workshop on the draft report, an indication of the government's strong commitment to risk reduction.

In Mozambique, GFDRR is helping the government with a nationwide risk analysis of the economic impacts of droughts and floods, priority mitigation activities, and a review of existing strategies. This long-term, multisector program will increase the understanding of the links between disaster-related economic shocks. It will also identify measures and strategies to insulate the economy from the impacts of increasing climate variability.

Over the past 35 years, **Madagascar** has suffered at least 50 natural disasters, including cyclones, droughts, epidemics, floods, famines, and locust infestations, that have affected more than 11 million people altogether. Although there has generally been good disaster management and capacity in the country, the government recognized that—given the country's extreme vulnerability—increased investments in disaster prevention, mitigation, and capacity building must be a priority. GFDRR responded to this commitment by providing support to reinforce local capacity to manage risks and disasters, respond effectively and quickly when disasters strike, and contribute to postdisaster rehabilitation efforts.

In recent years, Madagascar—in partnership with the UNDP, the World Bank, and other development partners—has given the highest possible profile to disaster risk management. The Prime Minister personally chairs the National Council for the Management of Risks

and Disasters, which has a central role in disaster response as well as responsibility for planning and implementation of the National Strategy for Risk and Disasters. The Unit for Prevention and Management of Disasters (CPGU) and the National Bureau for Management of Risks and Disasters (BNGRC) have in recent times also taken a much more proactive role in disaster risk management.

In December 2007, Madagascar received a \$1.2 million GFDRR grant for disaster risk reduction activities. Over the next three years, this technical assistance will enable the government to:

- Strengthen risk assessments at the national and regional levels, including improvements in cyclone, drought, and inundation modeling, and production of a risk atlas
- Develop cyclone-proof standards for major infrastructure and areas at risk
- Adopt disaster risk financing management in the national budget and set in place a mechanism for a potential contingency fund
- Strengthen and harmonize information available to BNGRC and CPGU on early warning systems
- Develop a national plan for disaster management
- Train the “trainers” in emergency planning.

The prime minister himself launched a GFDRR-supported project to help the government adopt climate-proof norms for roads, irrigation systems, schools, public health centers, and agriculture in areas highly vulnerable to cyclones, droughts, and other climatic shocks. With GFDRR support, the government completed a comprehensive damage, loss, and needs assessment for disaster recovery and reconstruction after the 2008 cyclone season.

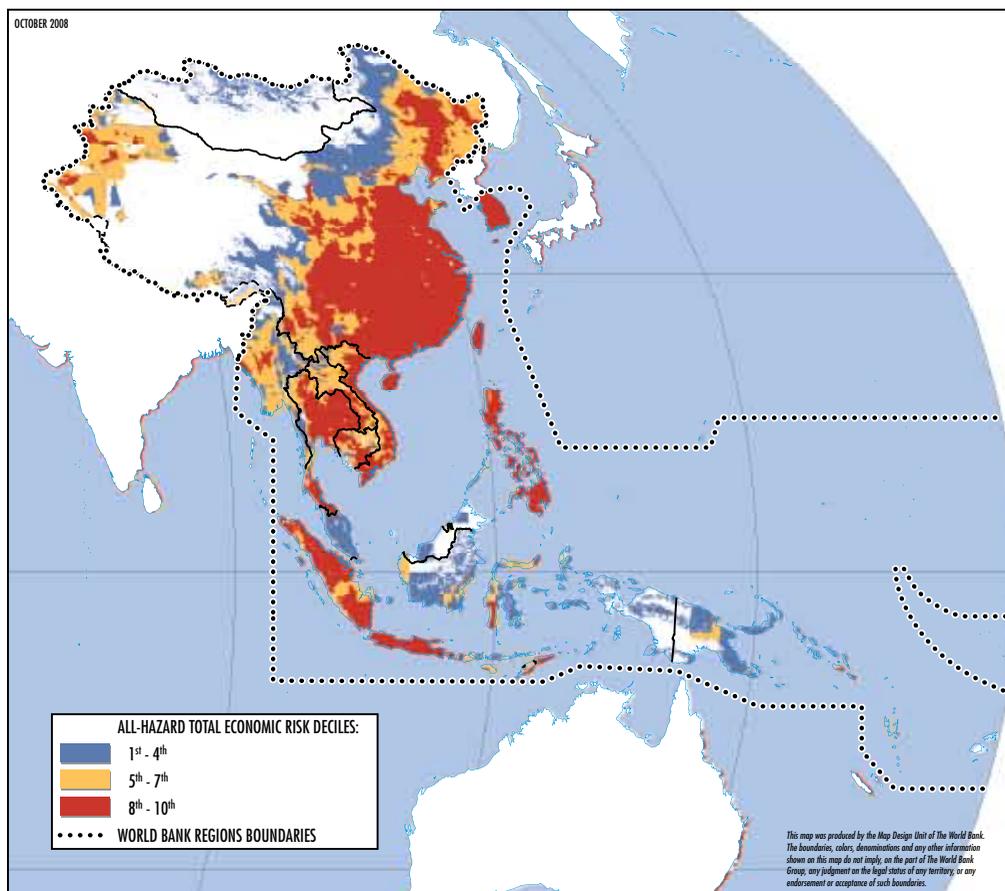
In **Burkina Faso**, GFDRR is supporting the development of new insurance instruments to mitigate the impact of recurring weather risks. To date, traditional interventions have been inadequate because rainfall patterns affect small-holder cotton farmers differently in different areas. Building on experiences in Ethiopia and Malawi, GFDRR is facilitating technical advice and capacity building so that the government can quantify and secure budgetary insurance to offset drought shocks. The project aims to develop a national rainfall index as a basis for drought risk management contracts and to explore the feasibility of index-based weather insurance for cotton producers. This emphasis on agricultural risk and changing climatic factors complements national poverty reduction and disaster risk management strategies. GFDRR partnerships with the National Agricultural Statistics and Forecasting Service, the Food and Agriculture Organization, and the Permanent Inter-State Committee for the Fight against Desertification in the Sahel are central to the project’s success.

Technical assistance for improved risk assessment is also a feature of the GFDRR portfolio. For example, GFDRR’s partnership with **Ethiopia’s** National Disaster Prevention and Preparedness Commission helped strengthen national and subnational capacities to develop vulnerability assessments, flood and drought preparedness strategies, and improved early warning and emergency response systems.

GFDRR-Approved Projects in Africa		
Project	Country	GFDRR Contribution (US\$)
Integrated Weather Risk Management for Sustained Growth in Burkina Faso	Burkina Faso	50,000.00
Disaster Risk Management in Africa: Strategic Framework, Good Practice, Communication	Burkina Faso; Comoros; Congo, Democratic Republic of; Eritrea; Ethiopia; Kenya; Madagascar; Malawi; Mozambique; Niger; Rwanda; Senegal; Seychelles; Swaziland	395,000.00
Climate Modeling and Risk Management	Burundi, Djibouti, Eritrea, Ethiopia, Kenya, Rwanda, Somalia, Sudan, Tanzania, Uganda	439,780.00
Community Co-Management for Disaster Risk Management of Marine Resources in West Africa	Cape Verde; Gambia, The; Ghana; Guinea; Guinea-Bissau; Liberia; Mauritania; Senegal; Sierra Leone	900,000.00
Facilitating Provision of Baseline Vulnerability Information on Flood-Exposed Communities in Ethiopia	Ethiopia	350,000.00
Mitigating Impacts of Adverse Shocks on Nutrition and Health	Ethiopia	350,000.00
Ethiopia: Weather Risk Management Framework Using Weather-Based Indices	Ethiopia	330,000.00
Ghana North: Sustainable Development, Disaster Prevention, and Water Resources Management	Ghana	660,000.00
Mainstreaming Climate and Disaster Risk Management into Economic Development in Madagascar	Madagascar	1,240,620.00
Mainstreaming Disaster Reduction for Sustainable Poverty Reduction: Malawi	Malawi	914,000.00
Mainstreaming Disaster Reduction for Sustainable Poverty Reduction: Mozambique	Mozambique	914,000.00
GFDRR Track II Sub-Saharan Africa	Region	300,000.00
Spatial Analysis of Natural Hazard and Climate Variability Risks in Peri-Urban Areas of Dakar	Senegal	93,000.00
National Disaster Preparedness and Response Project	Seychelles	1,000,000.00
Capacity Needs Assessment for Disaster Risk Management in Kingdom of Swaziland	Swaziland	50,000.00
African Regional Drought and Flood Preparedness	Region	210,000.00
Hazard Management ARD Staff Training	Region	50,000.00
	Total	8,246,400.00

GFDRR's Work in East Asia and the Pacific

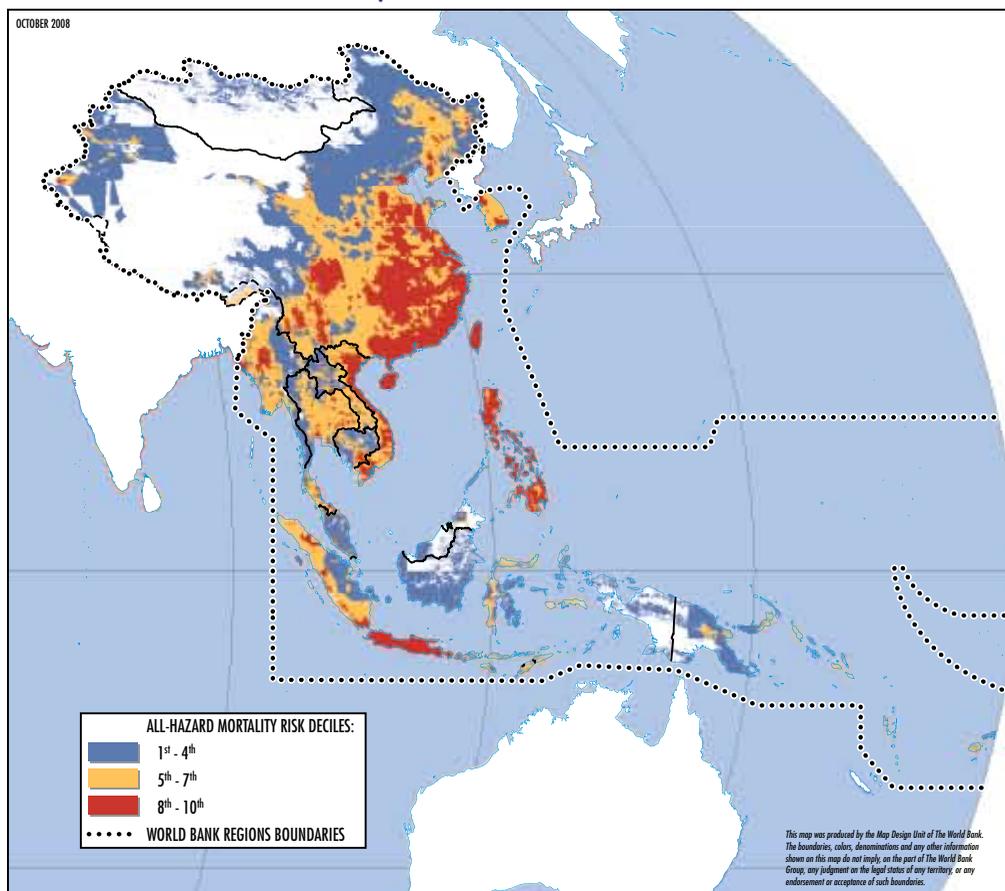
East Asia and the Pacific: Economic Loss Risks



Source: Maps were updated from *Natural Disaster Hotspots: A Global Risk Analysis*, by Maxx Dilley et al., published by the World Bank, Washington, DC, pp. 82–83.

GFDRR projects in the East Asia and Pacific region account for 22 percent of the portfolio, reflecting a financial commitment of \$6.4 million and \$1.8 million in cofinancing from the governments and other partners. Institutional capacity, consensus building, risk assessment, and risk financing are the primary focus areas, reflecting the growing interest in regional collaboration on ex ante risk management and climate change adaptation. Regional development strategies are also recognizing the links between climate change, disaster risk, and poverty and their impact on social, economic, and environmental vulnerability.

East Asia and the Pacific: Mortality Risks



Source: Maps were updated from *Natural Disaster Hotspots: A Global Risk Analysis*, by Maxx Dilley et al., published by the World Bank, Washington, DC, pp. 82–83.

Rationale

The East Asia and Pacific region is victim to some of the world's worst natural hazards—frequent earthquakes, volcanic eruptions, cyclones, and annual monsoons. The region is also home to many of the world's megacities—those with populations above 8 million. Rapid urbanization and industrial growth, especially in China, are leaving huge segments of the population highly vulnerable and sparking major humanitarian concerns. Disaster impacts on infrastructure are also a growing concern and threaten economic gains accrued over decades.



In the Pacific Islands, disasters result in chronic economic shocks. Annual damage (even in nondisaster years) averages 2–7 percent of gross domestic product (GDP). In a disaster year, Samoa’s economic losses have averaged 46 percent of GDP, and Vanuatu and Tonga’s losses were equivalent to 30 and 14 percent, respectively. The Pacific Islands are also experiencing a change in prevailing climatic conditions, with meteorologists predicting more droughts in the southern Pacific and more rain and consequent flooding in the equatorial Pacific. Rising coastal waters have already forced villagers on low-lying Vanuatu and Kiribati to move inland.

Highlights of GFDRR’s East Asia and Pacific Portfolio

In response to the Asian tsunami and subsequent earthquakes in Aceh, Nias, Yogyakarta, and Central Java, GFDRR has provided extensive support to strengthen **Indonesia’s** overall capacity at the national and community levels to respond to emergencies, including improved preparedness, data sharing, and evaluation of lessons learned. Priorities have been incorporating disaster risk reduction in the country’s project development cycle and creating an enabling environment that will generate greater investment in disaster mitigation practices within a sustainable legal and financial framework. GFDRR is supporting implementation of the county’s landmark disaster management legislation and the documentation of best practices in disaster risk reduction at the community level.

As the severe flooding in August 2008 showed, **Vietnam** is a highly disaster-prone country that is especially vulnerable to rising sea levels as a result of climate change. GFDRR has supported a multifaceted approach to disaster risk reduction—from the development of risk transfer and financing protocols, to community-based risk management, to institutional strengthening and risk analysis. With GFDRR financing, a range of options for integrating risk

reduction and climate change considerations into infrastructure projects, construction codes, and the design of coastal city drainage systems is being identified and presented to the government for consideration. On-the-job risk and loss-assessment training has strengthened the capacity of government officials as well as donor partners in the country. With GFDRR support, a consortium of government agencies, donors, and NGOs involved in disaster risk management is producing a new documentary video that highlights effective local risk management solutions. The documentary will be broadcast on national television.

Catastrophe risk financing and development of the financial sector are the primary focus of the GFDRR's ongoing work in **China**. A GFDRR project is identifying and mapping peak urban catastrophe risks in the country, quantifying both direct and indirect potential losses, and developing appropriate risk management strategies in consultation with national and city governments. The goal is to alert senior government officials to the potential economic impacts of disasters and encourage implementation of comprehensive risk management programs. GFDRR also supported postdisaster recovery planning and long-term risk management programs in response to the May 2008 Wenchuan earthquake.

In the **Pacific Islands**, which are especially vulnerable to sea level rise and other effects of climate change, GFDRR is strengthening government capacity to prepare for disaster risks and to respond rapidly and effectively when catastrophes do occur. An increasing number of national development programs are incorporating disaster risk management, while the creation of new insurance instruments is encouraging risk transfer and avoidance. Among the early results are improved access to quantitative data and analysis, the sharing of good practices, and the scaling up of appropriate technologies and tools.



“Climate change is real. The Albay Declaration on Climate Change Adaptation is the embodiment of efforts to arrest the imminent threats and dangers posed by radical ecological shifts occurring to our beloved planet Earth. In this regard, the contents of the Primer are timely and are of importance to many local governments like Albay.”

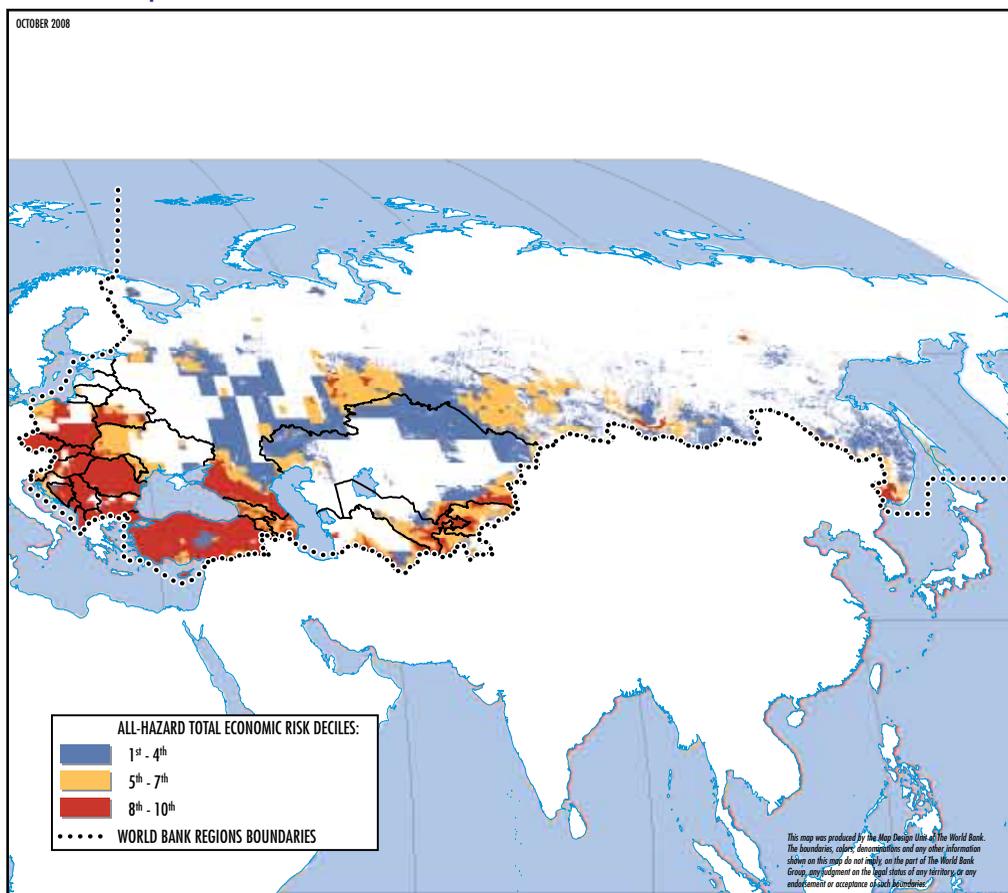
—**Joey Sarte Salceda**, *Governor, Albay Province, Philippines*

After three major typhoons hit the **Philippines** in a 10-week span in 2006, officials recognized the importance of disaster risk reduction and preparedness. Disaster management had been predominantly ex post and was weakened by fragmentation, limited coordination, and a lack of overall strategic planning. GFDRR is supporting government efforts to build more resilient institutional and operational capacity and to develop a long-term strategy for integrating disaster management in investment operations. GFDRR is supporting an assessment of institutional capacity and the effectiveness of existing seawalls and other infrastructure; a review of financing sources and fund flows; and an analysis of gaps in knowledge, skills, tools, and systems. At the provincial level, officials in the most vulnerable areas are shifting toward adopting a more holistic approach to disaster risk management, with a strong emphasis on mobilizing public, private, and civil society organizations and local communities in disaster risk reduction efforts.

GFDRR-Approved Projects in East Asia and Pacific		
Project	Country	GFDRR Contribution (US\$)
Design and Implementation of Empirical Methodologies for Developing Disaster Risk Management Strategy	Cambodia; China; Indonesia; Lao People's Democratic Republic; Mongolia; Philippines; Thailand; Vietnam	200,000.00
China Catastrophe Risks Assessment and the Development of Disaster Risk Management Strategies	China	400,000.00
Mainstreaming DRR in Indonesia	Indonesia	1,252,000.00
Nias: Mainstreaming DRR into Local Economic Development	Indonesia	60,000.00
Pacific Catastrophe Risk Pool Feasibility Study	Pacific Islands	400,000.00
Sustainable Management through Reduced Risk from Disasters and Climate	Fiji; Kiribati; Micronesia, Federated States of; Papua New Guinea; Solomon Islands; Timor-Leste; Vanuatu; Pacific Islands	2,500,000.00
Supporting Local Government Capacity to Manage Natural Disaster Risks in the Philippines	Philippines	1,000,000.00
Disaster Risk Reduction Mainstreaming: East Asia and Pacific	Region	280,000.00
East Asia and Pacific: Study on Coastal Cities and Climate Change	Region	145,000.00
Hazard Risk Management Institutional Development Advocacy and Capacity Building Program	Vietnam	914,000.00
Supporting Sustainable Post-Earthquake Recovery in China	China	1,200,000.00
	Total	8,351,000.00

GFDRR's Work in Eastern Europe and Central Asia

Eastern Europe and Central Asia: Economic Loss Risks



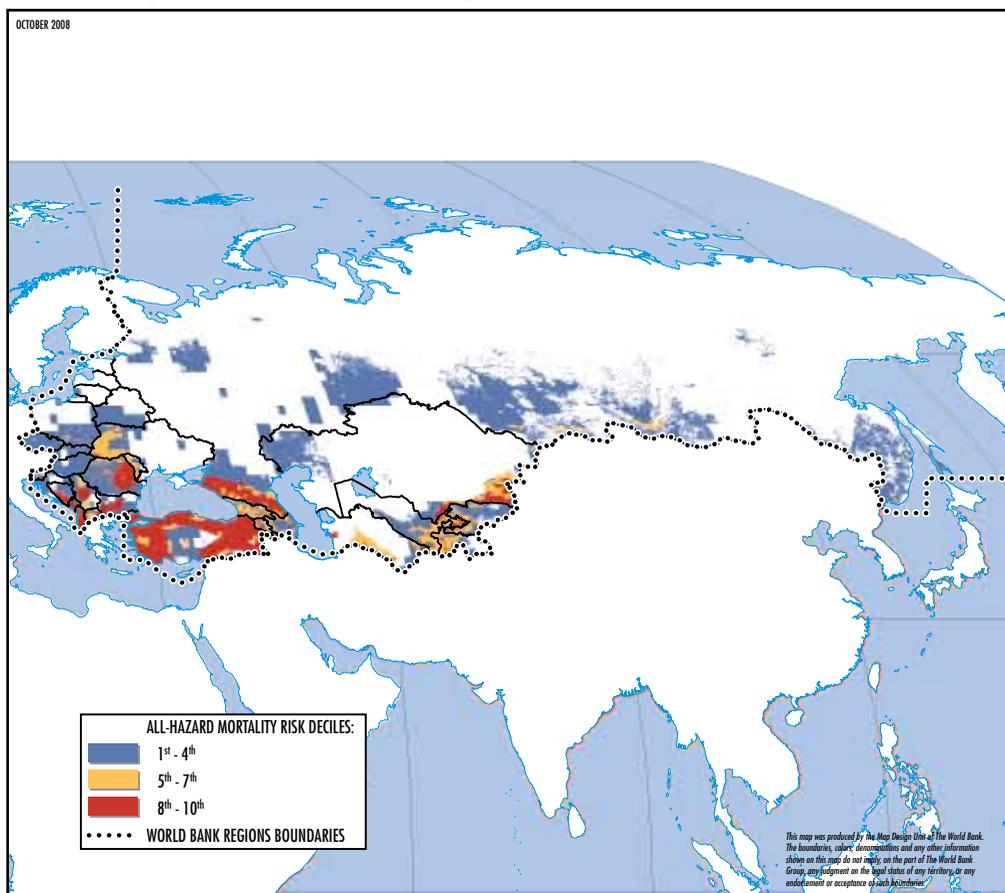
Source: Maps were updated from *Natural Disaster Hotspots: A Global Risk Analysis*, by Maxx Dilley et al., published by the World Bank, Washington, DC, pp. 82–83.

With \$2 million in GFDRR financing, countries in Eastern Europe and Central Asia are coordinating their approaches to early warning, emergency management, and communications systems; developing risk mitigation, risk transfer, and risk financing schemes; and improving weather forecasting and the sharing of climate data. GFDRR support has leveraged \$465,500 in cofinancing.

Rationale

Eastern European and Central Asian nations have a history of devastating earthquakes, floods, landslides, forest fires, droughts, storms, and other natural hazards. Over the past 30 years, reported economic losses from natural disasters in the region exceeded \$70

Eastern Europe and Central Asia: Mortality Risks



Source: Maps were updated from *Natural Disaster Hotspots: A Global Risk Analysis*, by Maxx Dillely et al., published by the World Bank, Washington, DC, pp. 82–83.

billion. Going forward, annual losses are estimated to average \$2 billion. Most of these disasters transcend national borders, overwhelming the ability of individual countries to respond and hampering sustainable economic and social development. Countries also vary in their level of preparedness, and regional cooperation is at an early stage. To be effective, regional development plans and investments must take these realities into account.

The region also faces a diversity of natural disaster threats. More than 80 percent of Turkey's population lives in areas at risk from earthquakes, floods, and landslides. In Armenia, which borders Turkey on the east, 80 percent of the people are seriously exposed to earthquakes. Central Europe faces sharp threats from floods, such as those that left 25,000 people

homeless in 2002 and 2005. Droughts are particularly severe in the western Balkans, triggering increased wildfires and undermining agricultural productivity and energy generation. Natural disasters in Albania have been exacerbated by severe and prolonged droughts.

Finally, poor land use planning and lack of property insurance increase vulnerability levels. For example, less than 2 percent of homeowners have private catastrophe insurance coverage. Small and medium-size businesses face similar obstacles. Although many countries in the region have enacted some type of legislative statutes or executive orders, disaster risk financing is not fully institutionalized.

Highlights of GFDRR's Eastern Europe and Central Asia Portfolio

At the regional level, projects supported by GFDRR are strengthening regional cooperation and development in **South East Europe**. Six countries are working together to create early warning systems and enhance disaster risk reduction and financing. Building on the idea that risk can be managed more effectively when shared among countries, a GFDRR project supports the development of hydrometeorological forecasting and data sharing; better coordination of disaster mitigation, preparedness, and responses; and innovative financing schemes, including disaster insurance. These important steps provide a foundation for setting regional and national priorities and are catalyzing new investments by the World Bank and other donors.

GFDRR support is also making possible an innovative public-private partnership to increase the availability of affordably priced catastrophe insurance for homeowners and businesses in the region. Legal action has been initiated to establish the Southeastern and Central Europe Catastrophe Risk Insurance Facility (CRIF) as a special reinsurance company registered and domiciled in Switzerland. **Albania** is a founding member of CRIF, which is expected to be operational in early 2009. Other members include **Bosnia and Herzegovina, Bulgaria, Croatia, Macedonia, Montenegro, and Serbia**.

In **Armenia**, one of the region's most vulnerable countries, the government's ability to deal with earthquakes has been strengthened significantly. GFDRR helped the government assess disaster risks, review existing institutional frameworks, and analyze legal requirements for disaster management and risk reduction. As a result, government officials were able to design a comprehensive disaster risk mitigation strategy, identify priorities for interventions, and strengthen capacity for reducing earthquake risks. Today, Armenia is at the forefront in introducing cost-effective and innovative antiseismic technologies for existing buildings as well as new infrastructure.

In **Albania**, GFDRR helped the government assess disaster risks (including the impacts of climate change), develop a national strategy for disaster risk reduction and climate change adaptation, and establish a sound institutional and policy framework. By strengthening coordination between national institutions and local authorities, the project helped improve emergency management capacity. GFDRR support also helped ensure that disaster risk reduction was integrated into the 2008 Country Assistance Strategy.

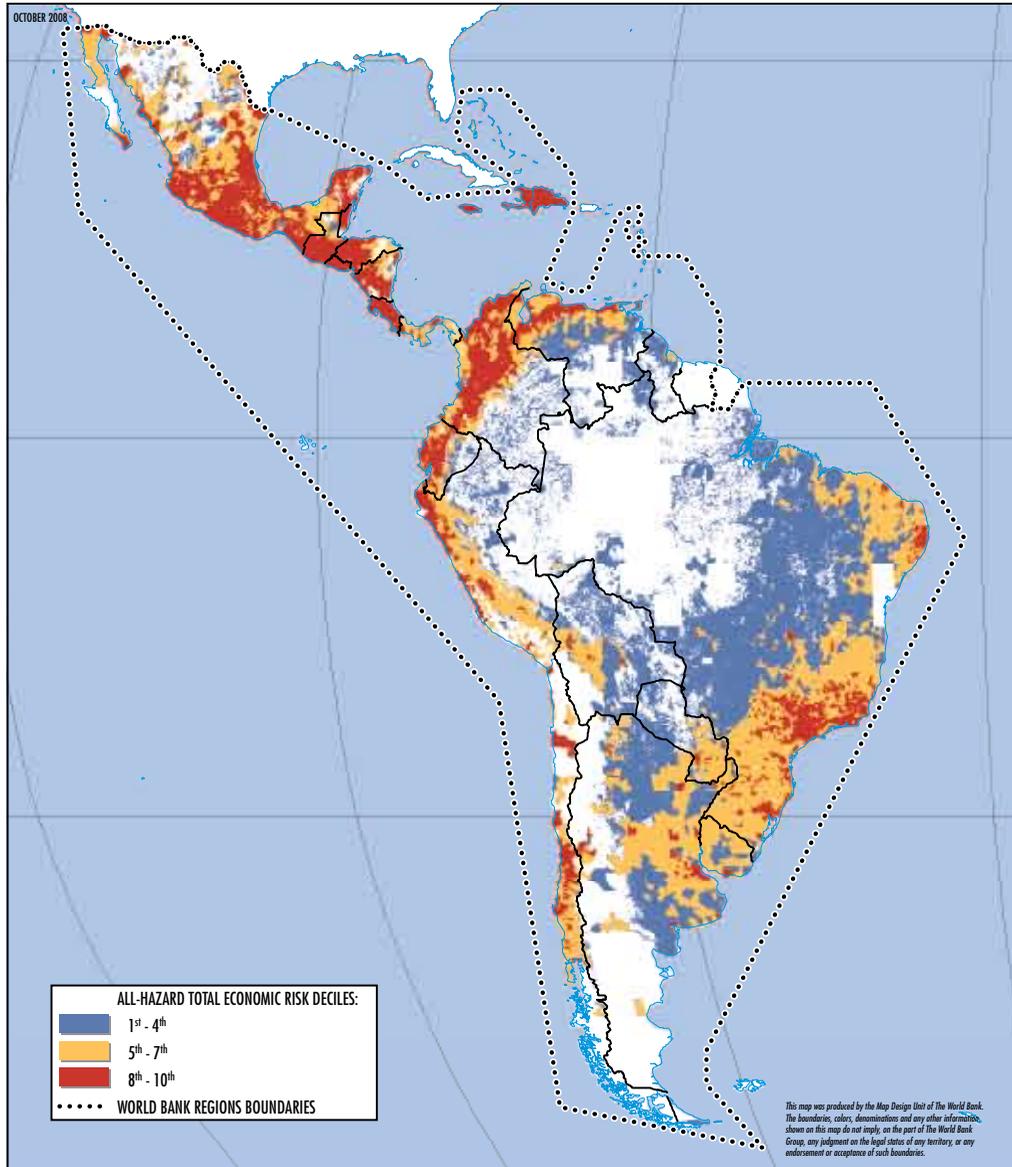
In the **Kyrgyz Republic**, a GFDRR project has provided planners, engineers, and policy makers with comprehensive and practical guidelines for developing earthquake-resistant construction standards for roads and bridges. The new standards are being utilized for the upgrading and construction of the Osh-Isfana Highway, the main traffic artery in the southwestern part of the country.

In **Bosnia and Herzegovina, Croatia, Macedonia, Montenegro, and Serbia**, extensive government and community consultations on disaster risk mitigation and climate change adaptation were made possible through a series of workshops and studies supported by GFDRR. The outcomes are shaping the development of individual country and regional disaster risk mitigation projects.

GFDRR-Approved Projects in Eastern Europe and Central Asia		
Project	Country	GFDRR Contribution (US\$)
Albania: Disaster Risk Management	Albania	50,000.00
Europe and Central Asia Regional: Disaster Risk Mitigation and Adaptation	Albania; Bosnia and Herzegovina; Croatia; Macedonia, FYR; Montenegro; Serbia	430,000.00
Armenia: Designing a Sustainable Institutional Arrangement in Hazard Risk Management	Armenia	150,000.00
Geo-Hazards and Infrastructure: A Kyrgyz Case Study	Kyrgyz Republic	50,000.00
An Action Plan for Improving Weather and Climate Service Delivery in High-Risk, Low-Income Countries	Kyrgyz Republic; Tajikistan	200,400.00
Geo-Hazards Management in the Transport Sector	Region	50,000.00
South Eastern Europe Disaster Preparedness Initiative	Region	235,000.00
Turkey: Disaster Mitigation and Preparedness	Turkey	400,000.00
	Total	1,565,400.00

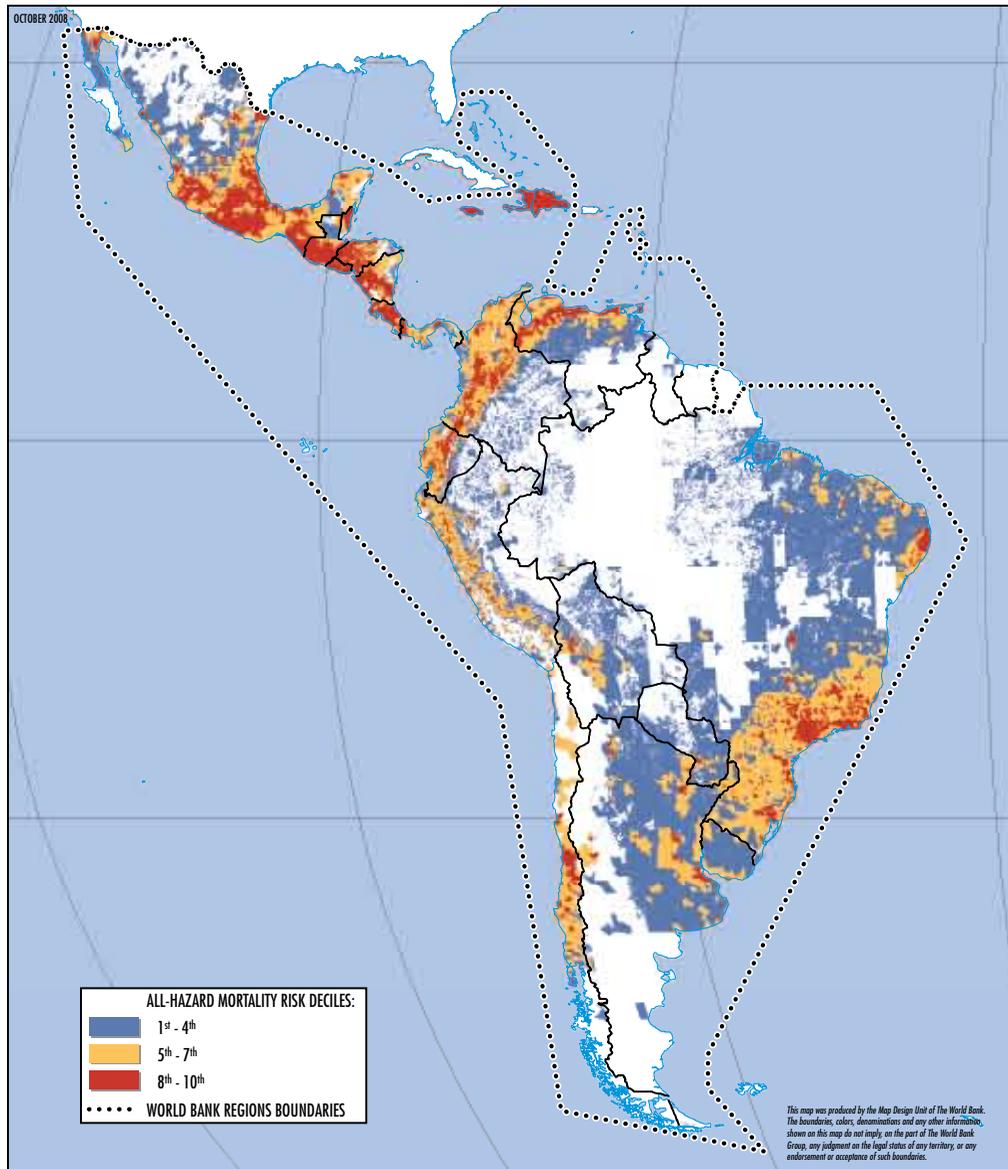
GFDRR's Work in Latin America and the Caribbean

Latin America and the Caribbean: Economic Loss Risks



Source: Maps were updated from *Natural Disaster Hotspots: A Global Risk Analysis*, by Maxx Dillely et al., published by the World Bank, Washington, DC, pp. 82–83.

Latin America and the Caribbean: Mortality Risks



Source: Maps were updated from *Natural Disaster Hotspots: A Global Risk Analysis*, by Maxx Dilley et al., published by the World Bank, Washington, DC, pp. 82–83.



GFDRR's commitments in Latin America and the Caribbean total more than \$7.4 million and account for 26 percent of the entire portfolio, the largest GFDRR presence in any region. In 2008 alone, GFDRR significantly expanded its assistance with 15 new projects in the region. The strategic emphasis is on identifying and financing risks and strengthening institutions.

Rationale

According to the *Natural Disaster Hotspots: A Global Risk Analysis*, five of the world's most vulnerable countries are in Central America, with Nicaragua topping the list. The region is exposed to a variety of natural hazards, including earthquakes, hurricanes, landslides, and floods. In the Caribbean Basin, hurricanes are the single most destructive force.

As in the rest of the world, the region's growing vulnerability is the result of a history of unplanned urban growth, unregulated land use, poorly enforced building standards, and severe environmental degradation, all of which have left people unprepared and structures inadequate. A 2005 Inter-American Development Bank study found that an earthquake could cause \$2 billion in economic losses in Costa Rica and Guatemala, and up to \$8 billion in Colombia and El Salvador, with the governments in all four countries expected to cover the losses. This financial vulnerability is a challenge to small economies in Central America and the Caribbean that have limited borrowing capacity, low opportunity to diversify their risks internally, and high transactions costs for transferring risks to international markets.

Highlights of GFDRR's Latin America and Caribbean Portfolio

Governments in the region are making gradual progress in developing their capacity to manage risks, strengthen laws and building codes, and pilot innovative solutions to better respond to these challenges. Several have pooled their risk by transferring a portion of it to the international reinsurance markets. Others are establishing regional schemes to prepare for and respond to natural disasters. In addition, collaboration with regional organizations, such as CARICOM (Caribbean Community and Common Market) and the Caribbean Disaster Emergency Response Agency, and partnerships with the academic community are advancing work on disaster risk management.

With GFDRR support, **El Salvador, Guatemala, Honduras, and Nicaragua** are identifying and disseminating best practices in disaster risk mitigation and lessons learned in the housing, civil protection, urban development, public infrastructure, and other sectors since Hurricane Mitch. The goal is to integrate disaster risk reduction in national and subnational development initiatives.

“With GFDRR resources and World Bank technical assistance, the government of Costa Rica is generating an efficient risk transfer financial strategy that utilizes the National Insurance Institute.”

—*Jose Angel Villalobos, Costa Rica National Insurance Institute, Chief Actuary*

In **Costa Rica**, GFDRR is helping the National Insurance Institute develop an integrated catastrophe insurance program closely aligned with the needs of the country. Groundbreaking legislation to change the regulatory environment of the insurance industry has been signed into law. The new law will allow private insurance companies to compete, thereby creating a well-functioning insurance market that will enable citizens and businesses to better protect their assets against disaster losses. The new law ends an 84-year state insurance monopoly in the country.

With GFDRR support, the Central American Probabilistic Risk Assessment (CAPRA) has engaged a broad spectrum of Central American governments and nongovernmental organizations, including academic and research institutions, in an effort to strengthen the region's capacity to respond to natural hazards. A Probabilistic Multihazard Model is being created to assess regional risk exposure and enable policy makers to make informed decisions about effective strategies. By incorporating state-of-the-art models into a geographic information platform, CAPRA is developing appropriate standards and comprehensive

methodologies to quantify risks associated with natural hazards in the region, identifying those that would have the most severe impacts, and producing probabilistic economic loss profiles for each country. Initially launched in **Costa Rica** and **Nicaragua**, CAPRA will extend to **Belize, El Salvador, Guatemala, Honduras, and Panama** during the coming year. Although still in its early stages, the project is helping align regional initiatives. For example, the Consejo Superior Universitario Centroamericano is considering adopting CAPRA as a reference standard, while the Inter-American Development Bank is discussing using CAPRA to align risk reduction efforts in **Belize, El Salvador, Guatemala, and Honduras**. CAPRA is also catalyzing proactive data sharing and risk identification activities throughout the region.

In **Guatemala**, government initiatives focus on risk assessment, risk mitigation, and institution building. Given the country's high exposure to floods and earthquakes, GFDRR is helping local officials utilize reliable scientific and technical information to build disaster safeguards into land use, zoning, and municipal planning efforts. Furthermore, the project promotes the sharing of flood and landslide data as well as zoning maps and emergency plans.

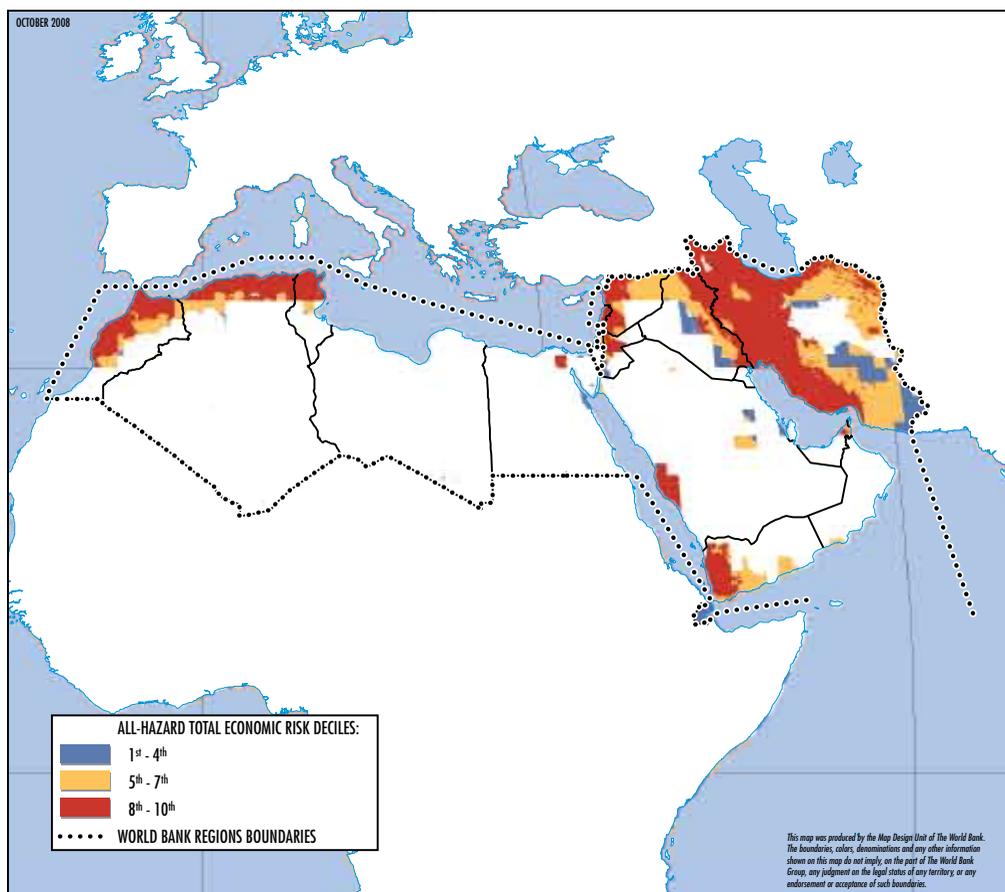
Emergency management, climate change adaptation, and capacity building are key elements in GFDRR's work in **Bolivia**, which has been affected by severe flooding in recent years. GFDRR is working closely with the government to integrate risk reduction into emergency preparedness, disaster response, mitigation, and recovery programs. The goal is to enable the Department of La Paz and the communities of Huayhuasi and El Palomar to take prompt and effective action in the occurrence of flooding of the La Paz River. The initiative will serve as an example for replication in other riverside communities with high flooding risk.



GFDRR-Approved Projects in Latin America and the Caribbean		
Project	Country	GFDRR Contribution (US\$)
Caribbean Risk Atlas	Antigua and Barbuda; Aruba; Bahamas, The; Barbados; Cayman Islands; Cuba; Dominica; Jamaica; Montserrat; Puerto Rico; St. Kitts and Nevis; St. Lucia; St. Vincent and the Grenadines; Trinidad and Tobago	765,000.00
Resettlement Tool-Kit for Risk Reduction	Argentina; Brazil; Colombia; Costa Rica	275,285.00
Mainstreaming Adaptive River Defense for Huayhuasi and El Palomar Settlements	Bolivia	427,000.00
Technical Assistance Support for Strengthening of Bolivia's Disaster Risk Reduction Framework	Bolivia	360,000.00
Risk Modeling for Hazard Risk Management: The Experience of Bogotá	Colombia	100,000.00
Costa Rica Public Asset Catastrophe Risk Insurance Facility Feasibility Study	Costa Rica	460,000.00
Central America Catastrophe Risk Insurance Program Feasibility Study	Costa Rica; Dominican Republic; El Salvador; Guatemala; Honduras; Nicaragua; Panama	780,000.00
Disaster Risk Reduction Program for the Municipality of Quito, Ecuador	Ecuador	953,000.00
Central America Mitch +10 Report and Summit	El Salvador; Guatemala; Honduras; Nicaragua	270,000.00
Development of Scientific Information to Promote Municipal Planning to Reduce Disaster Risks	Guatemala	730,000.00
Central America Probabilistic Risk Assessment for Nicaragua and other Central American Countries	Nicaragua	914,000.00
Peruvian Earthquake Disaster Assistance	Peru	500,000.00
Villcanota Valley Project	Peru	230,000.00
Disaster Reduction and Recovery Municipal Service	Peru	50,000.00
	Total	6,814,285.00

GFDRR's Work in the Middle East and North Africa

Middle East and North Africa: Economic Loss Risks

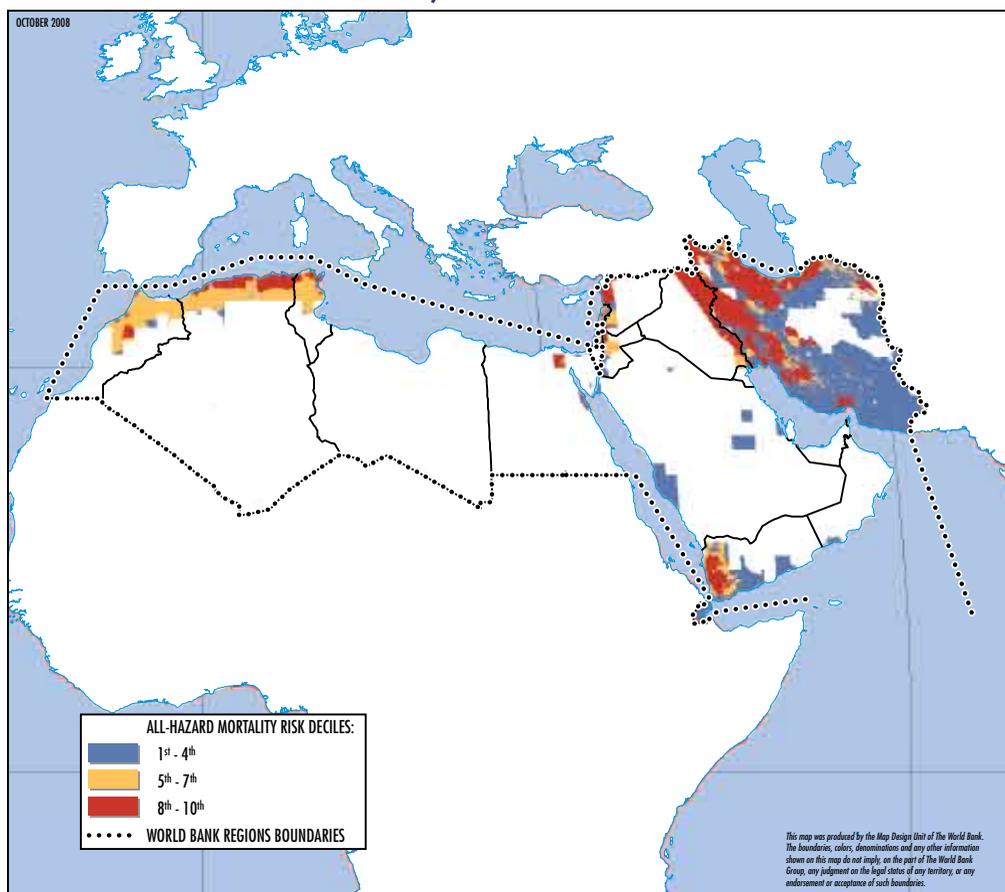


Source: Maps were updated from *Natural Disaster Hotspots: A Global Risk Analysis*, by Maxx Dille et al., published by the World Bank, Washington, DC, pp. 82-83.

GFDRR interventions in the Middle East and North Africa region over the last two years have been instrumental in bringing about:

- Development of national disaster risk reduction action plans
- Inclusion of disaster risk management and climate change adaptation in the Arab Region Climate Change Plan
- Development of an Arab Region Disaster Management Plan
- Increased partnerships and collaborations on technical and institutional aspects of disaster risk reduction with organizations in the region.

Middle East and North Africa: Mortality Risks



Source: Maps were updated from *Natural Disaster Hotspots: A Global Risk Analysis*, by Maxx Dilley et al., published by the World Bank, Washington, DC, pp. 82-83.

Rationale

The Middle East and North Africa region is prone to earthquakes, floods, and droughts that are causing increasingly heavy losses and hampering long-term development. While countries in the region have developed capacities for disaster preparedness and response, long-term risk reduction and prevention linked to national development strategies are still a new paradigm.

The region is highly urbanized—more than half of its 300 million people live in cities. Urbanization and the urbanization of poverty, population growth, and water scarcity



characterize the region. The expected 2 degree increase in temperature in the next 15–20 years will result in changed precipitation patterns, more intense and frequent droughts and floods, and periodic heat waves that will have direct repercussions on urban life.

Inappropriate development projects, such as investments and settlements in hazardous locations, are contributing to the region's vulnerability instead of improving its capacity to withstand climate extremes.

Highlights of GFDRR's Middle East and North Africa Portfolio

Natural disasters affect tens of thousands of people in the **Republic of Yemen** every year. Sensing the magnitude of the impact, Yemen has emerged as a flagship country for institutional capacity and consensus building on the importance of disaster risk reduction. Through GFDRR, the government is strengthening its national disaster risk management system by following a five-pronged strategy based on increased understanding of disaster risks through a national disaster risk assessment; development of a national strategy for disaster risk management; development of new national risk reduction laws or adaptation of existing laws; the inclusion of awareness and education programs in the national disaster strategy, which also increases understanding among ministers and planning officials; and improved coordination between public and private partners, including expanded civil society participation. In 2008, GFDRR spearheaded widespread consultations with the Ministries of Water and Environment, Finance, Interior, and Planning and International Cooperation.

A priority of the Republic of Yemen's national strategy is integrating disaster risk reduction in the development and land use plans of the capital city of Sana'a, which is vulnerable to flash floods, especially in the growing squatter settlements in flood-prone areas. Also at risk is the Old City of Sana'a, a UNESCO world heritage site and major tourist attraction. GFDRR is supporting the strengthening of the city's long-term development strategy through an assessment of the major risks from floods and landslides, development of an integrated storm water management plan, improvements in priority flood protection works, integration of disaster risk management in the revised city master plan and city institutions, and better coordination of interventions by local authorities.

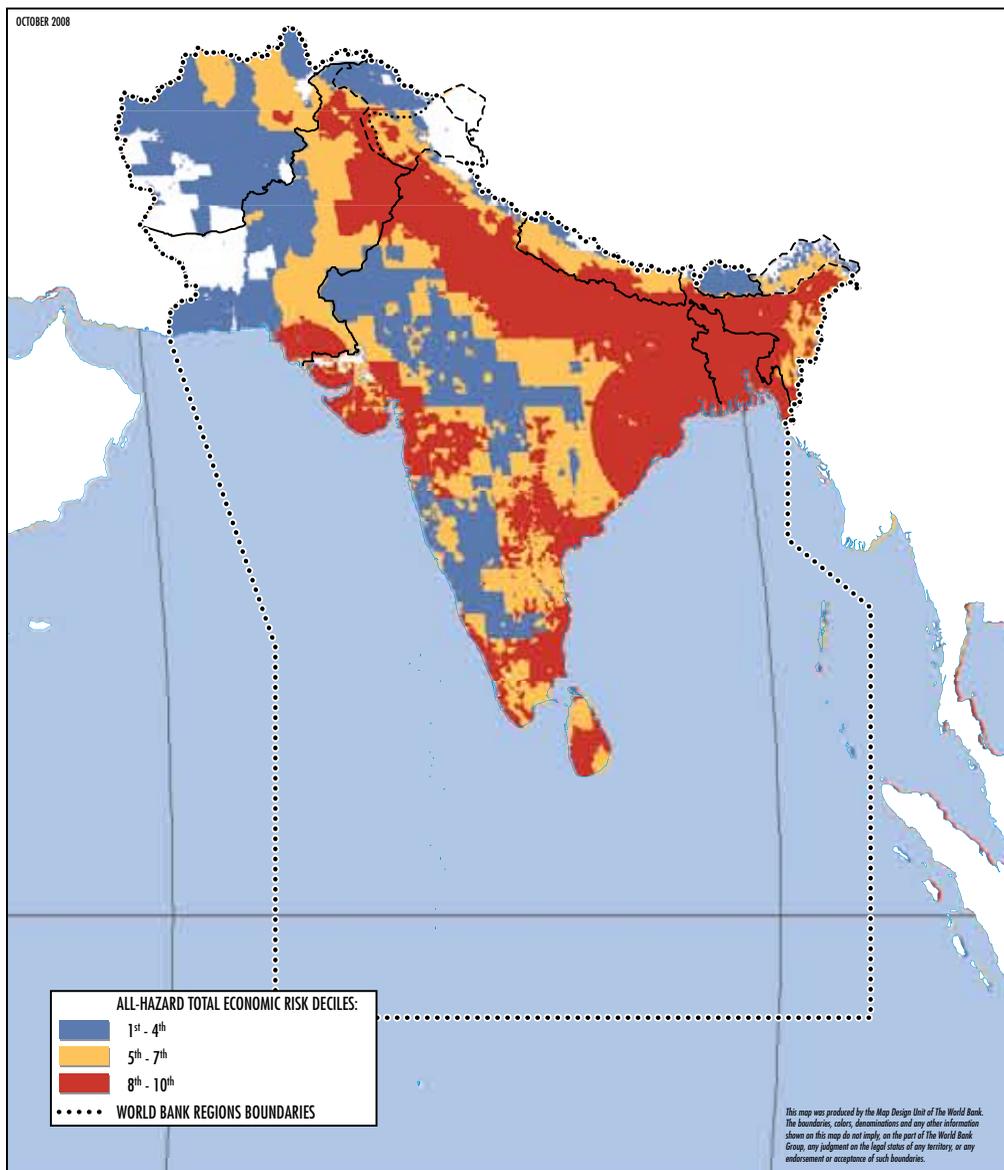
Urban risk planning is also a central feature of the GFDRR's work in **Djibouti**. Djibouti-Ville, the capital, is home to 80 percent of the country's population, most of whom live in poverty and lack access to basic services, such as potable water and sanitation. The city is highly vulnerable to floods, droughts, desertification, fires, and earthquakes. Because of its location on the Red Sea and dependence on marine resources, that vulnerability is likely to increase with climate change. GFDRR is working with Djibouti's newly created Executive Secretariat for Risk and Disaster Management to develop a combined disaster and climate change risk map for the city and identify information, staffing, training, and equipment needs.

In **Morocco**, there already exists a draft national strategy for disaster risk management focusing on different sectors and institutional systems. GFDRR's crucial role is to catalyze increased coordination among government ministries and support risk assessment and risk mapping in the country. Such an assessment will lead to the conceptualization of a national, integrated risk reduction strategy. Of increasing concern to government officials is the plight of drought-affected farmers and herders as well as long-term climatic challenges. A GFDRR project is identifying different risk management approaches for surface water irrigation, groundwater irrigation, and rain-fed agriculture. The current support that GFDRR is providing to the Morocco national drought management strategy will also contribute to the final national comprehensive disaster risk reduction strategy.

GFDRR-Approved Projects in the Middle East and North Africa		
Project	Country	GFDRR Contribution (US\$)
Preparatory activities and methodology to develop a risk map for Djibouti-Ville	Djibouti	70,000.00
Risk Management Strategy for Morocco's Agricultural Sector	Morocco	125,000.00
Disaster Risk Reduction Mainstreaming: Middle East and North Africa	Region	210,000.00
Disaster Risk Reduction Institutional Mainstreaming Strategy and Priority Intervention Areas in Sana'a	Yemen, Republic of	230,000.00
Strengthening Yemen National System for Disaster Risk Reduction and Recovery	Yemen, Republic of	700,000.00
Integrating Disaster Risk Management in Investment Decisions in the Region	Region	330,000.00
	Total	1,665,000.00

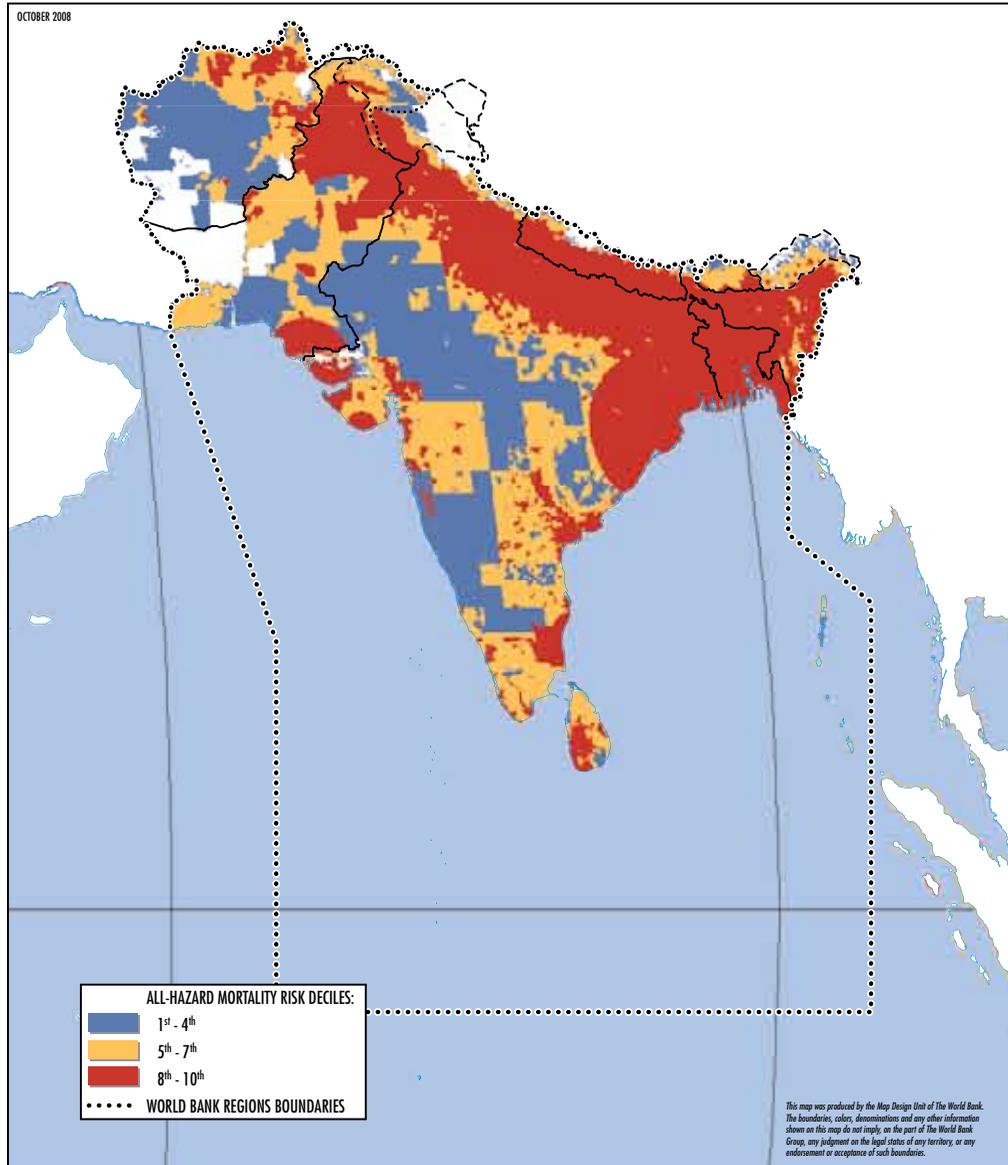
GFDRR's Work in South Asia

South Asia: Economic Loss Risks



Source: Maps were updated from *Natural Disaster Hotspots: A Global Risk Analysis*, by Maxx Dillely et al., published by the World Bank, Washington, DC, pp. 82-83.

South Asia: Mortality Risks



Source: Maps were updated from *Natural Disaster Hotspots: A Global Risk Analysis*, by Maxx Dillel et al., published by the World Bank, Washington, DC, pp. 82-83.

GFDRR's South Asian portfolio includes 16 projects, with a financial commitment of \$3.8 million and \$1 million in cofinancing. GFDRR's presence in the region supports achievement of the five HFA priority areas: capacity building, risk assessment, risk mitigation, risk transfer, and emergency preparedness.

Rationale

The South Asia region is exposed to frequent and severe natural catastrophes that pose a growing challenge to development. Between 1996 and 2000, for example, more than 10 percent of the region's total population was affected by natural disasters; direct losses to infrastructure were estimated to be about 13.2 percent of government revenues. In 2004, the Asian tsunami alone killed nearly a quarter million people and displaced 1.2 million others. Recent years have been particularly devastating. In addition to the Asian tsunami, earthquakes in Pakistan and India and cyclones in Bangladesh and other countries have underscored the urgency of disaster mitigation and risk financing. National commitments to ex ante risk management strategies reflect a growing recognition of the region's vulnerability.

At national and regional levels, there has been growing acceptance of comprehensive disaster risk management approaches rather than limited postdisaster relief. At the Second Asian Ministerial Conference, governments adopted the Delhi Declaration on Disaster Risk Reduction in South Asia. The South Asia Association of Regional Cooperation has also finalized a Comprehensive Framework of Disaster Management.

Highlights from GFDRR's South Asia Portfolio

In **Pakistan**, GFDRR support for enhanced emergency preparedness is strengthening the government's institutional and technical capacity to provide effective and timely relief to disaster victims and vulnerable households. This support complements ongoing World Bank efforts to help the government provide cash transfers and promote victims' access to economic opportunities. Early results include the identification of poor households; improved management information systems; and effective, accountable, and transparent payment systems. The project is being implemented by the Ministry of Social Welfare and Special Education, through the government welfare agency, Pakistan Bait-ul-Mal, and the Planning Commission.

A key focus of the South Asia portfolio is the promotion of market-based risk financing. In **Nepal**, a GFDRR project is developing affordable and cost-effective agricultural insurance products targeted at poor farming communities, which are bearing the brunt of a 15–20 percent decrease in food production because of changed rainfall patterns. The initiative is based on a partnership arrangement between the government, the domestic insurance

industry, and farmers' cooperatives. With GFDRR support, a feasibility study is assessing the quality of agricultural and weather data collections; reviewing the existing agricultural, insurance, and weather databases; analyzing the impact of natural disasters on agriculture; identifying crops, livestock, and hazards that could be covered by market-based insurance; and proposing pilot livestock and crop insurance options. The data will contribute to development of a detailed operating plan for selected agricultural insurance products. Under the leadership of the Ministry of Home Affairs, a steering committee is ensuring that effective disaster risk reduction plans and programs are appropriately funded at all government levels. GFDRR support is also encouraging new public-private partnerships, such as the government's collaboration with the National Society for Earthquake Technology to develop a national seismic safety strategy for schools (see box) and with the International Centre for Integrated Mountain Development to develop mitigation plans for glacial lake outburst flood sites.

Making Nepal Schools Earthquake Safe

In collaboration with the National Society for Earthquake Technology (NSET), the World Bank and GFDRR are helping the government of Nepal develop a national strategy to improve the seismic safety of schools. Studies have shown that about two-thirds of public school buildings in the Kathmandu Valley alone require immediate retrofitting. The remaining one-third are beyond repair and must be rebuilt.

The strategy is an outgrowth of the successful School Earthquake Safety Program that was pioneered by NSET in several districts of Nepal. "Lessons learned from that program demonstrate that schools can be powerful entry points for advancing the national disaster risk management agenda," said Amod Mani Dixit, NSET executive director. "In preparing this national strategy, we hope to replicate the School Earthquake Safety Program throughout the country." In addition to reducing the vulnerability of existing schools and making new ones earthquake safe, the program is helping schools develop earthquake preparedness plans, such as regular earthquake evacuation drills. Teachers, students, government officials, and local communities are also being encouraged to take a more proactive approach to reducing risks and expanding preparedness. In addition, the program is training local masons and other construction workers to use earthquake-resistant building materials and technologies.

In **India**, GFDRR is providing the government with technical assistance to modify the National Agricultural Insurance Scheme (NAIS), which covers more than 18 million farmers and is one of the largest crop insurance programs in the world. Although the program's overall structure is soundly designed, claims settlements have been taking 9 to 12 months, on average. The government's goal is to ensure that NAIS remains the mainstay of the agricultural insurance strategy but that efficiency problems affecting millions of farmers are addressed. With GFDRR support, an actuarial regime that uses a statistical database to quantify risk and pricing is being developed. In addition, NAIS is adopting weather-indexed insurance and offering innovative insurance products to facilitate timely claim payments. More than 700,000 farmers purchased weather-based crop insurance during the 2007–08 Rabi growing season and another 400,000 are expected to buy the insurance in the 2008 Kharif growing season. A flood index crop insurance scheme is also being developed as a pilot program, to allow for early indemnity payments under the NAIS.

GFDRR is also working with the Indian government to strengthen the institutional capacity of agencies implementing the National Cyclone Risk Mitigation Program and the new component of the Emergency Tsunami Reconstruction project. The goal is to reduce the vulnerability of coastal communities and increase government investments in disaster mitigation activities. The Government is also strengthening its quality control, monitoring and evaluation, and audit and assessment systems to allow effective analysis of the economic costs and benefits of selected risk mitigation efforts as well as the short- and longer-term impacts.

Increasing Access to Rural Finance in Bangladesh: The Forgotten Missing Middle

Increasing access to rural finance is often the last frontier in developing countries. Financial institutions operating in rural areas often face high transactions costs, low population densities, remote areas, and a heavy focus on agriculture, with related weather and commodity risks. Although Bangladesh is highly vulnerable to natural disasters, its population density lowers transactions costs considerably. Against this backdrop GFDRR is supporting the development of agricultural insurance solutions for the missing middle—to stabilize the incomes of small-holder farmers and to protect rural households from crop losses. Early results include the identification of priority crops and hazards, prototype agricultural insurance contracts, and premium rate recommendations.



GFDRR-funded training and learning activities are strengthening institutional capacity in **Sri Lanka**. Working closely with the Ministry of Resettlement and Disaster Management, the Ministry of Disaster Management and Human Rights, and other national authorities, GFDRR is supporting work to improve livelihoods and expand social protection for people affected by natural disasters. Also at the national level, GFDRR support is ensuring that disaster mainstreaming priorities are embedded in the country assistance strategy.

The GFDRR portfolio supports the active dissemination of best practices and lessons learned in the region. Disaster management experiences during the Gujarat earthquake—including the role of the Gujarat State Disaster Management Authority—are being documented. The project focuses on the authority's key areas of responsibility: housing, livelihoods, public infrastructure, urban reengineering, community participation, and long-term disaster management capacity building.

The project documents lessons learned and emerging best practices from the approach, methodology, implementation strategies, and outcomes of the response, recovery, and reconstruction efforts following the earthquake. The project also supports capacity building and feedback mechanisms for all stakeholders, including line departments at the state and district levels as well as NGOs and others involved in the reconstruction.

Pooling the Risks

The effects of climate change and an increasing number of natural disasters have shown how poverty reduction, development, and disaster risk are interdependently linked. The poorest countries suffer disproportionately from hurricanes, earthquakes, floods, and other natural hazards. The damage in proportion to their GDP is multiple times higher than in developed countries and, within a few days, development efforts of many years can suffer severe drawbacks. At the same time, the lack of financial and material resources to mitigate risks from natural disasters presents a growing threat to low- and middle-income countries.

As a priority action to help countries rapidly recover from natural disasters, GFDRR supports one of the principal goals of the Hyogo Framework for Action 2005–15 by promoting the development of financial risk-sharing mechanisms—in particular, catastrophe insurance and reinsurance. Catastrophe risk financing products and services include contingent loans, sovereign budget insurance, insurance-linked securities, property catastrophe insurance programs, agriculture insurance programs, and specialized index-based reinsurance.

Currently, GFDRR finances 24 projects that help countries better support and develop appropriate catastrophe risk financing programs and other financial risk instruments. These projects assist such activities as the development of probabilistic risk assessment platforms, the creation of disaster risk atlases, and the establishment and improvement of loss model tools. By making data collection more reliable, available insurance companies are in a position to better assess their risk exposure, and new data management systems will contribute to removing a major impediment for private sector engagement and help establish better functioning catastrophe insurance markets that make use of competitive and cost-effective risk financing instruments.

GFDRR-Approved Projects in South Asia		
Project	Country	GFDRR Contribution (US\$)
Bangladesh: Agricultural Risk Insurance Feasibility Study	Bangladesh	264,250.00
Climate Change and Future Flood Risks	Bangladesh	75,000.00
Improving Bangladesh's Response and Recovery Activities	Bangladesh	200,000.00
2nd Asian Conference on Disaster Reduction	India	75,000.00
Development of Lessons Learned Reports from Gujarat Emergency Reconstruction Project	India	300,000.00
Implementation Support for High-Priority Disaster Risk Mitigation Program in India	India	200,000.00
India Crop Insurance: Developing Market-based Products	India	306,875.00
Hazard Risk Management Program: Nepal	Nepal	914,000.00
Nepal: Agricultural Insurance Feasibility Study	Nepal	159,400.00
Building Capacity to Effectively Deliver Safety Nets in Post-Disaster Situations in Pakistan	Pakistan	250,000.00
Results and Lessons in the Rural Housing Reconstruction Response to the 2005 Pakistan Earthquake	Pakistan	230,000.00
Hazard Risk Management Program: South Asia Region	Region	300,000.00
Improving Sri Lanka's Response and Recovery in the Aftermath of Natural Disaster	Sri Lanka	200,000.00
	Total	3,474,525.00



Strong Global Advocacy and Regional Partnerships for a Safer, More Resilient World

“No nation, rich or poor, can go it alone when confronted by a natural disaster of the magnitude of Cyclone Nargis, which struck Myanmar in May 2008. ...And Nargis showed the world a new model of humanitarian partnership, adding the special position and capabilities of the Association of Southeast Asian Nations (ASEAN) to those of the United Nations in working effectively with the Government. This may prove the most important—and I hope enduring—lesson of the cyclone response, with implications for how we respond, anywhere, in the future.”

—John Holmes, *UN Under-Secretary-General for Humanitarian Affairs; Chair, ISDR System*

ASEAN's coordination of the response to Myanmar's deadly cyclone helped reshape world thinking about effective disaster risk reduction and recovery operations. Natural disasters are becoming increasingly complex and more frequent. In 2007, more than 234 million people were affected by natural disasters, nearly 74 million were killed, and economic damage totaled more than \$50 billion.

Robust and flexible approaches to these challenges require that both international and regional resources be fully utilized. At the regional level, however, capacities and resources for disaster risk reduction programs are limited.

Recognizing this paradigm, the International Strategy for Disaster Reduction has been steadily shifting its focus to regional intergovernmental organizations. The ISDR Secretariat manages GFDRR's program to enhance global and regional advocacy and partnerships, which has as its core mandate the creation of an enabling environment for effective disaster risk reduction activities at the country level. In support of this goal, the ISDR is increasingly utilizing GFDRR support to build stronger regional and local ownership of the disaster risk reduction agenda and ensure its integration into broader economic, social, and humanitarian policies. In 2008, more than 70 percent of its work program supported regional activities.

Climate Change Primer for East Asian Cities

Recognizing that the East Asia region will face the brunt of climate change impacts, the World Bank's East Asia and Pacific Region Sustainable Development Department, with collaboration and cofunding from GFDRR and the ISDR, developed *Climate Resilient Cities: Reducing Vulnerabilities to Climate Change Impacts and Strengthening Disaster Risk Management in East Asian Cities*.

Cities, and coastal cities in particular, are on the front line of disaster vulnerability and have been identified as climate change hot spots. To help city governments better understand climate change and its implications for densely populated urban areas, this handy primer offers a menu of practical tools to assess risks and make cities more disaster and climate resilient. The recommendations are drawn from the actual experiences and good practices of 20 cities around the world.

Among the innovative features is an interactive risk assessment that challenges urban policy makers to think seriously about the resources needed to combat climatic and other natural disasters. The primer also presents a hot-spot matrix to identify priority activities. The primer was launched at a Green Cities workshop held in conjunction with the 2008 United Cities and Local Governments Asia Pacific Congress in Pattaya, Indonesia, in July.

More than 100 mayors, governors, city officials, and representatives of regional and international organizations participated. Media response to the primer has been strong. Initial news coverage included more than 50 articles and interviews in major media, such as Bloomberg Television News. The primer is being sent to more than 700 city officials in East Asia, and the World Bank Info-Shop is disseminating the reports worldwide.

“The Cities Primer—which focuses on reducing vulnerability to climate change impacts and related disasters—is a useful and valuable reference for our members, in particular the city managers and local government leaders.”

—Emeritus Mayor Peter Woods OAM, Secretary General, United Cities and Local Governments, Asia-Pacific

The primer’s success highlights the growing awareness that disaster risk reduction strategies can provide useful solutions to climate change adaptation. The Green Cities workshop, in particular, is an example of how collaborations among many stakeholders can create synergies among climate change, disaster risk reduction, and development experts; leverage national, regional, and international partnerships; and engage a wide network of local authorities. The full report is available at www.worldbank.org/eap/climatecities.

Reinvigorating Regional Organizations

GFDRR is providing financial and technical assistance to reinvigorate regional organizations and bolster their capacity to spearhead collective responses to regional disaster issues. A few snapshots of GFDRR’s regional capacity building efforts follow.

- In Latin America, the Organization of American States received GFDRR support to initiate a regional platform for disaster risk reduction, establish regional information and communications technology programs as well as early warning systems, and promote increased South-South cooperation in Latin America.
- In Europe, GFDRR supported finalization of the South Eastern Europe Disaster Risk Mitigation and Adaptation Program, which includes priorities and a time frame for national and regional activities.
- In the Middle East, GFDRR established partnerships on disaster risk reduction with the League of Arab States and the Economic Cooperation Organization.

GFDRR: Focus on Gender

Recognizing that women and men are affected differently by natural disasters, a number of GFDRR projects actively address gender issues. For example, the \$1.1 million Community Co-Management for Disaster Risk Management of Marine Resources in West Africa project is helping coastal communities in Senegal, Sierra Leone, and Mauritania reduce risks through better management of their marine resources. Because on-shore fish processing is largely undertaken by women, this initiative has an important gender focus.

Going forward, GFDRR will encourage high-risk countries to engage women in risk and vulnerability assessments and expand their role in early warning systems and other preparedness measures. At the policy level, GFDRR will help countries incorporate gender dimensions in national development strategies and include programs targeted to women to ensure gender equity when planning recovery and reconstruction.

Finally, gender-disaggregated disaster risk management data will be systematically collected and, where possible, specific gender budgeting will be tracked.

- Through the African Union, GFDRR provided financial and technical assistance to the Economic Commission for West African States and the Southern African Development Community to develop subregional disaster risk reduction programs and prepare a GFDRR South-South Cooperation partnership proposal.
- Also in Africa, GFDRR support allowed the African Union Secretariat to engage expert staff to help implement the regional strategy for disaster risk reduction.
- In Asia, GFDRR support to the South Asian Association for Regional Cooperation resulted in the development of a regional knowledge networking system to facilitate information sharing on risk analysis, good risk management practices, and experts in the region.
- Also in Asia, GFDRR provided staff support and training to build ASEAN's disaster risk reduction capacity after the Myanmar cyclone.

Dakar Workshop: Effective Disaster Risk Reduction Practices

Under the leadership of the African Union and subregional economic commissions, Africa has developed a strong commitment to disaster risk reduction, but capacity levels remain low. A workshop in Dakar, Senegal, in April 2008 sought to remedy that. More than 100 African Union members, government officials, UN and World Bank staff, and representatives of intergovernmental and civil society organizations from 30 countries participated. The workshop focused on practical applications of existing tools for disaster risk reduction, damage and loss assessments, and the urgent need to ensure that the development process itself does not generate increased risk.

The workshop was organized by the World Bank, UNDP, the government of Senegal, and the ISDR, under the aegis of the African Union Commission with GFDRR sponsorship. It raised understanding of the importance of mainstreaming disaster risk reduction in development planning and policies, increased acceptance of the HFA Monitor as a tool for progress reporting, and resulted in an agreed work plan for the ISDR's Africa Program.

Along with the new emphasis on regional strengthening, global advocacy and partnerships remain a top priority. In 2008, the ISDR expanded its efforts to raise awareness of disaster risk reduction issues and the intricate links between disasters and poverty.

First Global Assessment Report on Disaster Risk Reduction

The ISDR Secretariat and the World Bank, in collaboration with the UNDP and other partners and with support from GFDRR, are coordinating the research, analysis, and preparation of the first biennial Global Assessment Report on Disaster Risk Reduction. This flagship publication will be launched by the UN Secretary General in June 2009 and presented to the second session of the Global Platform on Disaster Risk Reduction.

The Global Assessment Report will fulfill three main objectives:

- Establishment of a credible and widely accepted reference point for information on global disaster risk patterns and trends.
- Increased understanding and awareness of the mutually supportive relationship between development and disaster risk reduction, through an in-depth analysis of key links and interfaces between hazards and a global development theme, such as the relationship between disaster risk and poverty, the theme of the 2009 report.
- Strengthened ISDR system capacity for planning and joint programming at all levels by providing a global review of achievements and gaps in hazard risk reduction from national, regional, and thematic HFA reporting.

As the World Bank's primary vehicle for working with client countries to reduce vulnerability to disaster risks and link with the ISDR system, the GFDRR is responsible for assembling critical inputs from the World Bank's work for the Global Assessment Report, and where necessary, for synthesizing key findings and conclusions.

State-of-the-Art Tools To Enhance Risk Reduction Efforts

GFDRR funding helped establish PreventionWeb.net as a virtual clearinghouse tailored to the collection and sharing of risk information data and analysis. PreventionWeb.net also expedites progress reporting by ISDR system partners and regional and national organizations. In less

than a year, the site has drawn more than 60,000 visitors, and daily submissions are increasing, an indication that partners are using the site as an information hub.

In 2008, PreventionWeb.net added online tools to increase direct contributions from partners, information sharing, and networking. Among the innovations:

- HFA Monitor, an online tool for national authorities to report risk updates and indicators of national, regional, and global needs.
- Online workspaces for disaster risk reduction professionals, such as the Asia regional task force on urban risk reduction and the nine peer review groups contributing to the Global Assessment Report.
- A calendar of disaster risk reduction events and training workshops.

In addition, more than 30 disaster risk reduction networks and communities use PreventionWeb.net tools and information management guidance to promote professional collaborations. Regional information management officers have also been identified through the UN Volunteer program.



GFDRR and a Safer World

GFDRR aims to mainstream disaster reduction in national development strategies to achieve the Millennium Development Goals (MDGs), through integration of disaster risk reduction concerns into poverty reduction and country development strategies. To ensure efficient country development strategies that can withstand the shocks of disasters, and to achieve the MDGs by 2015, it is imperative that each country have a hazard-resilient social infrastructure. Schools and hospitals constitute the core critical infrastructure of any society.

The future leaders of the world we want to make safe spend a significant portion of their lives in schools. The total number of children attending school in 2004 was estimated at more than 4 billion, including children enrolled in preschool. This population is growing. In the primary education sector, growth is predicted from 654.9 million children in the year 2000 to 668.3 million children by 2015. Thus, the number of children in primary schools alone will grow by 13.4 million. Assuming 100 children per school, this means about 134,000 new primary schools will have to be built by 2015 to achieve the MDGs.

Many of these children study in hazard-prone areas of the world, exposed to the dangers of disasters such as earthquakes, fires, floods, landslides, volcanic activity, industrial accidents, and other natural and man-made disasters.

In the case of hospitals and health infrastructure, the situation is of equal concern. In the last 20 years, more than 100 hospitals and at least 1,000 health care centers in the Latin America and Caribbean region alone were damaged as a consequence of natural disasters.

In August 2007, in just two minutes, the city of Pisco, Peru, lost 97 percent of its hospital beds to an 8.0 magnitude earthquake. In the October 2005 earthquake in Pakistan, 50 percent of the health facilities in affected areas were completely destroyed. In December 2004, the tsunami in the Indian Ocean destroyed 61 percent of the health facilities in Banda Aceh, Indonesia.

Recognizing the need for a safer world, the World Bank has been actively involved in mitigation of risks in critical infrastructure. The World Bank, through GFDRR, is supporting the World Disaster Reduction Campaign 2008–2009: Hospitals Safe from Disasters. This support is in partnership with the ISDR and the World Health Organization, and advocates the structural and nonstructural safety of health facilities.

The Bank has been also been promoting risk mitigation in schools. One example is the bank-supported Istanbul Seismic Risk Mitigation and Emergency Preparedness project. After two years of project implementation, about 150 schools and two hospitals have been retrofitted, among other achievements. Similarly, in Uttar Pradesh, India, the Bank supported the construction of over 6,000 seismically safe school buildings under the Education for All project.

As countries race to achieve the Millennium Development Goals, the expenditure on construction of school and hospital buildings is expected to increase. This is an opportunity to promote investments in infrastructure built to higher standards of hazard resilience. Not only will this generate goodwill in a world weary of frequent disasters, but it will also generate more willingness for mainstreaming disaster reduction.

To ensure increased sustainability of the investments made in the social sector, GFDRR is developing a marketable strategy for governments, concerned World Bank units, and other stakeholders. This strategy will include a complete set of actions and guidelines that policy and decision makers need to ensure disaster-resilient infrastructure. Separate packages are planned for schools and hospitals. Action has been initiated by appointment of a school and hospital safety specialist in the GFDRR Secretariat team. The objective is to have at least 5 million resilient buildings in the social sector, contributing to a safer world by 2015. The ultimate objective is to “disaster-proof the MDGs.”

Source: UNESCO, Pan-American Health Organization, Asian Disaster Preparedness Center.

Moving Forward with the Stockholm Plan of Action

In October 2007, the Stockholm Forum for Disaster Reduction and Recovery adopted the *Stockholm Plan of Action for Integrating Disaster Risk and Climate Change Impacts in Poverty Reduction*. The Stockholm Plan identified a set of priority actions and indicators. This report measures progress one year after the plan was adopted.

Priority actions	Progress
<p>1. Disaster risk reduction and climate change adaptation cannot be dealt with in isolation. Enhance institutional and policy coordination at the level of individual countries, regions, and global institutions.</p>	<ul style="list-style-type: none"> ■ GFDRR assistance to enhance regional cooperation in disaster risk reduction among the Africa Union, ASEAN, Economic Community of West Africa States, League of Arab States, Organization of American States, SAARC, and SOPAC has resulted in expanded opportunities to link disaster risk reduction with the climate change agenda at policy and institutional levels in the member countries. ■ As many as 22 countries have made significant progress in developing coordinated institutional mechanisms for dealing with disaster risks and climate change—for example, Madagascar, Pacific Islands, Vietnam, Ecuador, Mozambique, and Malawi. ■ Building adaptive capacities through disaster risk reduction interventions is integral to GFDRR's forward-looking strategy, "GFDRR Results Agenda: 2015 and Beyond." ■ GFDRR assistance to ISDR has supported the 2008–09 <i>World Disaster Reduction Campaign: Hospitals Safe from Disasters</i>, in collaboration with the World Bank and WHO; sponsored a regional workshop in Dakar in collaboration with the Bank, UNDP, and Government of Senegal; contributed to the <i>Global Assessment Report on Disaster Reduction</i>; and enhanced PreventionWeb.org.
<p>2. Risks stemming from disasters and climate change must be known and measured.</p>	<ul style="list-style-type: none"> ■ Tools and guidelines to assess common country risks from disasters and the impacts of climate change have been developed and are currently being used in several GFDRR priority countries. ■ Twenty-two countries are working on common assessments of disaster risks and climate change impacts. ■ A number of priority countries have initiated global and country-level assessments of the economics of climate-induced extreme events.
<p>3. Disaster and climate change risk analysis must be integrated into national planning processes, including the poverty reduction process in each country.</p>	<ul style="list-style-type: none"> ■ GFDRR's upstream reviews of country development strategies now include better articulation of disaster risks and the linkages with climate change impacts. ■ Thirty-two low- and middle-income countries have made significant progress in mainstreaming disaster risk reduction and climate adaptation in country processes.
<p>4. Disaster risk reduction and climate change adaptation are not sectors but need to be factors in all sectors.</p>	<ul style="list-style-type: none"> ■ GFDRR support has resulted in the better integration of disaster risk reduction and climate change considerations in a broad range of development sectors, such as agriculture and rural development (27 country projects), education (5 projects), health and nutrition (5 projects), housing and basic services (10 projects), infrastructure (18 projects), governance (12 projects), poverty alleviation programs (13 projects), private-public partnerships (14 projects), social development (9 projects), urban and transport (20 projects).
<p>5. Capacity building is required at local, national, regional, and global levels, with a focus on GFDRR priority countries that are particularly prone to natural hazards.</p>	<ul style="list-style-type: none"> ■ GFDRR assistance has enabled 54 disaster-prone low- and middle-income countries to build their capacity for disaster risk reduction and climate change adaptation. ■ Capacity-building programs on disaster risk reduction, risk financing, and risk transfer are being delivered to development managers in priority countries. ■ At least 20 countries will benefit from the initial phase of GFDRR's South-South Cooperation Program to foster greater collaborations on disaster risk reduction and climate adaptation among southern institutions, civil society networks, and professional bodies. ■ Postdisaster needs assessments in recent disasters provided an opportunity to develop in-country capacity for assessing the underlying causes of disaster risks and building climate resiliency—an example is Bangladesh.



GFDRR Innovations: Catalyzing South-South Cooperation

South-South collaborations have played an important role in disaster response and emergency preparedness over the years. After the 2004 Asian tsunami, the dialogue among policy makers from India, Sri Lanka, Indonesia, and Maldives, whose countries faced similar recovery challenges, helped guide reconstruction efforts and enabled the governments to benefit from information sharing and good practices. There are also a growing number of success stories about the exchange of knowledge and expertise among developing countries—on topics ranging from agriculture and trade to industrial development and health care.

Yet as notable as these examples seem, without enabling mechanisms, collaborations to reduce disaster risks have been limited and insufficient to help developing countries effectively prepare for the impacts of climate change and the increasingly frequent and severe disasters.

The growing and unmatched demand for Southern solutions to disaster risk reduction challenges led to the inception of the GFDRR South-South Cooperation Program. The idea, introduced and endorsed at the Third GFDRR Consultative Group meeting in October 2007, was conceptualized and validated through a consultative process involving policy



makers, academics, nongovernmental organizations, and practitioners. Supported by broad-based consensus in the disaster assistance community, the GFDRR established the South-South Cooperation Program to facilitate and promote interregional and cross-country collaboration in disaster risk reduction. Within a year the idea became a reality and the June 2008 call for proposals officially launched the program.

The program, the first of its kind, is anchored in the belief that expanded partnerships among low- and middle-income countries are the key drivers of effective risk reduction. By systematically sharing experiences and lessons learned, disaster-prone countries facing similar challenges and operating under comparable financial and political constraints can arrive at more relevant and efficient solutions to daunting disaster risk and climate change problems.

The program was set up to advance opportunities for high-risk countries to work jointly on common objectives and take more responsibility for reducing their vulnerability. By tapping their enlightened self-interest, the program aims to capitalize on the leadership, creativity, technical know-how, and practical experience of governments, institutions, NGOs, and communities in the South. The program also encourages the support of multilateral, regional, and global organizations that can offer access to knowledge and resources that might otherwise be unavailable. Close collaboration with the UNDP's Special Unit for South-South Cooperation is providing valuable lessons in brokering knowledge and development solutions across countries.

A powerful confirmation of the relevance of the South-South Cooperation Program was the remarkable interest and significant number of applications in response to the first

call for proposals. The Secretariat received 34 applications involving more than 28 countries and nearly 100 organizations. Asia countries and organizations submitted the largest number of proposals, with Africa second. Proposals from the NGO sector focused on collaborations among government agencies and communities to promote participatory risk reduction and improve community resilience. The proposals to set up partnerships among local governments or urban settlements across different regions centered on climate change adaptation experiences and the design of risk-sensitive land use planning. Last but not least, proposals coming from government agencies and regional intergovernmental organizations featured collaborations to set up national platforms, establish effective institutions, and build government capacities for implementing the disaster reduction agenda. After careful screening, eight partnerships were invited to submit full proposals.

The Indian government, which has indicated an interest in leading a South-South partnership, cohosted the successful finalists at a Partnership Development Workshop October 28–31, 2008, in New Delhi. Fifty-five participants from 20 countries participated.

Oslo Consultation

To complement and enhance GFDRR's efforts, the concept of developing a program that supports South-South partnerships for disaster risk reduction was introduced at the Third GFDRR Consultative Group meeting. The group endorsed the concept, but it did not take shape until an international consultation organized in connection with the 2008 Oslo Policy Forum breathed life into it. The meeting of more than 50 ministers, senior policy makers, field practitioners, and disaster risk management experts focused on the nuts and bolts of the new program, from its design and structure, to its practical implementation and operational guidance. Discussions at the one-day conference were enriched by presentations from developing countries themselves on the added value of strong intercountry partnerships within the South. Insights and guidance from the participants provided a foundation for the three-year South-South Cooperation work program that was formally launched in June 2008.

The workshop provided technical assistance and advice on how to sharpen the focus of their proposals and design activities and work programs that utilize the full potential of their partnerships.

The GFDRR South-South Cooperation Program aims to mobilize at least \$100 million between 2008 and 2015. Through grant financing of up to \$500,000, the program fosters demand-driven and results-oriented partnerships designed around common needs and shared objectives in disaster education and communication, public policy, institutional and legislative environment, and innovative risk sharing mechanisms. Building on the partners' commitments of intellectual, financial, technical, and human resources, the program is expected to support partnerships involving 50 or more countries over the next three years. To ensure the inclusive character of the program, the basic program documents have been translated into Arabic, Chinese, French, Russian, and Spanish.

The primary challenge of the program is to meet the unprecedented demand from low- and middle-income high-risk countries and contribute to the effectiveness and sustainability of the partnerships it supports. Future progress will require GFDRR to expand awareness of the nature of South-South partnerships, build trust among potential South-South partners, and strengthen the capacity of Southern organizations and institutions to develop win-win proposals.



60 MINUTES WITH NOBEL LAUREATE KENNETH J. ARROW

Assessment of the Economics of Disaster Risk Reduction

What are the long-run economic and welfare impacts of disasters? What incentives, or perhaps *disincentives*, do governments face to make disaster risk reduction a development priority? What does economics have to say about whether there is a bias against *ex ante*, risk-reducing measures, and about correcting these biases?

These are some important questions that a new World Bank–UN study will address. The comprehensive *Assessment on the Economics of Disaster Risk Reduction*, scheduled to be launched in 2009, is intended to influence the broader thinking related to disaster risks and disaster occurrence, raise awareness of the potential to reduce disaster costs, and provide guidance on the implementation of disaster risk reduction interventions.

A review committee led by Katherine Sierra, World Bank Vice President and GFDRR chair, and John Holmes, UN Under-Secretary-General for Humanitarian Affairs and Chair of the ISDR System, has endorsed specific themes as a basis for the study. The emerging themes of the assessment are:

- **Balancing Ex Ante and Ex Post Actions, and the Rationale for Public Intervention**

This theme aims to discuss links between ex ante–ex post and private-public sector actions and policies for effective disaster risk reduction. Under which circumstances should one undertake more (or less) ex ante versus ex post actions for dealing with disasters? Related to this question is the appropriate role of public intervention. Markets are efficient mechanisms for addressing many risk sharing and risk transferring needs associated with uncertainty in the timing and scale of disasters, but they can be incomplete or missing, and may not adequately deliver societywide beneficial outcomes. This theme will therefore also discuss the market failures or equity concerns that warrant public intervention for ex ante disaster risk reduction.

- **ABCs of Disaster Impacts: Disasters—Aberrations, Barriers, or Catalysts for Long-Term Development Prospects?**

Disasters may have longer-term impacts on economies beyond the immediate impact of loss of lives, destruction of physical capital, and reductions in income. Some pathways by which disasters could affect future capital stock include the possibility that high risk of disasters affects the expected returns to human capital; disaster shocks may exacerbate credit constraints of households, reducing their ability to invest in children’s human capital. Disasters may also occur during critical periods of vulnerability in a child’s life when the quality and timing of investment in human capital are important, such as early childhood or even while the child is in utero. This theme aims to analyze these key issues related to the long-term impact of disasters on developing economies, in particular, on human capital, a key determinant of growth and welfare.

- **Cost-Benefit Analysis in Disaster Risk Reduction**

This theme aims to review the cost-benefit methodologies that are currently in use at microeconomic (project evaluation) levels, from a theoretical, technical, and empirical perspective. It will recommend ways for better integrating cost-benefit analysis techniques for disaster risk management into analytical tools that are currently used, as well as possible methodological improvements.

- **Disasters and Conflicts**

This theme aims to examine the two-way links between conflict and natural disasters, namely, whether violent conflict exacerbates the effects of disaster, and how disasters affect conflict. The theme will also attempt to assess the extent to which such determinants as lack of governance and other failures that make conflict more likely also make countries more vulnerable to disaster.

■ **The Urbanization of Disasters**

This theme aims to examine how ongoing urbanization affects the economic costs imposed by disasters and to address the following pertinent questions: First, which growing cities face significant risks from natural disasters? Within these cities, what is the spatial distribution of economic activity? Are there “excessive” residential and commercial activity in areas within these cities that are especially at risk from such shocks? Are public investments being made to help to offset this risk?

The assessment aims to provide an analytical, conceptual, and empirical examination of these themes. It has already sparked wide interest in disaster risk issues. As part of the assessment, GFDRR has facilitated four high-profile seminars featuring Nobel Laureate speakers and prominent scholars:

- The unpredictability of catastrophes (induced by climate-change) was the topic, at the opening session in March, for Thomas Schelling, 2005 Nobel Laureate in Economics; Harvard professor Martin Weitzman; Richard Posner, author of *Catastrophe: Risk and Response*; and John Seo, a pioneer in the catastrophic insurance industry.
- Kenneth Arrow, 1972 Nobel Laureate in Economics, presented the second seminar, also in the spring. He focused on “deep-future disasters” that have the potential to destroy the human race.
- William Nordhaus, an outstanding climate change economist and author of *A Question of Balance*, was joined by Freeman Dyson, a renowned physicist, at the third seminar on “Climate Change and Disasters—Risk and Policy.”
- The fourth seminar featured 2002 Nobel Laureate Daniel Kahneman and Howard Kunreuther of the Wharton Business School. They unveiled a psychological and behavioral economics framework to explain why individuals tend to suboptimally prepare for disasters.

In addition to the work by World Bank staff, a team of academics and recognized experts from the public and private sector is preparing background papers for the assessment. The Asian Disaster Preparedness Center, International Food Policy Research Institute, International Institute for Applied Systems Analysis, International University of Japan, London School of Economics, and Wharton Business School are among some of the contributors.



Measuring Results: GFDRR Monitoring and Evaluation

In recent years, the international community's focus has moved beyond traditional evaluations of project performance. Today the emphasis is on a results-based approach.

To ensure a rigorous accounting of how efficiently and effectively development funds are being used, GFDRR has adopted a results-based management system (RBMS) for disaster risk reduction. The RBMS aims to bring into sharp focus the best aspects of GFDRR's work—and the areas where more is needed to achieve expected results.

Tailored to GFDRR's growing portfolio of diverse and geographically dispersed projects and initiatives, the RBMS provides up-to-date assessments of program direction, implementation management, and performance evaluation. The system is designed to foster accountability (by tracking performance) and continuous learning (through documentation of project performance, planning, and management experience as well as the integration of lessons learned).

The RBMS includes common indicators to allow comparisons across projects, sectors, and geographical settings. In addition, GFDRR task team leaders propose indicators to measure the progress and performance of specific projects throughout the project cycle. As a web-based tool, the RBMS facilitates reporting from the field, the identification of indicators, and realistic target setting. Each project is evaluated on the basis of:

- *Objectives:* To help ensure overall program coherence and compatibility, the RBMS requires a clear statement of project objectives that are aligned with the priorities of the Hyogo Framework for Action. The objectives are based on a thorough assessment of relevant baseline conditions associated with project inputs, outputs, outcomes, and long-term impacts.
- *Inputs:* Project inputs include funding, personnel, and materials that are adequate to achieve project objectives. Resources from GFDRR, national and local partners, and other donors are captured in the project budget proposal.
- *Outputs:* Project outputs are the tangible deliverables resulting directly from the project. Outputs are relatively easy to track and have been the focus of traditional performance evaluations. The identification and scheduling of projected outputs provide the basis for managing project implementation.
- *Outcomes:* Project outcomes are measured in terms of changes in the environment of the area affected by the project. External to the project and dependent on factors beyond the control of the task team leader, these outcomes pose a new and important challenge to monitoring and evaluation. Outcomes are reflected in sustained changes in behavior and practices. Measuring project outcomes may require a range of reviews, including reviews by target populations. In some cases, outcomes may be difficult to ascribe to a single project but can be relevant to a programmatic effort or a combination of efforts supported by GFDRR.
- *Long-term Impacts:* Long-term impacts are the ultimate target of the RBMS. The underlying purpose of the RBMS is to keep the outcomes and long-term impacts foremost in the conceptualization and execution of projects. In the case of GFDRR, these strategic results are summarized by the five HFA priorities and the reduction of losses attributable to disasters.

Vulnerability Tracking Initiative

The Vulnerability Tracking Initiative (VTI) is being developed as a new tool to measure changes in physical, economic, social, and environmental vulnerability as a result of disaster risk reduction activities at the metropolitan and regional levels. The VTI will evaluate overall progress in disaster risk reduction, with an emphasis on vulnerability assessment at a micro level. By adopting common terminology and measures, the VTI will enable disaster specialists to compare changes in the same area over a specific time period. It will also facilitate assessments of the effectiveness of a range of different activities.

GFDRR Results Management Council

The GFDRR Results Management Council is an independent group of experts who provide technical advice to the GFDRR Secretariat and Consultative Group. The council ensures the quality, relevance, and impact of GFDRR-funded activities by reviewing the annual indicative work program before it is presented to the Consultative Group, conducting ex post evaluations of selected GFDRR activities, and leveraging the engagement of local and regional authorities to sustain and replicate GFDRR's work. At its meetings in 2008, the council critiqued initial GFDRR projects in Malawi, Mozambique, Nepal, Nicaragua, and Vietnam, and initiated the Vulnerability Tracking Initiative.

The RBMS Advantage

Program Balance and Direction

The RBMS provides a hierarchy of project level, intermediate, and common strategic objectives that unify the diverse activities of the three-track operations of GFDRR. This framework provides the basis for monitoring many narrowly focused activities that contribute to the achievement of broad strategic goals. Reference to HFA priorities and common indicators provides cohesion and coordination within and among these three tracks.

Implementation Management

Clearly defined input and output indicators enable ongoing projects to be monitored and adjusted. Scheduled milestones can be compared with actual performance. The relation of inputs to outputs provides an indicator of management efficiency. Documenting risks and obstacles during project implementation allows experiences to be shared and planning and implementation to be improved.

Reporting

Regular reporting of results and progress is critical to the integrity of the GFDRR program and donor confidence in GFDRR's ability to contribute to the strategic goal of reducing global disaster losses. The RBMS supports the timely reporting of the full range of program activities, current implementation effectiveness, expected results, and long-term impacts arising from disaster risk reduction.



Resource Management

Track I

Track I, which is managed through the ISDR, targets partnership development, knowledge sharing, and advocacy. Examples include regional cooperation on disaster risk reduction in Central America, Sub-Saharan Africa, South Eastern Europe, and South Asia; and partnerships with North and South universities, academic institutions, and scientific organizations to promote disaster risk reduction in education, training, and research.

Financing of Track I activities comes from the World Bank. For fiscal years 2007–09, the World Bank, through the Development Grant Facility, is contributing a total of \$15 million (or \$5 million per year).

Track II

Track II supports the development of national strategies and capacity-building interventions. It provides ex ante support, primarily through three-year technical assistance programs, to enhance investments in risk reduction and risk transfer mechanisms. Financing of Track II activities is made possible by contributions from various donors in the form of trust funds administered by the World Bank. To maximize flexibility in the use of contributions, GFDRR

follows a two-tier financial structure: core and noncore funds. The core fund consists of untied funds that can be used to support any activity falling within the Track II mandate. Noncore funds are usually subject to donor restrictions regarding themes, activities, or regions.

Track III

Track III's Standby Recovery Financing Facility is a mechanism to support accelerated disaster recovery in disaster-prone countries. Track III contributions are received in both a Technical Assistance Fund and a Callable Fund. The funds are used to bridge the gap between immediate relief efforts and longer-term reconstruction and development programs.

Contributions to the GFDRR are in cash. In-kind resources may also be considered in limited cases. Under the GFDRR program charter, membership is open to eligible organizations and recipient or developing country governments. Official donors that contribute a minimum of \$3 million per year and developing countries that contribute \$500,000 for a three-year period to either Track II core funds or Track III funds become members of the Consultative Group.



Table 1. Member contributions to GFDRR received as of June 30, 2008
(In US\$ Thousands)

MEMBER	Track II			Track III				
	CORE	NON-CORE	South-South	TOTAL RECEIVED	TA	CALLABLE	TOTAL RECEIVED	ALL TOTAL
Australia	2,167	796		2,963	968		968	3,931
Canada	1,511			1,511			0	1,511
Denmark	1,066			1,066		1,984	1,984	3,050
EC	0			0			0	0
Italy	1,397			1,397			0	1,397
Japan	3,000	3,000		6,000			0	6,000
Luxembourg	2,936			2,936			0	2,936
Norway	1,773		394	2,167	784		784	2,951
Spain	3,024	3,210		6,234			0	6,234
Sweden	2,133			2,133	1,504		1,504	3,637
Switzerland	1,024			1,024			0	1,024
United Kingdom	5,607			5,607			0	5,607
World Bank	10,000			10,000			0	10,000
TOTAL	35,638	7,006	394	43,038	3,256	1,984	5,240	48,278

Table 2. Member contributions to GFDRR pledged as of June 30, 2008
(In US\$ Thousands)

MEMBER	Track II			Track III				
	CORE	NON-CORE	South-South	TOTAL RECEIVED	TA	CALLABLE	TOTAL RECEIVED	ALL TOTAL
Australia	3,081	1,128 a/		4,209	948		948	5,157
Canada	3,511			3,511			0	3,511
Denmark	7,250			7,250		1,984	1,984	9,234
EC				0		400	400	400
Italy	3,125		1,167	4,292		700	700	4,992
Japan	3,000	3,000 b/		6,000			0	6,000
Luxembourg	2,936			2,936		c/	0	2,936
Norway	5,153		400	5,553	784		784	6,337
Spain	3,000	3,000 d/		6,000			0	6,000
Sweden	7,602 e/			7,602	1,500		1,500	9,102
Switzerland	1,024			1,024			0	1,024
United Kingdom	8,761			8,761			0	8,761
World Bank	15,000 f/			15,000			0	15,000
TOTAL	70,571		1,567	72,138	3,232	3,084	6,316	78,454

NOTE: Pledged amounts quoted at time of donor's pledged agreement. Actual received contributions are in Table 1. Depository schedules could spread from one year to three years.

a/ Targeted to the following specific countries: Bangladesh, Cambodia, East Timor, and Vanuatu.

b/ Targeted to the following specific countries: Sri Lanka, Pakistan, and Lao PDR.

c/ Luxembourg signed Administrative Agreement in FY08 to support Track III — Callable Funds. Call of Funds Confirmation will determine actual contributions.

d/ Targeted to the following specific countries: Costa Rica, Guatemala, and Ecuador.

e/ Sweden pledges included SEK 3 million supplemental contributions.

f/ US\$5 million per year for three years (FY07 to FY10) is provided as a grant to ISDR under the Track I financing.

Table 3. GFDRR expenditures for program activities, secretariat costs, and administrative fees, fiscal 2007 and 2008

(In US\$ Thousands)

EXPENSE CATEGORY	2007a/	2008a/
Program Activities	6,762	11,696
o/w Track I	5,000	5,000
Track II	1,762	5,786
Track III		910
Secretariat ¹	347	1,524
Administrative Fees	211	1,279
TOTAL	7,320	14,500

NOTE: Program activities for Track II and III included global anchor operational support from GFDRR.

a/ This would refer to actual payments made and contracts already entered in the Bank's SAP system.

1 Includes Program Management Unit staff costs (management, administration, evaluation of proposals, governance and donor relations).

Table 4. GFDRR Secretariat expenditures, fiscal 2007 and 2008

(In US\$ Thousands)

EXPENSE CATEGORY	2007a/	2008a/
Administration		
Staff Costs ¹	225	977
Travel ²	92	282
Overhead ³	4	23
Other ⁴	26	241
TOTAL	347	1,524

a/ This would refer to actual payments made and contracts already entered in the Bank's SAP system.

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

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

3 Overhead includes office space, communications and IT, computers, and other office equipment of Washington-based PMU + representation and hospitality.

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

Table 5a. Approved activities under Track II for the period FY07–FY10 as of June 30, 2008 (by Region)

(In US\$ Thousands)

REGIONS	APPROVED	TRANSFERRED	DISBURSEMENT a/ (Actuals + Commitments)	BURN RATE b/
Africa	8,246	3,732	1,206	32%
East Asia and Pacific	8,351	2,278	1,328	58%
Europe and Central Asia	1,565	1,015	715	70%
Latin America and Caribbean	6,814	2,697	966	36%
Middle East and North Africa	1,665	676	380	56%
South Asia	3,474	1,694	855	50%
Global	3,994	1,749	164	9%
TOTAL	34,109	13,841	5,614	41%

a/ This would refer to actual payments made and contracts already entered in the Bank's SAP system.

b/ Disbursement rate as a percentage of actual amount transferred from inception to June 30, 2008.

Table 5b. Approved activities under Track III for the period FY08–FY10 as of June 30, 2008 (by Region)

(In US\$ Thousands)

REGIONS	APPROVED	TRANSFERRED	DISBURSEMENT a/ (Actuals + Commitments)	BURN RATE b/
Africa	205	205	164	80%
East Asia and Pacific	1,810	225	200	89%
Europe and Central Asia	—	—	—	—
Latin America and Caribbean	100	100	67	67%
Middle East and North Africa	25	25	0	0%
South Asia	466	409	264	65%
Global	52	0	0	0%
TOTAL	2,658	964	695	72%

a/ This would refer to actual payments made and contracts already entered in the Bank's SAP system.

b/ Disbursement rate as a percentage of actual amount transferred from inception to June 30, 2008.



Annex—GFDRR Interventions in Natural Disaster Hotspot Countries

Pipeline Poverty Reduction Strategies, Country Assistance Strategies, and UN Development Assistance Frameworks in Natural Disaster Hotspot Countries with More Than 30 Percent GDP in Areas at Risk of Two or More Hazards

GFDRR Technical Assistance under Tracks II and III

SL NO	COUNTRY	% OF TOTAL AREA AT RISK	% OF POPULATION IN AREAS AT RISK	% OF GDP IN AREAS AT RISK	GDP IN US\$ BILLIONS	POVERTY REDUCTION STRATEGY PAPER—BOARD DATE	COUNTRY ASSISTANCE STRATEGY—BOARD PRESENTATION DATE	UNDAF - VIEW BY HARMONIZED CYCLE YEAR (CCA/UNDAF YEAR IS 2 YEARS PRIOR TO THE CYCLE)	FY 07-09	FY 08-10	FY 09-11
1	El Salvador	88.7	95.4	96.4	16		Progress Report— 08/30/2007	2007		II	
2	Jamaica	94.9	96.3	96.3	8		Progress Report— 03/27/2007	2007		II	
3	Dominican Republic	87.2	94.7	95.6	19		Progress Report— 07/12/2007	2007			
4	Guatemala	52.7	92.1	92.2	27		Progress Report— 01/11/2007	2005		II	
5	Korea, Rep. of	82.8	92.2	91.5	680						
6	Vietnam	33.2	75.7	89.4	45	Vietnam 5— year SEDP and JSAN 2006— 12/05/2006	Country Partnership Strategy - 01/23/2007	2006	II		
7	Albania	86.4	88.6	88.5	8			2006			II
8	Costa Rica	51.9	84.8	86.6	18		Progress Report— 11/30/2006	2008		II	
9	Colombia	21.2	84.7	86.6	97		CAS— 09/27/2007	2008		II	
10	Bangladesh	71.4	83.6	86.5	57			2006		II, III	
11	Philippines	50.3	81.3	85.2	86			2005		II	III
12	Turkey	73	80.9	83.3	302		CAS— 06/07/2007	2006		II	
13	Trinidad and Tobago	66.7	82.4	83.1	13		CAS— 07/01/2008	2008			

SL NO	COUNTRY	% OF TOTAL AREA AT RISK	% OF POPULATION IN AREAS AT RISK	% OF GDP IN AREAS AT RISK	GDP IN US\$ BILLIONS	POVERTY REDUCTION STRATEGY PAPER—BOARD DATE	COUNTRY ASSISTANCE STRATEGY—BOARD PRESENTATION DATE	UNDAF - VIEW BY HARMONIZED CYCLE YEAR (CCA/UNDAF YEAR IS 2 YEARS PRIOR TO THE CYCLE)	FY 07-09	FY 08-10	FY 09-11
14	Antigua and Barbuda	53.4	80.4	80.4	1						
15	Barbados	79.9	79.9	79.9	1						
16	San Marino	66.7	55.3	73.1	1						
17	Ecuador	24.4	73.6	72.2	30		CAS— 06/07/2007	2007		II	
18	Mexico	15.9	68.2	71.1	676		CAS— 02/28/2008, Progress Report— 02/06/2007	2008			
19	Dominica	68.3	67	68.3	1	Progress Report— 06/26/2007					
20	Nicaragua	21.6	68.7	67.9	4	Progress Report— 04/19/2007	CAS— 09/13/2007	2008		II	
21	Chile	5.2	64.9	67.7	94		CAS— 02/27/2007	2008			
22	Iran, Islamic Rep. of	31.7	69.8	66.5	163		CAS (FY07 Joint IFC)— 06/14/2007	2005			
23	Venezuela, R. B. de	4.9	61.2	65.9	109		Interim CAS— 02/13/2007	2008			
24	Uzbekistan	9.3	65.6	65.5	12	PRSP— 12/10/2007	Interim Strategy Note— 07/27/2006	2005			

SL NO	COUNTRY	% OF TOTAL AREA AT RISK	% OF POPULATION IN AREAS AT RISK	% OF GDP IN AREAS AT RISK	GDP IN US\$ BILLIONS	POVERTY REDUCTION STRATEGY PAPER—BOARD DATE	COUNTRY ASSISTANCE STRATEGY—BOARD PRESENTATION DATE	UNDAF - VIEW BY HARMONIZED CYCLE YEAR (CCA/UNDAF YEAR IS 2 YEARS PRIOR TO THE CYCLE)	FY 07-09	FY 08-10	FY 09-11
25	St. Kitts and Nevis	0.01	52.8	64.9	1						
26	Jordan	13.7	64.9	64.7	11			2008			
27	Argentina	1.8	574	63.2	152						
28	South Africa	8.6	56.4	62.4	213		Country Partnership Strategy—01/18/2007	2007			
29	Tunisia	30.4	64.1	62.4	28		Progress Report—04/03/2007	2007			II
30	Indonesia	11.5	674	62.3	258		FY07-08 CAS Progress Report—10/05/2006	2006		II	
31	China	13.1	49.8	56.6	1,649			2006		II	
32	Honduras	19	56	56.5	7	Progress Report—02/01/2007	CAS - 11/07/2006	2007			
33	Haiti	44.4	47.9	56	4	Full PRSP—10/26/2007	Interim Strategy Note—01/25/2007			III	
34	Uruguay	3	55	55	13		Progress Report—05/31/2007	2007			
35	Peru	4	41.5	53.7	68		CAS—12/19/2006	2006		II	
36	Liechtenstein	53.9	45.9	53.6	1						

SL NO	COUNTRY	% OF TOTAL AREA AT RISK	% OF POPULATION IN AREAS AT RISK	% OF GDP IN AREAS AT RISK	GDP IN US\$ BILLIONS	POVERTY REDUCTION STRATEGY PAPER— BOARD DATE	COUNTRY ASSISTANCE STRATEGY— BOARD PRESENTATION DATE	UNDAF - VIEW BY HARMONIZED CYCLE YEAR (CCA/UNDAF YEAR IS 2 YEARS PRIOR TO THE CYCLE)	FY 07-09	FY 08-10	FY 09-11
37	Kyrgyz Republic	8.3	51.3	53.4	2		CAS— 04/19/2007	2005			II
38	Montserrat	50.3	50.3	50.3	1						
39	Romania	37.4	45.8	50.3	73			2005			
40	India	22.1	47.7	49.6	692		Progress Report— 03/13/2007	2008		II, III	
41	Algeria	3.1	49.3	48.3	85		CAS— 01/15/2008	2007		II	
42	Niue	48.1	48.1	48.1	1						
43	Cyprus	50.4	60.5	47.4	15						
44	Andorra	43.5	19.4	45	1						
45	Paraguay	2	45.6	42.9	7		Progress Report— 04/30/2007	2007			
46	Azerbaijan	15.6	42.3	42.4	9	PRSP— 03/15/2007	CAS— 12/07/2006	2005			
47	Pakistan	9	40.1	41.6	96	Progress Report— 03/29/2007		2004		II	
48	St. Vincent	41.6	41.6	41.6	1						
49	Georgia	4.4	40.5	41	5			2006			

SL NO	COUNTRY	% OF TOTAL AREA AT RISK	% OF POPULATION IN AREAS AT RISK	% OF GDP IN AREAS AT RISK	GDP IN US\$ BILLIONS	POVERTY REDUCTION STRATEGY PAPER—BOARD DATE	COUNTRY ASSISTANCE STRATEGY—BOARD PRESENTATION DATE	UNDAF - VIEW BY HARMONIZED CYCLE YEAR (CCA/UNDAF YEAR IS 2 YEARS PRIOR TO THE CYCLE)	FY 07-09	FY 08-10	FY 09-11
50	Macedonia, FYR	38.8	29.6	38.7	5		CAS— 02/28/2007	2005			
51	Tajikistan	4.1	38.2	38.8	2	Progress Report/JSA 2— 02/22/2007		2005			
52	Bolivia	1	36.6	37.7	9		Interim Strategy Note— 11/21/2006	2008		II, III	
53	Mozambique	0.01	1.9	37.3	6	JSAN of PARPA 2— 12/19/2006	CAS— 03/20/2007	2007	II		
54	Djibouti	1.9	31.7	35.3	1			2008		III	II
55	Cambodia	9.1	31.3	34.5	5	PRSP— 03/01/2007	Progress Report— 05/30/2007	2006		II	
56	Morocco	3.4	30.4	33.4	50			2007			II
57	Bulgaria	29.3	31.6	30	24						
58	Nepal	80.2	97.4	30	7	Progress Report— 12/07/2006	Progress Report— 02/08/2007	2008	II		
59	Burundi	96.3	96.6	30	1	Full PRSP— 02/08/2007		2008			
60	Malawi	70.8	95.3	30	2	4th APR JSAN & PRSP II— 01/09/2007	CAS— 01/30/2007	2007	II		
61	Niger	14.4	76.4	30	3	Full PRSP 2— 07/12/2007	CAS— 02/27/2007	2004			II

SL NO	COUNTRY	% OF TOTAL AREA AT RISK	% OF POPULATION IN AREAS AT RISK	% OF GDP IN AREAS AT RISK	GDP IN US\$ BILLIONS	POVERTY REDUCTION STRATEGY PAPER—BOARD DATE	COUNTRY ASSISTANCE STRATEGY—BOARD PRESENTATION DATE	UNDAF - VIEW BY HARMONIZED CYCLE YEAR (CCA/UNDAF YEAR IS 2 YEARS PRIOR TO THE CYCLE)	FY 07-09	FY 08-10	FY 09-11
62	Ethiopia	29.9	69.3	-30	8	Full PRSP— 01/09/2007	CAS— 10/01/2007	2007		II, III	
63	Kenya	29	63.4	-30	16	Progress Report— 12/14/2006	CAS— 12/11/2007, Progress Report— 01/18/2007	2004		II, III	
64	Burkina Faso	35.1	61.7	-30	5	PRSP PR #6— 04/12/2007	Progress Report— 06/28/2007	2006			II
65	Bhutan	31.2	60.8	-30	1			2008			II
66	Madagascar	15.7	56	-30	4	Progress Report— 07/26/2006	CAS— 03/15/2007	2005		II, III	
67	Comoros	59	54.2	-30	1	Full PRSP— 01/08/2008	Interim Strategy Note— 12/14/2006	2008		II, III	
68	Tanzania	27.7	53.7	-30	11		CAS— 05/03/2007	2007			
69	Somalia	15.4	53.3	-30	1		Interim Strategy Note— 01/29/2008	2008			
70	Senegal	10.1	52.9	-30	8	Full PRSP— 01/30/2007	CAS— 03/15/2007	2007			II
71	Grenada	52.1	52.1	-30	1	Full PRSP— 07/03/2007					
72	Lesotho	52.4	50.5	-30	1			2008			
73	Afghanistan	7.2	46	-30	6			2006			

SL NO	COUNTRY	% OF TOTAL AREA AT RISK	% OF POPULATION IN AREAS AT RISK	% OF GDP IN AREAS AT RISK	GDP IN US\$ BILLIONS	POVERTY REDUCTION STRATEGY PAPER—BOARD DATE	COUNTRY ASSISTANCE STRATEGY—BOARD PRESENTATION DATE	UNDAF - VIEW BY HARMONIZED CYCLE YEAR (CCA/UNDAF YEAR IS 2 YEARS PRIOR TO THE CYCLE)	FY 07-09	FY 08-10	FY 09-11
74	Cameroon	9.2	42	-80	15		Interim Strategy Note—12/07/2006	2008			
75	Fiji	20	42	-80	3			2008			II
76	Togo	61.2	39.3	-80	2			2008			
77	Zimbabwe	10.1	39	-80	1		Interim Strategy Update—03/29/2007	2007			
78	Congo, Rep of	1.9	38.8	-80	1	PRSP—03/13/2008	Interim Strategy Note—01/23/2007	2008			
79	Benin	37.2	38.6	-80	4	PRSP II — 05/01/2007	Full CAS—08/30/2007	2004			
80	Belize	19.8	38.2	-80	1			2007			
81	Sierra Leone	13	35.7	-80	1	PRSP/ JSAN #1 — 12/21/2006	Progress Report—04/26/2007	2008			
82	Mali	2.9	29.6	-80	5	PRSP 2—03/29/2007	CAS—04/26/2007	2008			
83	Lebanon	19.2	29.2	-80	22			2008			
84	Uganda	27.5	26.6	-80	7	Progress Report—06/14/2006		2006			III

SL NO	COUNTRY	% OF TOTAL AREA AT RISK	% OF POPULATION IN AREAS AT RISK	% OF GDP IN AREAS AT RISK	GDP IN US\$ BILLIONS	POVERTY REDUCTION STRATEGY PAPER—BOARD DATE	COUNTRY ASSISTANCE STRATEGY—BOARD PRESENTATION DATE	UNDAF - VIEW BY HARMONIZED CYCLE YEAR (CCA/UNDAF YEAR IS 2 YEARS PRIOR TO THE CYCLE)	FY 07-09	FY 08-10	FY 09-11
85	Central African Republic					Full PRSP— 12/13/2007	Interim Strategy Note— 12/21/2006	2007			
86	Côte d'Ivoire					Full PRSP— 03/18/2008	Interim Strategy Note— 01/23/2007	2008			
87	Liberia					Interim PRSP— 05/22/2007	Interim Strategy Note— 03/29/2007, Progress Report— 01/08/2008	2008			
88	Myanmar									III	
89	West Bank and Gaza						WBG Assistance Strategy— 11/15/2006				
90	Angola					PRSP— 05/16/2007	Interim Strategy Note— 02/28/2007	2005			
91	Chad					PRSP Update— 12/13/2007	Progress Report— 12/13/2007	2006			
92	Congo, Dem. Rep. of					Full PRSP— 02/20/2007	CAS— 03/27/2007	2008			II
93	Eritrea					PRSP— 03/29/2007		2007			II
94	Guinea					Progress Report #2— 09/08/2006	Interim CAS— 05/31/2007	2007			

SL NO	COUNTRY	% OF TOTAL AREA AT RISK	% OF POPULATION IN AREAS AT RISK	% OF GDP IN AREAS AT RISK	GDP IN US\$ BILLIONS	POVERTY REDUCTION STRATEGY PAPER—BOARD DATE	COUNTRY ASSISTANCE STRATEGY—BOARD PRESENTATION DATE	UNDAF - VIEW BY HARMONIZED CYCLE YEAR (CCA/UNDAF YEAR IS 2 YEARS PRIOR TO THE CYCLE)	FY 07-09	FY 08-10	FY 09-11
95	Guinea-Bissau					Full PRSP/General Economic Work—02/01/2007	Interim Strategy Note—02/01/2007	2008			
96	Kosovo						(First) CAS—12/10/2007				
97	Lao, PDR					PRSP-NSEDP 2006-2010—04/26/2007	Progress Report—05/30/2007	2007		II, III	
98	Solomon Islands									II	III
99	Sudan					I PRSP—02/01/2007	Interim Strategy Note—02/01/2007	2008			
100	Timor-Leste									II	III
101	Tonga										
102	Gambia, The						CAS—06/26/2007	2007			
103	Mauritania					Progress Report—09/13/2007, Full PRSP #2—01/16/2007	CAS—03/08/2007				
104	Nigeria						Progress Report—03/27/2007				

SL NO	COUNTRY	% OF TOTAL AREA AT RISK	% OF POPULATION IN AREAS AT RISK	% OF GDP IN AREAS AT RISK	GDP IN US\$ BILLIONS	POVERTY REDUCTION STRATEGY PAPER—BOARD DATE	COUNTRY ASSISTANCE STRATEGY—BOARD PRESENTATION DATE	UNDAF - VIEW BY HARMONIZED CYCLE YEAR (CCA/UNDAF YEAR IS 2 YEARS PRIOR TO THE CYCLE)	FY 07-09	FY 08-10	FY 09-11
105	Papua New Guinea						CAS— 05/24/2007	2008		II	III
106	São Tomé and Príncipe					Progress Report— 08/08/2007		2007			
107	Vanuatu				6102					II	
108	Cape Verde					Progress Report— 07/24/2006	Progress Report— 05/03/2007	2006			
109	Equatorial Guinea						Interim Strategy Note— 12/03/2007	2008			
110	Gabon							2007			
111	Mauritius						Country Partnership Strategy— 11/02/2006				
112	Seychelles									II	
113	Swaziland						Country Dialogue— 07/01/2009	2006			II
114	Brunei										
115	Kiribati										II

SL NO	COUNTRY	% OF TOTAL AREA AT RISK	% OF POPULATION IN AREAS AT RISK	% OF GDP IN AREAS AT RISK	GDP IN US\$ BILLIONS	POVERTY REDUCTION STRATEGY PAPER—BOARD DATE	COUNTRY ASSISTANCE STRATEGY—BOARD PRESENTATION DATE	UNDAF - VIEW BY HARMONIZED CYCLE YEAR (CCA/UNDAF YEAR IS 2 YEARS PRIOR TO THE CYCLE)	FY 07-09	FY 08-10	FY 09-11
116	Marshall Islands										II
117	Micronesia, Federated States of										
118	Palau										
119	Samoa							2008			
120	Tuvalu										
121	Bahamas, The										
122	Guyana					Progress Report—06/19/2007		2006			
123	St. Lucia										
124	St. Vincent and the Grenadines										
125	Suriname							2008			
126	Bahrain										
127	Estonia										
128	Maldives					JSA/PRSP—03/13/2007	CAS—08/14/2007	2008			II

SL NO	COUNTRY	% OF TOTAL AREA AT RISK	% OF POPULATION IN AREAS AT RISK	% OF GDP IN AREAS AT RISK	GDP IN US\$ BILLIONS	POVERTY REDUCTION STRATEGY PAPER—BOARD DATE	COUNTRY ASSISTANCE STRATEGY—BOARD PRESENTATION DATE	UNDAF - VIEW BY HARMONIZED CYCLE YEAR (CCA/UNDAF YEAR IS 2 YEARS PRIOR TO THE CYCLE)	FY 07-09	FY 08-10	FY 09-11
129	Malta										
130	Qatar										
131	Cook Islands										
132	Nauru										
133	Rwanda								II		III
134	Panama										II
135	Yemen, Rep. of								II, III		
136	Armenia										II
137	Sri Lanka								II		



Abbreviations

ASEAN	Association of Southeast Asian Nations
BNGRC	National Bureau for Management of Risks and Disasters (Madagascar)
CAPRA	Center for Probabilistic Risk Assessment (Central America)
CAS	Country Assistance Strategy
CPGU	Unit for Prevention and Management of Disasters (Madagascar)
CRIF	Catastrophe Risk Insurance Facility (Central Europe)
DaLa	Damage and Loss Assessment
FAO	Food and Agriculture Organization
GDP	Gross domestic product
GFDRR	Global Facility for Disaster Reduction and Recovery
HFA	Hyogo Framework for Action
ISDR	International Strategy for Disaster Reduction
MDGs	Millennium Development Goals
NAIS	National Agricultural Insurance Scheme (India)
NGO	Nongovernmental organization
NSET	National Society for Earthquake Technology (Nepal)
PRSP	Poverty Reduction Strategy Paper
RBMS	Risk-based Management System
SRFF	Standby Recovery Financing Facility
UN	United Nations
UNDP	United Nations Development Programme
UNESCO	United Nations Education, Scientific, and Cultural Organization
VTI	Vulnerability Tracking Initiative

All currency is in U.S. dollars (\$) unless otherwise noted.



Design: Patricia Hord.Graphik Design
Printing: Professional Graphics Printing Co.
December 2008

Photography credits: cover, 29, 38, 44, 51 © Curt Carnemark/World Bank; 7, 18, 63, 64, 73, 74, 92, 95 © Michael Foley/World Bank; 8 © ASEAN; 9, 15, 67 © GFDRR; 10 © Yosef Hader/World Bank; 10 © Steve Harris/World Bank; iv, 3, 5, 19, 40, 54, 59, 70, 79 © Arne Hoel/World Bank; 28 © Tran Thi Hoa/World Bank.

Global Facility for Disaster Reduction and Recovery
GFDRR Secretariat

1818 H Street NW
Washington, DC 20433, USA

T 202 458 0268
F 202 522 3227
E drm@worldbank.org

www.gfdr.org

