World Reconstruction Conference 2

RESILIENT RECOVERY:

An Imperative for Sustainable Development

Washington, D.C. • September 10–12, 2014

In Partnership With

GFDRR
Global Facility for Disaster Reduction and Recovery

UNDP

WORLD BANK GROUP

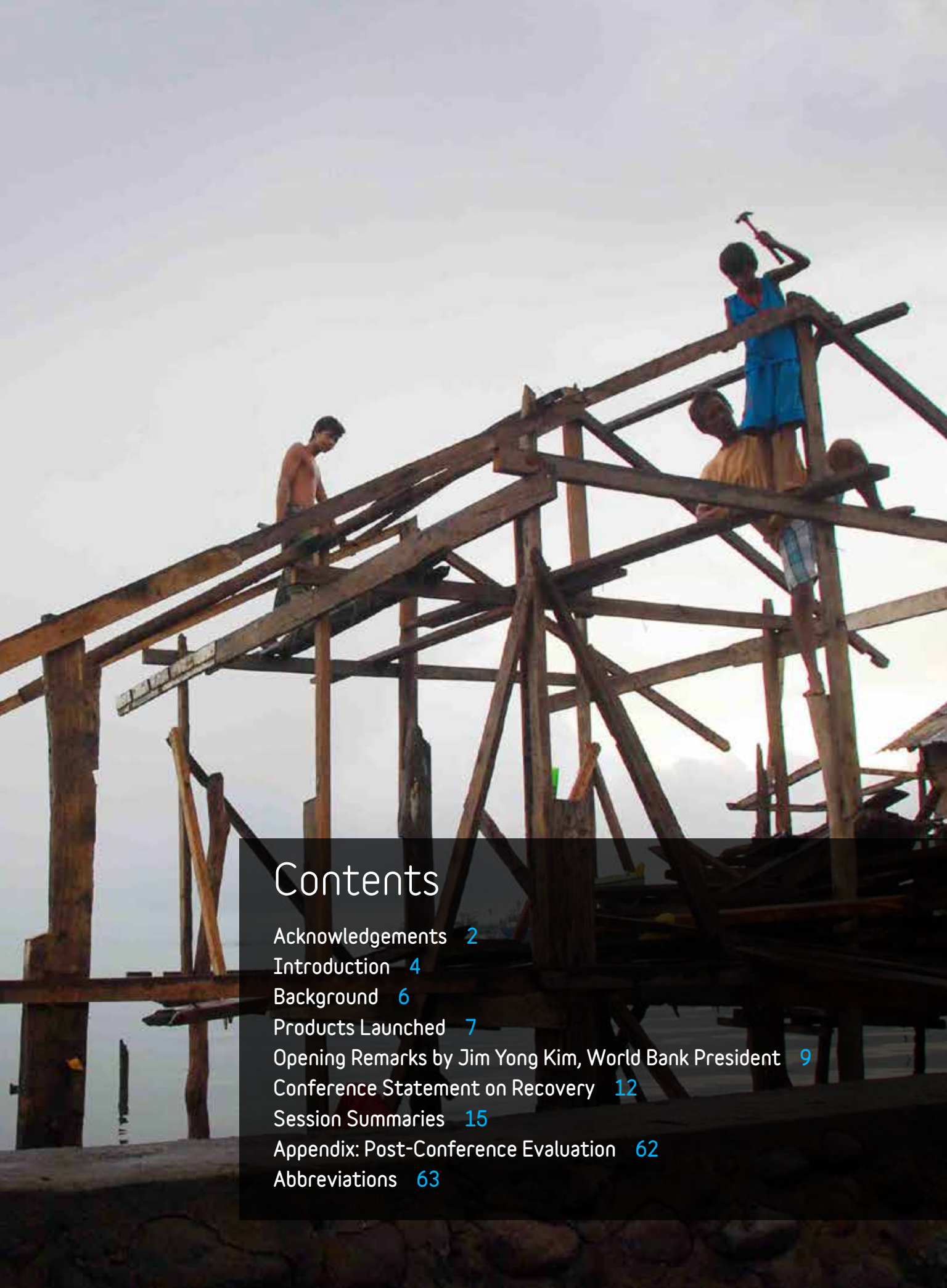
The International Bank for Reconstruction
and Development
The World Bank Group
1818 H Street, NW
Washington, D.C. 20433, USA

July 2015

Note: all figures shown in U.S. dollars

gfdrr.org/wrc2
#ResilientRecovery

Design: miki@ultradesigns.com



Contents

Acknowledgements 2
Introduction 4
Background 6
Products Launched 7
Opening Remarks by Jim Yong Kim, World Bank President 9
Conference Statement on Recovery 12
Session Summaries 15
Appendix: Post-Conference Evaluation 62
Abbreviations 63

Acknowledgements

The second World Reconstruction Conference was jointly organized by the Global Facility for Disaster Reduction and Recovery, the European Union, the United Nations Development Programme (UNDP), and the World Bank Group.

We would like to thank our contributing partners from the public sector, private sector, civil society, academic institutions, and multilateral organizations, including 100 Resilient Cities (Rockefeller Foundation); American Red Cross; Bullock & Haddow LLC; Caribbean Disaster Emergency Management Agency; Centro de Coordinación para la Prevención de los Desastres Naturales en América Central (CEPREDENAC); Cordaid; Devex; Enlightened Myanmar Research; Enviroplus+; European Investment Bank; Global Network of Civil Society Organizations for Disaster Reduction; Habitat for Humanity International; Ibasho; InterAction; International Federation of Red Cross and Red Crescent Societies; International Recovery Platform; Japan International Cooperation Agency (JICA); Kansai University; Kobe University; McKinsey and Company; Microsoft Corporation; Miyamoto International Inc.; The Nature Conservancy; Norwegian University of Science and Technology; Organization of Islamic Cooperation; PricewaterhouseCoopers LLC; Queensland Reconstruction Authority; Swiss Re; Texas A&M University; Tohoku University; University of North Carolina; United Nations Environment Programme (UNEP); United Nations Office for Disaster Risk Reduction (UNISDR); United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA); United Nations Office for Project Services (UNOPS); United States Agency for International Development (USAID); United States Environmental Protection Agency; United States Federal Emergency Management Agency (FEMA); University of California,

Berkeley; and World Habitat Research Centre.

We are grateful to our panelists, speakers, and presenters who represented local and national governments from around the world, including Australia, Bangladesh, Chile, Croatia, El Salvador, Ethiopia, Guatemala, Haiti, India, Indonesia, Ireland, Japan, the Kyrgyz Republic, the Lao People's Democratic Republic (PDR), Malawi, Mexico, Mozambique, Norway, Pakistan, the Philippines, Saint Lucia, Senegal, Serbia, Uganda, United Kingdom, United States, and Yemen.

We would also like to thank the leadership and guidance of Jim Yong Kim, Rachel Kyte, Ede Jorge Ijjasz-Vasquez, James Close, and Marisela Montoliu Munoz.

Finally, the Word Bank core team deserves special thanks for their support in organizing the sessions and conference logistics: Tahir Akbar, Sajid Anwar, Joy Aoun, Margaret Arnold, Raja Rehan Arshad, Regianne Bertolassi, Edouard Blanchet, Yuri Borovsky, Alessandro Caillat, Lauren Caldwell, Manuela Chiapparino, Jaeeun Chung, Saurabh Dani, Beth Elliott, Sara Holmberg, Ana Campos Garcia, Hope Gerochi, Francis Ghesquiere, Hemang Karelia, Jolanta Kryspin-Watson, Josef Leitmann, Jared Mercadante, Katie Moss, Katsuhito Miyake, James Newman, Reiko Niimi, Ayaz Parvez, Priscilla Phelps, Christoph Pusch, Shaela Rahman, Natalia Rodriguez, Hamzah Saif, Darya Seraj, Pushparani Simon, Deepak Singh, Prashant Singh, Jochen Stange, Joaquin Toro, Tariro Tserayi, Kim Van Nguyen, Gaetano Vivo, Jon Walton, Andrea Zanon, and all support staff who helped with the WRC2.

Introduction

In September 2014, the Global Facility for Disaster Reduction and Recovery (GFDRR) hosted the second World Reconstruction Conference, in partnership with the European Union, the United Nations Development Programme (UNDP), and the World Bank Group.

During the three-day conference in Washington, D.C., more than 500 participants from over 60 countries explored innovative approaches for restoring lives, livelihoods, and assets that are more resilient to future natural hazards .

Resilient recovery can help elude the cycle of poverty and impaired development that so often accompanies disasters. Yet many countries delay their planning for recovery until after a disaster strikes, and in doing so, they are more likely to face resource and expertise constraints, or struggle to coordinate roles and responsibilities among a range of actors.

To help countries plan for a recovery that is efficient and effective, GFDRR and its partners launched early editions of knowledge products—the Post-Disaster Needs Assessment Guide, Disaster Recovery Framework Guide, and nine country case studies—that will help countries to finance, manage, and monitor the post-disaster recovery process.

From sessions on housing recovery and conflict situations to empowering women and communities, a wide breadth of expertise was represented at the conference. Throughout these sessions, several key findings emerged, which will help inform future government-led recovery and reconstruction efforts:

- Post-disaster recovery strategies must be linked to poverty alleviation and livelihood recovery activities, as well as to long-term development goals.
- Establishing recovery policies, standards, and institutional arrangements *before* disaster strikes can help ensure

2014 Bosnia and Herzegovina floods. Credit: EC/ECHO/EEAS/EU Delegation BiH

recovery is managed more efficiently and effectively.

- Recovery should be inclusive and coordinated, with established roles laid out at all levels of government, the private sector, and civil society.
- Building capacity within governments, civil society, and the private sector to conduct post-disaster needs assessments and prepare recovery frameworks will facilitate resilient recovery, contributing to long-term sustainable development.

At the conference's conclusion, 37 governments, parliamentarians, international agencies, nongovernmental organizations (NGOs), and civil society organizations issued a statement in support of strengthening resilient recovery in the post-2015 framework for disaster risk reduction, the successor agreement to the Hyogo Framework for Action (HFA). The joint statement illustrated the broad international consensus in favor of recognizing the recovery process as an opportunity for building back more resilient communities.

We would like to thank the panelists, moderators, and hundreds of participants from around the world for contributing to this dialogue, and helping to protect future generations from the devastation of disasters.

For additional information on WRC2, including the conference's impact on the Sendai Framework for Disaster Risk Reduction and ongoing resilient recovery efforts, please visit: www.gfdrr.org/wrc2.

Background

The first World Reconstruction Conference was held in Geneva, Switzerland, in 2011. It was organized by the World Bank Group, GFDRR, and the United Nations Office for Disaster Risk Reduction (UNISDR). The conference concluded with an agreement to move forward with a framework for international cooperation in post-disaster recovery and reconstruction.

The second World Reconstruction Conference delivered on this commitment with the launch of comprehensive guides for post-disaster needs assessments and disaster recovery frameworks, jointly developed by the European Union, GFDRR, UNDP, and the World Bank Group. Furthermore, a joint statement released at the conference, titled, "Strengthen Resilient Recovery and Reconstruction in the Post-2015 Framework for Disaster Risk Reduction," served as an input to deliberations at the Third UN World Conference on Disaster Risk Reduction, held in Sendai, Japan, in March 2015.

Organized in Partnership by:

GFDRR
Global Facility for Disaster Reduction and Recovery

UNDP

WORLD BANK GROUP

At a Glance:

3
days in Washington, D.C.

more than
60
countries represented

more than
500
attendees

2
TECHNICAL ORIENTATIONS

5
PLENARIES

1
SPEAKER SERIES

18
SESSIONS

Products Launched

The conference served as a platform to launch early editions of the *Post-Disaster Needs Assessment* and the *Disaster Recovery Framework Guides*. These products were jointly developed by GFDRR, the European Union, UNDP, and the World Bank Group, and provide governments a means of planning and executing recovery programs that contribute to long-term sustainable development.

In addition, the conference served as the launch for, "Learning from Megadisasters: Lessons Learned from the Great East Japan Earthquake and Tsunami."

Post-Disaster Needs Assessment Guide

This product provides detailed guidance on conducting comprehensive post-disaster needs assessments that allow affected governments and their partners to channel appropriate levels of funding based on needs for recovery and reconstruction.

Disaster Recovery Framework Guide

The *Disaster Recovery Framework Guide* builds on the findings of post-disaster needs assessments to assist governments in appropriately planning and financing recovery programs in a prioritized manner to ensure a resilient recovery process.

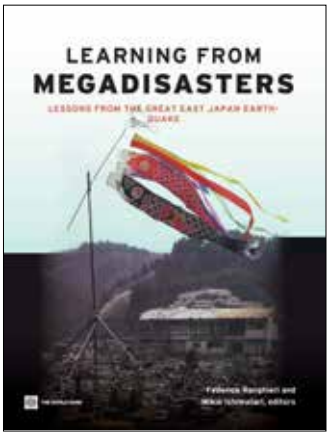
Disaster Recovery Case Studies

The *Disaster Recovery Framework Guide* draws on the combined efforts of GFDRR, the European Union, UNDP, and the World Bank Group to document country experiences in post-disaster recovery. These case studies, capturing post-disaster recovery experiences from nine countries in three continents, were also launched at the conference. The countries include:

- Bangladesh
- Haiti
- Indonesia
- Lao PDR
- Mozambique
- Pakistan
- The Philippines
- Senegal
- Yemen

Learning from Megadisasters

This book was published by the government of Japan, GFDRR, and the World Bank and provides data, analysis, and insight on achievements and challenges following the March 2011 earthquake and tsunami.




World

Opening Remarks by Jim Yong Kim, President, World Bank Group

Good morning and welcome. It's so great to see so many of you here at the second World Reconstruction Conference. I especially want to thank those of you who have helped create and support the program ahead of all of you today, including the European Union and the United Nations Development Programme.

Witnessing the Disaster in Sendai, Japan

You all know about the devastating impact of disasters both in developing and in developed countries.

Even in some of the best-prepared countries in the world, the impact can be staggering. I had the opportunity to visit Sendai during the annual meetings that were held in Tokyo, and we know that the Great East Japan Earthquake and Tsunami of 2011 claimed nearly 20,000 lives and caused more than $230 billion in damages. That's nearly 4 percent of Japan's GDP.

It was quite an experience going to Sendai because as you drove through the city, the really extraordinary thing was that the buildings were all still standing. In other words, they had a level of preparedness that allowed the buildings to stand. But then when we went to the area near the coast, we were on top of the hill, 40 feet high, and the water had gotten to that point.

So I want to especially thank today the Japanese government, that in the midst of that awful tragedy, they made a deep and abiding commitment to helping with all these efforts in disaster risk management, and this is a topic of conversation for me every time I meet with the prime minister or every time I meet with the deputy

prime minister. This is something that they are committed to, and I know that all of you here are committed to that, as well.

Disasters as a Growing Trend

As bad as it was in Japan, we know that it's the developing countries that suffer the most from disasters: more than three-fourths of global fatalities occur in developing countries, with almost half concentrated in low-income countries.

Over the past 30 years, economic losses have totaled $1.2 trillion in low- and middle-income countries, and that's equivalent to one-third of all development assistance over that same time frame.

These trends are bound to get worse in the future:

- Three-quarters of all disaster losses over the past 30 years were caused by extreme weather events. With climate change, these disasters will grow in intensity, frequency, and also in destructive potential.

- Ninety percent of urban growth through 2050 will take place in developing countries, with hundreds of millions of people moving into the cities in search of jobs and opportunities. This concentration of people and assets in risky areas will only worsen existing vulnerabilities.

It's here, at the intersection of climate change, population growth, and rapid urbanization, that communities are most vulnerable.

Implications for Poverty Reduction

Both in developing countries and in the developed world, the poor are most affected and least able to cope. They live in marginal or exposed lands, and the poor are hit by recurrent disasters that have crippling effects on their livelihoods, their ability to recover, and on economic and human development in the long term.

We know that 75 percent of people in developing countries live on less than four dollars a day. They risk dropping into extreme poverty when faced with shocks like disasters.

The implications for poverty reduction are clear. Disasters and climate change fundamentally threaten the core mission of our institution: to end extreme poverty and to build and boost shared prosperity.

Resilient Recovery and Reconstruction

As most of you know, the World Bank Group was created as the International Bank for Reconstruction and Development to help countries rebuild after World War II. So reconstruction has always been at the very heart of our mission.

We have continued funding large-scale reconstruction projects, but increasingly, we've been faced with devastation caused by natural disasters. So over the years, we have gradually shifted our focus toward addressing the root causes of disasters—toward building resilience and reducing the impact of disasters before they strike.

But disasters will continue to strike, and in their wake we have the chance to move in a new direction toward resilient recovery and reconstruction. The aftermath of a disaster is a critical and delicate moment, where the right policies and decisions can turn adversity into opportunity. We can rebuild communities better and use the recovery and reconstruction processes to embed resilience in the affected communities to build back better.

A few months ago in the Philippines, I met with communities that were hardest hit by Typhoon Yolanda. And I asked them, "What does it mean to you when President Aquino says 'We can build back better'?"

The people of the community in Tacloban told me that they wanted to rebuild their homes, and more than anything else, they wanted to regenerate their livelihoods, they wanted to get back to doing what they had been doing back before, and use the disaster as an opportunity to move toward greater prosperity, better jobs, and more productivity from their agricultural activities.

They were asking the government not just to rebuild infrastructure

and restore services. They were also asking them to provide safer infrastructure and more modern, reliable, and inclusive service delivery.

The international community, of course, has an important role to play to support the government in these efforts.

Over the years, we have seen countless examples of "building back better" in action—and I know you will discuss many of these over the next few days.

Building back better can mean better integration of risk considerations in a country's planning processes.

Consider, for example, the Indian state of Odisha. After a cyclone killed 10,000 people in 1999, the local government built an early warning system and a network of emergency roads, cyclone shelters, and coastal embankments.

When Cyclone Phailin hit the same stretch of coast in 2013, over 900,000 people were evacuated and just 40 people compared to 10,000 died in that storm.

Building back better is not only about the end result, but also about the way to get there. After Pakistan's 2005 earthquake, the government sponsored a massive reconstruction effort that used technical support and a subsidies program to directly engage households in the reconstruction of their own homes. About 400,000 homes were rebuilt—90 percent of them meeting earthquake-resistant standards.

The example of Pakistan shows how building back better is both about the quantity and quality of new building stock, and about *how* the process is carried out. By engaging the local government and affected communities, the reconstruction process can strengthen social capital and capacity, as well as modernize and improve service delivery.

Building Capacity for Resilient Recovery

But in spite of the clear evidence that recovery and reconstruction are golden opportunities to build future resilience, there is still work to do.

Many countries still lack predictable systems to ensure resilient recovery and reconstruction.

Even though individuals may have an innate ability to recover, governments have a responsibility to facilitate that natural process. And it is often governments who bear most of the costs of emergency relief, recovery, and reconstruction efforts.

So here at the World Bank Group, we believe that helping governments manage their contingent liability—the price tag of disasters, if you will—can improve the predictability of available resources. This is a crucial step to institutionalizing resilient recovery.

Today, together with the European Union and UNDP, we will release the *Disaster Recovery Framework Guide*. This is a collection of case studies that will help countries plan efficient, effective, and resilient post-disaster recovery.

From Pakistan to Senegal, from Yemen to Indonesia, these case studies are practical examples of how countries have managed to turn adversity into opportunity.

Resilience must be integrated into our development work, especially at humanitarian and development organizations and multi-lateral development banks. We need to adapt development lending investments in analytic tools and planning processes to reflect this understanding. Thank you very much for being here, thank for being committed to this particular effort around reconstruction and resilience, and I wish you the best of luck in your discussions today.

The implications for poverty reduction are clear. Disasters and climate change fundamentally threaten the core mission of our institution: to end extreme poverty and to build and boost shared prosperity.

Conference Statement on Recovery

"Strengthen Resilient Recovery and Reconstruction in the Post-2015 Framework for Disaster Risk Reduction"

Preamble

The growing incidence of high-impact disasters has made countries recognize the importance of building long-term disaster resilience. Such recognition stems from the experience of post-disaster recovery which several countries have implemented in the aftermath of a disaster. Governments, parliamentarians, and other stakeholders such as international agencies, NGOs, and civil society view recovery as an important context for introducing several measures which not just restore their lives, homes, and livelihoods, but build them more resilient. Though recovery was not explicitly included in the Hyogo Framework for Action, the financial and technical resources allocated for recovery across the world has placed it on the agenda for building resilience.

Going forward in the post-2015 framework for Disaster Risk Reduction, recovery must be viewed as part of a continuum, inseparable from preparedness, response, mitigation, and sustainable development. It is important to acknowledge the critical role that recovery can play in seizing opportunities that arise through the adversity of disasters and steering countries toward a state of greater resilience. The post-2015 framework for disaster risk reduction should, therefore, actively promote the institutionalization of recovery as a means to risk reduction and sustainable development, and better define and measure outcomes such as resilient recovery and "build back better."

Goal

Advance consensus, nationally and internationally, on the critical role of resilient recovery for sustainable development and poverty reduction.

Conference Statement:

We, the participants of the Second World Reconstruction Conference from 36 governments and countries, parliamentarians, civil society organizations, academia, UN agencies, regional organizations, and the World Bank Group, bringing expertise and knowledge from all regions of the world, have met in Washington, D.C., from 10-12 September 2014. We support to further the actions below to include and strengthen resilient recovery and reconstruction in the post-2015 framework for disaster risk reduction, which will be deliberated and finalized through the Third UN World Conference on Disaster Risk Reduction in Sendai, Japan, in March 2015:

1. Promote and ensure efficient, inclusive, and effective recovery and reconstruction interventions and measures through the institutionalization of post-disaster needs assessments and recovery

frameworks across regions and all levels of government. This would enhance risk governance, strengthen coordination, and empower communities and marginalized groups.

2. Provision for sufficient financial reserves and resources within government to manage and respond to disasters triggered by natural hazards, and formalized strategic and resource commitments towards equitable recovery planning, implementation, and performance management; promoting more dependable and predictable international financial mechanisms for financing recovery.

3. Strengthening mechanisms for cooperation with services in areas of recovery and reconstruction that include standardized approaches for post-disaster needs assessments and recovery planning frameworks, and other support services such as sharing of information, databases and rosters of experts, best practices, capacity building, tools, bilateral, regional and multilateral support to countries, and progress monitoring.

4. Strengthening readiness and capacity for recovery planning, implementation, and monitoring across regions and all levels of government, and establishing clear roles and responsibilities for all actors in a recovery setting.

Consider further consultations in the development of a "Draft Voluntary Commitment in Support of Recovery and Reconstruction in the Post-2015 Framework for Disaster Risk Reduction" (Annex I) at Second Preparatory Committee Meeting and the Third UN World Conference for Disaster Risk Reduction, and other events ahead of the Third UN World Conference for Disaster Risk Reduction to be held in Sendai, Japan, in March 2015.

Drafting Participants

Australia, Asia Dalit Rights Forum, Bangladesh, Chile, Centro de Coordinación para la Prevención de los Desastres Naturales en América Central (CEPREDENAC), Costa Rica, El Salvador, Global Facility for Disaster Reduction and Recovery/World Bank Group, Global Network for Disaster Reduction, Grameen Development Society, Guatemala, Haiti, Honduras, Indonesia, InterAction, International Recovery Platform, Japan, Kyrgyz Republic, Lao PDR, Malawi, Mexico, Madagascar, Mozambique, Nepal, Nepal National Dalit Social Welfare Organization, Nicaragua, Organization of Islamic Cooperation, Panama, Philippines, Senegal, Tajikistan, Uganda, Yemen, and United Nations Development Programme.

Session Summaries

Political Economy of Recovery: Why resilient recovery is an imperative for the development agenda

"Disasters will continue to strike, and in their wake we have the chance to move in a new direction toward resilient recovery and reconstruction. The aftermath of a disaster is a critical and delicate moment where the right policies and decisions can turn adversity into opportunity."

—**Jim Yong Kim**, President, World Bank Group

Why is resilient recovery an imperative for the development agenda? Human settlements are constructed over a period of decades, or even centuries, yet can be destroyed by a disaster in mere seconds. Post-disaster reconstruction offers a unique opportunity to "build back better" by investing in infrastructure, housing, and other capacities that help communities better withstand shocks from natural hazards. This process of building resilience against future hazards during the recovery process is commonly referred to as "resilient recovery."

However, there is a gap between the research and practice in investing in resilient post-disaster recovery, panelists noted. Recovery is chronically underfunded, as it can be difficult for stakeholders to look beyond immediate emergency needs and invest in longer-term sustainable development measures.

Recommendations

A clear vision for resilient recovery must be established and ready as soon as the post-disaster response begins to ensure that resources and efforts will be aligned around a common goal. The international community, and particularly multilateral development banks, play an important role in responding to the growing country demand for investment in the recovery process—but also for investment in preparedness, risk-screening in project portfolios, prioritizing vulnerable countries and regions, and sharing knowledge and experience.

Panelists noted that investments in disaster preparedness have significant positive rates of return. For example, a study of 5,500 disaster risk mitigation grants by the U.S. Federal Emergency Management Agency (FEMA) found an average benefit-to-cost ratio of four to one. Anecdotal evidence speaks to the efficacy of preparedness: even with disasters occurring at a greater frequency, disaster-related fatalities (as a percentage of the total population) have declined over the past 30 years, according to a report by the Overseas Development Institute.

Finally, community involvement in recovery preparedness, planning, and implementation is central to boosting the effectiveness and sustainability of the recovery process, and has been proven to reduce costs. To fully realize these benefits, the recovery process must better address the needs and participation of vulnerable populations (the elderly, women and children, the disabled, and minorities) in the recovery process.

Opening Plenary

Opening Remarks: **Jim Yong Kim**, *President, World Bank Group*

Moderator: **Kathleen Koch**, *Author and Former CNN journalist*

Panelists

- **Kubatbek Boronov**, *Minister of Emergency Situations and State Secretary, Kyrgyz Republic*
- **Gina Casar**, *Under-Secretary-General and Associate Administrator, UNDP*
- **Rachel Kyte**, *Vice President and Special Envoy for Climate Change, World Bank Group*
- **David Meltzer**, *Chief International Officer and General Counsel, American Red Cross*
- **Kiren Rijiju**, *Minister of State for Home Affairs, India*

David Meltzer *Chief International Officer and General Counsel, American Red Cross,* and Gina Casar, *Under-Secretary-General and Associate Administrator, UNDP.*

Rachel Kyte, *Vice President and Special Envoy for Climate Change, World Bank Group.*

Guiding a Post-Disaster Needs Assessments and Disaster Recovery Framework: Knowledge products for disaster assessment and recovery planning

Panelists display newly launched Post-Disaster Needs Assessment and Disaster Recovery Framework Guides.

"In the immediate aftermath of natural disasters, assessing damage and needs and developing a recovery strategy must be done very quickly, and under difficult conditions. […] We have worked with the widest spectrum of partners to develop common tools, training, and evaluation methodologies. We have tested them on the ground, and improved them with the experience of supporting governments."

—**Antonio De Lecea**, Minister and Principal Advisor for Economic and Financial Affairs, European Union

In the aftermath of a disaster, a hasty response often leads to complications down the road, according to UNDP Associate Administrator Gina Casar. When multiple actors undertake simultaneous post-disaster assessments, their findings are often confusing, if not contradictory.

In response to this challenge, the European Commission, UNDP, and the World Bank Group signed a joint declaration of post-crisis cooperation in 2008. Through this agreement, the three institutions committed to unifying their efforts behind a single, government-led needs assessment and recovery process. At the second World Reconstruction Conference, the three organizations delivered upon their commitment with the launch of conference editions of the *Post-Disaster Needs Assessment* and *Disaster Recovery Framework Guides*.

Knowledge Products

The *Post-Disaster Needs Assessment Guide* will help governments to systematically document the damages and losses caused by a disaster, identify priority needs, and determine the overall cost of recovery and reconstruction. This process helps governments and the international community to plan the necessary resources for the reconstruction effort.

The *Disaster Risk Framework Guide* is a complementary tool that assists governments in appropriately planning and financing recovery programs in a prioritized manner to ensure a resilient recovery process. It draws from recovery experiences in nine countries: Bangladesh, Haiti, Indonesia, Lao PDR, Mozambique, Pakistan, the Philippines, Senegal, and the Republic of Yemen.

Recommendations

"We have learned that for the assessment to be effective and for the recovery framework to be sufficiently prioritized, the entire process must be led and owned by national and local governments," Casar said during the launch event. "Our partners must work to complement, rather than supplant, national strategies for recovery."

Furthermore, panelists emphasized that recovery must focus on the well-being of communities and individuals by protecting lives and livelihoods. While assessing damage to critical infrastructure and economic losses is vital to reconstruction, this alone is not enough to help individuals improve their lives and escape poverty. Access to basic services, as well as inclusive and accountable governance systems, must be included in early and long-term recovery planning.

Finally, recovery efforts must address the underlying causes of disaster-related losses—such as the location of homes in high-risk areas, or insufficient early warning systems—to ensure that preexisting vulnerabilities are not replicated. Knowledge products that catalogue global experiences in post-disaster recovery can help policy makers, practitioners, and donors to develop well-planned recovery efforts that reduce vulnerability to future hazards.

Featured Event

Moderator: Kathleen Koch, *Author and Former CNN Journalist*

Panelists

- Patricia Avila, *Technical Secretariat of the Presidency, El Salvador*
- Gina Casar, *Under-Secretary-General and Associate Administrator, UNDP*
- Antonio De Lecea, *Minister and Principal Advisor for Economic and Financial Affairs, European Union*
- Ede Jorge Ijjasz-Vasquez, *Senior Director, Global Practice—Social, Urban, Rural, and Resilience (GP-SURR),World Bank Group*
- Graeme Newton, *Chief Executive Officer, Queensland Reconstruction Authority, Australia*
- Marcus Oxley, *Executive Director, Global Network of Civil Society Organisations for Disaster Reduction*
- Dody Ruswandi, *Secretary General, National Disaster Management Agency (BNPB), Indonesia*

Learning from Country Experiences in Disaster Recovery: Sharing lessons from around the world

Representatives from Bangladesh, Haiti, Indonesia, Lao PDR, Mozambique, Pakistan, the Philippines, Senegal, and the Republic of Yemen display case studies on post-disaster recovery in their respective countries.

"After the [2005 Kashmir] earthquake, we built back better in impacted areas. So when the floods of 2010 struck, areas where we had built back better fared far better than the areas where we had done no rebuilding, where the communities were not prepared, where the early warning systems were not effective, and where the buildings were not resilient. So when you build back better, and invest money in efficient and effective recovery, it saves a lot of capital expenditures in subsequent disasters."

—**General Nadeem Ahmed**, retired, Former Chairman, National Disaster Management Authority, Pakistan

In support of the *Disaster Recovery Framework Guide*, GFDRR, the European Union, UNDP, and the World Bank Group commissioned several country case studies—led by national governments—to better understand the distinct phases of the recovery process. First, how do countries plan for disaster recovery? Second, what policies, institutions, and mechanisms have been used to implement and monitor recovery? Finally, how can countries translate the gains of resilient recovery into longer-term risk reduction and resilient development?

Representatives from Bangladesh, Haiti, Indonesia, Lao PDR, Mozambique, Pakistan, the Philippines, Senegal, and the Republic of Yemen spoke about post-disaster recovery in their countries. The variety of experiences suggested that there is no single path toward recovery. However, despite different types of natural disasters and varying political and economic circumstances, the case studies demonstrated a similarity in terms of principles, institutional options, and mechanisms. By learning from these shared experiences, countries can better prepare for an efficient and effective recovery process.

Key Findings

Successful cases of disaster recovery share several principles. First, in order to translate disaster recovery into sustainable development, post-disaster recovery strategies must be linked to poverty alleviation and livelihood recovery efforts, as well as long-term development goals.

Second, by establishing policies, standards, and institutional arrangements for managing recovery *before* a disaster strikes, countries can help ensure a more efficient and effective recovery process. Panelists noted that recovery programs often face a tradeoff between speed and resilience, and that investing in readiness is an important step for addressing this tension.

Third, recovery should be inclusive and coordinated, with established roles for actors at all levels of government, the private sector, and civil society. By identifying key actors and responsibilities in an anticipatory manner, countries can avoid the confusion or duplication of roles that often characterizes disaster recovery efforts.

Finally, it is essential to build the capacity of governments, civil society, and the private sector to conduct post-disaster needs assessments and identify recovery priorities that will contribute to long-term sustainable development.

Plenary One

Moderator: Francis Ghesquiere, *Head, GFDRR Secretariat*

Panelists

- Lieutenant General Nadeem Ahmed, *retired, Former Chairman, National Disaster Management Authority, Pakistan*
- Abdulmalek Al-Jolahy, *First Deputy Minister, Ministry of Public Works and Highways, Republic of Yemen*
- Alta Jean Baptiste, *Director of Civil Protection, Ministry of the Interior, Haiti*
- Emmanuel Esguerra, *Deputy Director General, National Economic Development Authority (NEDA), the Philippines*
- Seeta Giri, *Manager, Early Recovery Facility, UNDP Dhaka, Bangladesh*
- Suprayoga Hadi, *Deputy Minister for the Development of Resources, Ministry for the Development of Disadvantaged Regions, Indonesia*
- Leovigildo da Cruz Marcos, *Deputy Director, National Disaster Management Institute, Mozambique*
- Mamadou Mbodj, *Coordinator, Flood Management Unit, Ministry for Flood Management, Senegal*
- Khamlien Pholsena, *Vice Minister, Ministry of Planning and Investment, Lao PDR*
- Dody Ruswandi, *Secretary General, National Disaster Management Agency (BNPB), Republic of Indonesia*
- Jo Scheuer, *Chief of Profession, Director, Climate Change and Disaster Risk Reduction, Bureau for Policy and Programme Support, UNDP*

Making Post-Disaster Recovery Efficient and Effective: Elements of good recovery for articulation in the post-2015 framework for disaster risk reduction

"Disasters know no boundaries. We have our own borders and national jurisdictions, but when nature comes, it doesn't need an invitation. It invites itself."

—**Saber Hossain Chowdhury**, President, IPU and Member of Parliament, Bangladesh

Post-disaster recovery is unquestionably the most complex phase of disaster risk management. For disaster-impacted countries, recovery timeframes are measured in years or even decades, and require capital outlays that can approach and have even exceeded national gross domestic product.

However, there remains a tendency among governments to focus their disaster risk management capacity development efforts on response, preparedness, and prevention, rather than post-disaster recovery. Therefore, as the international community transitions from the Hyogo Framework for Action to the post-2015 framework for disaster risk reduction, it is imperative to prioritize readiness for resilient recovery.

Hyogo Framework for Action

The Hyogo Framework for Action (HFA), introduced at the UN World Conference on Disaster Risk Reduction in 2005, was a 10-year plan to reduce the vulnerability of nations and communities to natural hazards. The HFA identified five priorities for action, each with its own set of guiding principles and practical steps for achieving disaster resilience. In all, 168 countries endorsed the HFA.

Of the five priorities for action, the fourth, "Reduce the Underlying Risk Factors," related most closely to resilient recovery. It included an indicator to assess whether "disaster risk reduction measures are integrated into post-disaster recovery and rehabilitation processes." However, this single indicator did not adequately prioritize the recovery process as an opportunity to build back better and reduce the vulnerability of communities to future hazards.

Key Findings

The "efficiency" of recovery refers to the manner in which a task or action is performed, where productivity is maximized while cost, time, and effort are minimized. The "effectiveness" of recovery relates to the achievement of mission objectives and desired outcomes, such as the restoration of livelihoods and the reconstruction of homes, transportation routes, and ecosystems.

Many post-disaster recovery and reconstruction activities, such as the construction of infrastructure, mirror those performed in the course of a nation's ongoing social and economic development. However, several factors differentiate these activities when performed in the aftermath of a major disaster event:

- Opportunities for extended development planning are minimal to nonexistent, leaving decisions to be made on short order with sub-optimal data and information;
- Multiple activities commence simultaneously and progress concurrently, at times in competition for resources and attention;
- Constraints on time are extreme, tensions and emotions run high, and political figures and key decision-makers are under extraordinary pressure to act;
- Demands on available technical

expertise, manpower, and resources greatly outpace what is locally or even nationally available;

- Obstacles confound the initiation of action, including the presence of vast amounts of disaster debris, a shortage of qualified building inspectors, an inability to meet standard permitting requirements, a loss of land ownership records, or a lack of updated risk and vulnerability assessment data;
- Business sector supply chains are disrupted, as are the economic conditions that support demand and promote commercial vitality;
- The vast number of agencies, entities, and individuals providing and receiving assistance are poorly coordinated; and
- Funding sources to support the required work are highly inconsistent or uncertain.

By promoting recovery planning and capacity building before a disaster strikes, the post-2015 framework for disaster risk reduction can help governments to overcome these challenges. Panelists called for the following actions to be considered in the post-2015 framework for disaster risk reduction:

- Adopt **specific public policies**, and establish **coordination and funding** mechanisms and procedures to plan and prepare for post-disaster recovery, rehabilitation, reconstruction, and displacement in order to mitigate and minimize losses.
- **Engage diverse institutions, multiple authorities, and stakeholders at all levels**, in view of the complex and costly nature of post-disaster reconstruction.
- **Learn from the reconstruction programs over the HFA decade**, and exchange experiences to provide guidance for future reconstruction efforts.
- **Promote the incorporation of disaster risk management into post-disaster recovery and rehabilitation processes**, and use the recovery phase as an opportunity to develop capacities that reduce disaster risk in the medium-term, including through the sharing of expertise, knowledge, and lessons learned.

Conference representatives from the Republic of Yemen.

Session One

Moderator: Jane Bullock, *Founder and Principal of Bullock & Haddow LLC*

Panelists

- Alex Bakunda Byarugaba, *Member of Parliament, Uganda*
- Saber Hossain Chowdhury, *President, Inter-Parliamentary Union (IPU) and Member of Parliament, Bangladesh*
- Santosh Kumar, *SAARC Disaster Management Center, India*
- Kaoru Saito, *Director for Disaster Preparedness, Cabinet Office, Japan*
- Roy Barboza Sequeira, *Executive Secretary, CEPREDENAC, Guatemala*

Technical Innovations in Recovery

Robotics and unmanned systems are promising technologies that can contribute to immediate response, rebuilding, and recovery after disasters. These technologies can be applied to field reconnaissance, inspection of critical infrastructure, search and rescue, debris estimation, and engineering in unsafe locations. However, legal barriers often prevent new technologies from being used to their full potential. Furthermore, information related to disaster recovery is not sufficiently gathered, shared, and applied.

Key Findings

Robin Murphy, Director of the Center for Robot-Assisted Search and Rescue at Texas A&M University, shared footage of a drone delivering medicine to a clinic in Haiti. Unmanned aerial vehicles (UAVs), autonomous underwater vehicles, and ground robots have been used to assess the extent of devastation in 36 disasters since 2001, including the collapsed World Trade Center buildings, Hurricane Katrina, the Great East Japan Earthquake and Tsunami, and Typhoon Haiyan. For example, UAVs have been used to assess the condition of transportation routes, while marine vehicles are used to recover victims or assess bridges and ports, debris, and the pollution of fishing areas.

Unmanned vehicles can reach areas that are too dangerous or inaccessible for humans. Yet 13 years after the first successful use of ground robots, robots are still not routinely used in disaster response and recovery. Regulatory hurdles are not the primary obstacle, Murphy noted. While the U.S. Federal Aviation Administration designates no-fly zones and other limitations on the use of UAVs, it takes relatively little time to receive a certificate of authorization for the use of the technology in a disaster zone. The primary deterrence seems to be cost, as well as resistance to the training required for unfamiliar technology. To overcome this challenge, programs like Roboticists Without Borders train members and deploy the appropriate technology in the event of an emergency.

Panelists recommended establishing systems to encourage greater adoptions of new technologies, as well as greater involvement of the private sector. For example, Japan has an innovative registration system that allows the private sector to register new technologies, allowing government officials to access them immediately after disasters. Similarly, public-private partnerships focused on engineering and construction technologies should be encouraged and used to improve disaster response.

Session Two

Moderator: Yuichi Ono, *Assistant Director, International Research Institute of Disaster Science (IRIDeS), Tohoku University, Japan*

Panelists

- Yusuke Amano, *Director, International Affairs Office, Water and Disaster Management Bureau, Ministry of Land, Infrastructure, Transport, and Tourism, Japan*
- Martin Bjerregaard, *Director, Disaster Waste Recovery, United Kingdom*
- Robin Murphy, *Department of Computer Science and Engineering; Director, Center for Robot-Assisted Search and Rescue, Texas A&M University, United States*
- Jonathon Victor Rembeth, *National Manager, Disaster Resource Partnership, Indonesia*

Institutionalizing Recovery: Local, national, and regional perspectives

Due to the growing incidence of recurring and high impact disasters in recent years, recovery is increasingly viewed as an opportunity to improve the resilience of people, livelihoods, infrastructure, and economies through a rebuilding and restoration process that makes them less vulnerable to future hazards. Recovery is recognized as an important link between humanitarian interventions and ongoing disaster preparedness, risk reduction, and development efforts.

However, for many governments, improving resilience during the recovery process is hampered by gaps in knowledge, such as guiding policies and strategies, and declining levels of attention and resource commitments by stakeholders. The idea of implementing a post-disaster resilient recovery process is a relatively new one within the continuum of a disaster risk management and, consequently, there are few ready blueprints. Until recent years, most post-disaster assessments did not outline priorities to structure the recovery process; furthermore, most post-disaster assessments focused on macroeconomic impacts, without considering socioeconomic circumstances.

Consequently, while opportunities for introducing legal reform and mainstreaming disaster risk reduction into the recovery process are greatest in the aftermath of a disaster, national and international stakeholders have often struggled to fully capitalize on these opportunities.

Key Findings

When a disaster strikes, relatively few governments are prepared with the necessary policies, standards, and institutional arrangements to successfully implement recovery programs. By institutionalizing national recovery frameworks before a disaster, countries can respond more efficiently to natural hazards, and implement "build back better" policies that can break the cycle of poverty and impaired development that disasters often cause.

Governments can adopt several proactive measures to strengthen their capacity for a resilient recovery before disaster hits:

- First, governments should designate institutions to plan and manage reconstruction programs, whether by creating new institutions—like the Earthquake Reconstruction and Rehabilitation Authority (ERRA) in Pakistan, which helped to enforce seismic building codes in homes constructed after the 2005 earthquake—or strengthening existing institutions.
- Second, governments should strengthen financial resources for recovery by allocating portions of

Marisela Montoliu Munoz, Director, Urban Development/Disaster Risk Management, World Bank Group.

Disasters as an Opportunity for Legal Reform

During the recovery process, weaknesses and gaps in existing legal frameworks often become clear. This knowledge, combined with vigorous political will, generally leads to legal reforms.

Credit: Tessa Kelly, Senior Disaster Law Officer, Disaster Law Programme, IFRC

their budget to support resilient recovery efforts. For example, the Philippines established a national disaster risk management fund that allocates 30 percent for emergency response, dedicating the remainder for disaster risk reduction-related activities.

- Third, governments should craft legislation and regulation to help streamline recovery in post-disaster situations, which are often chaotic and present legally ambiguous challenges. In particular, laws that regulate physical planning—such as building codes and land use—are crucial for building resilience to future hazards, but they are difficult to enforce.
- Fourth, by establishing monitoring and evaluation systems, as well as accountability mechanisms, governments can ensure a more efficient and effective implementation of reconstruction programs.

Finally, cross-boundary and regional organizations for cooperation on disaster risk reduction can galvanize national efforts to institutionalize recovery. For example, following the introduction of the HFA in 2005, many countries introduced laws that identified disaster risk reduction as a national priority, which provides an important legal basis for disaster risk management.

Session Three

Keynote: Marisela Montoliu Munoz, *Director, Urban Development/Disaster Risk Management, World Bank Group*

Moderator: Jo Scheuer, *Global Coordinator for Disaster Risk Reduction and Recovery, UNDP*

Panelists and Presenters

- Temiraliev Taalaibek Asanbekovich, *State Secretary, Kyrgyz Republic*
- Paul Chiunguzeni, *Director, Department of Disaster Management Affairs, Malawi*
- Seeta Giri, *Manager, Early Recovery Facility, UNDP Dhaka, Bangladesh*
- Jonathon Hoyes, *Director for the National Disaster Recovery Planning Division, FEMA*
- Tessa Kelly, *Senior Disaster Law Officer, Disaster Law Programme, International Federation of Red Cross Red Crescent Societies (IFRC)*
- Emiko Okuyama, *Mayor, City of Sendai, Japan*
- Dody Ruswandi, *Secretary General, National Disaster Management Agency (BNPB), Indonesia*

Resilient Cities Recover Faster

"[M]ore mayors should be involved in building resilience. The economic powerhouses of countries are major cities. More than half of the largest cities in the world are in disaster-prone areas, and they need to prepare."

—**Alfred Romualdez**, Mayor, Tacloban, the Philippines

Urbanization has become a significant global trend: About 54 percent of the world's population resided in urban areas in 2014, and an estimated 66 percent will be urban residents by 2050.[3] Resilience is recognized as a key concept for mitigating urban risk and fast tracking recovery. However, the definition of resilience in terms of cities is constantly evolving, and tools to improve urban resilience are often unclear.

Panelists discussed several questions, including: What characteristics does resilience encompass, and how is resilience differentiated from related concepts? What is the difference between recovery and development efforts? Where do the borders of a city fall? And finally, what do cities need in order to enhance their resilience, and how can partners best support these requirements?

Challenges

Worldwide, nearly 180,000 people move to cities every day, and as these cities become more densely populated, more residents are exposed to shocks and stresses. Over the past 30 years, the proportion of the population living in flood-prone regions increased by 114 percent, while the proportion of those living in cyclone-exposed regions increased by 192 percent. With increasing global reliance on goods and services produced in cities, there is a great need to ensure the resilience of urban settlements.[2]

Differing Definitions of Resilience

The Hyogo Framework defines resilience as "the capacity of a system, community, or society potentially exposed to hazards to adapt, by resisting or changing in order to reach and maintain an acceptable level of functioning and structure." The "hazards" in this case are natural hazards such as earthquakes or storms. In comparison, the Rockefeller Foundation defines resilience as "the ability of a system, entity, community, or person to withstand shocks while still maintaining its essential functions and to recover quickly and effectively." Rockefeller, and its 100 Resilient Cities Challenge, uses the terms "shocks and stresses" to indicate any type of disruption in a city, from earthquakes and floods to endemic violence and chronic food shortages. Finally, UN-Habitat takes the definition one step further by defining resilience as "the ability to withstand and recover quickly from any plausible hazard."

Recommendations

Panelists encouraged using a more general definition for resilience as a way to help cities become more resilient to disruptions related not only to climate change and natural hazards, but also to other systemic shocks and stresses, such as disease or high unemployment. The Medellin Collaboration on Urban Resilience, introduced in April 2014, aims to foster collaboration among signatories in the following areas:

- Develop common definitions and metrics for multiple types of shocks and stresses experienced by cities;
- Provide a menu of tools and approaches to cities that can be adapted to diverse social, economic, and environmental conditions;
- Expand access to international finance mechanisms, including risk-based instruments to enhance cities' ability to

[2] United Nations, Department of Economic and Social Affairs, Population Division (2014). World Urbanization Prospects: The 2014 Revision.

[3] Medellin Collaboration on Urban Resilience.

Credit: Phuong Nguyen

reduce vulnerability to shocks;

- Promote resilience as a criterion for investment to ensure the sustainability of urban development;
- Support capacity development in cities by sharing best practices;
- Strengthen partnerships with cities that aim to improve their resilience;
- Promote greater alignment with the urban resilience agenda, including in the post-2015 framework for disaster risk reduction and the Sustainable Development Goals;
- Foster new partnerships with urban networks and institutions and the private sector.

The Medellin Collaboration was signed in April 2014 by the World Bank Group, UN-Habitat, UNISDR, GFDRR, Inter-American Development Bank, Rockefeller Foundation, 100 Resilient Cities, C40 Cities Climate Leadership Group, and ICLEI—Local Governments for Sustainability.

Panelists recommended that city leaders integrate resilience thinking, planning, and investment into as wide a swath of departments and services as possible, including in the education sector. Data collection and analysis can also play a key role in enhancing resilience and preparing for recovery. Finally, policy makers should unify local, humanitarian, and development agendas in urban recovery frameworks, and place special focus on community participation in the recovery process.

Session Four

Keynote: David Sanderson, *Professor, Norwegian University of Science and Technology*

Moderator: Stephen A. Hammer, *Lead Urban Specialist, Resilient Cities Program, World Bank Group*

Panelists and Presenters

- Filiep Decorte, *Chief Technical Advisory, UN-Habitat, City Resilience Profiling Programme*
- Andrés Ibaceta, *Director for Los Lagos Region, National Office of Emergencies, Chile*
- Christine Morris, *Chief Resilience Officer, Norfolk, Virginia*
- Alfred S. Romualdez, *Mayor, Tacloban, the Philippines*
- Lauren Sorkin, *Platform Director, 100 Resilient Cities, pioneered by the Rockefeller Foundation*
- Leslie Voltaire, *Urban Planner, Former Advisor to the President of Haiti*

Bridging Humanitarian and Development Efforts

"In some ways, it doesn't really matter where we come from, whether we are from the humanitarian or the development community. Because at the end of the day, it's all about putting people at the center, working with the affected population, and building their capacity so they can be more resilient. That means we need a more inclusive approach to partnership."

—**Gwi-Yeop Son**, Director of Corporate Programs, UNOCHA

The suffering of affected populations calls for urgent humanitarian assistance—medical assistance, food and water, shelter, and other basic necessities. Yet it is also imperative to support long-term sustainable development. How can governments and other stakeholders resume development after a disaster?

Disaster recovery is often perceived as containing two distinct phases: immediate post-disaster humanitarian relief, followed by longer-term recovery. However, this distinction does not reflect reality, UNDP Assistant Administrator Jessica Faieta noted. Evidence shows that affected populations immediately take recovery into their own hands, reestablishing their livelihoods even as their basic needs (including reliable food, shelter, or electricity) remain unmet.

In this context, recovery must begin as soon as possible, without waiting for humanitarian assistance to end. State institutions, NGOs, and multilateral organizations must adapt to support the longer-term recovery process in the midst of humanitarian work. If recovery does not take place early, the process will become characterized by a vicious circle of delays, inefficiency, and inadequate resources.

"The affected populations and their needs must be at the heart of our efforts."

—**Jessica Faieta**, Assistant Administrator, UNDP

Key Findings

About a decade ago, most governments did not have well-planned policies, institutional frameworks, or financing mechanisms for the post-disaster recovery process, nor were they emphasized by international development partners. Only recently has the international community collaborated to produce technical resources to support longer-term recovery initiatives.

The Indian Ocean Tsunami of 2004 served as a catalyst to bring the process of long-term disaster recovery to the attention of the international community, with an emphasis on early recovery that begins while humanitarian assistance is still underway. However, several obstacles continue to challenge the recovery process in developing countries:

- At times, development agencies have placed too much emphasis on the process of conducting rapid damage assessments and launching funding appeals, while neglecting the more basic needs of affected populations. Recovery efforts should focus first and foremost on people's needs: for example, a cooking and heating project launched by UNDP after the 2005 Kashmir earthquake responded directly to Pakistani women, who needed to feed their families during the approaching winter.
- More leadership and institutional support is needed to successfully guide recovery from the initial humanitarian response phase to the long-term development phase. Many countries have introduced dedicated institutions to lead the recovery process following a disaster, but establishing these institutions takes time. Existing institutions, particularly local governments,

Nancy Lindborg, *Assistant Administrator, USAID.*

Rolf Rosenkranz, *Director, Devex.*

are often better prepared to immediately take action. For example, several local governments in the Philippines signed an agreement with UNDP to implement early recovery interventions in the aftermath of Typhoon Haiyan.

- The recovery process only receives limited resources. In most cases, only 20 percent of the required resources are mobilized for recovery following a major disaster. As a result, recovery programs are often implemented on a selected basis and with poor results. It is necessary to have stronger standby credit facilities that can provide funding in times of shock or crisis. Governments must also allocate resources for recovery through their budgets.

Plenary Two

Keynote: Jessica Faieta, *Assistant Administrator, UNDP*

Moderator: Rolf Rosenkranz, *Director, Devex*

Panelists

- Antonio de Lecea, *Minister and Principal Advisor for Economic and Financial Affairs, European Union*
- Nancy Lindborg, *Assistant Administrator, USAID*
- Jorge Melendez, *Presidential Secretary of Vulnerability, El Salvador*
- Kåre Stormark, *Deputy Director General, Ministry of Foreign Affairs, Norway*
- Gwi-Yeop Son, *Director, UNOCHA*

Jessica Faieta, *Assistant Administrator, UNDP*

Gwi-Yeop Son, *Director, UNOCHA*

Sustainable Reconstruction: Turning crisis into an opportunity for greener recovery

Because disasters expose underlying risks, a post-disaster situation provides communities and countries with political space and opportunity for rethinking old approaches to risk reduction, such as introducing greener approaches to reconstruction. Additionally, in a post-disaster situation, there are often increased financial resources available. Focused attention from the government, the presence of national and international experts, and heightened public awareness all provide an enabling environment to consider newer and greener approaches to reconstruction that minimize impacts on a country's natural resources and ecosystems.

Key Findings

Ecologically sound recovery often suffers from insufficient baseline data. For example, rapid assessments typically cannot assess cultural sensitivities, ecological damage, or exposure to natural hazards. Furthermore, countries often lack detailed knowledge of what reconstruction will require in terms of natural resources, and how it will impact or alter ecosystems and future vulnerability.

Panelists identified several recommendations going forward:

- First, development partners like the World Bank and the UN should make sustainability criteria and environmental safeguards prerequisites for funding requests for construction activities.
- Second, it is important to identify local experts before a disaster strikes. Affected communities often have a wealth of knowledge and expertise related to disaster, and facilitating communication among different groups in a community will help to build a social network to support recovery.
- Third, it is essential to take into account social and environmental concerns, and respect local culture when calculating acceptable levels of risk and sustainability.

Session Five

Opening Remarks: Sanjaya Bhatia, *Head, UNISDR Office for Northeast Asia and Global Education and Training Institute*

Moderator: Patricia J. Beneke, *UNEP Regional Director for North America*

Panelists

- Mary Catherine Comerio, *Professor, University of California, Berkeley, United States*
- Gopalan Nair Shankar, *Habitat Technology Group, India*
- Dennis Conor Skehan, *Chairperson, Housing Agency, Dublin, Ireland*
- Fred Stroud, *U.S. Environmental Protection Agency*

Credit: Fumiko Tanaka

Recovery in Conflict and Fragile Situations

Disasters affect the lives, livelihoods, environment, and social fabric of communities. It is challenging for even prosperous and stable nations to address the many demanding facets of recovery. For weak governments, where justice, economic opportunities, and social cohesion have been eroded by conflict and political fragility, post-disaster recovery presents a host of new and significant obstacles.

Although governments and international partners have on occasion recognized the need to be sensitive to conflict in individual post-disaster recovery efforts, there remains a lack of collective understanding of the specific needs of recovery under conflict conditions. To address this knowledge gap, participants used the session to share experiences, challenges, and solutions related to post-disaster recovery in conflict and fragile contexts.

Key Findings

There is a growing overlap between disasters and conflict. Between 2005 and 2009, half of all natural disasters occurred in fragile countries—low-income countries with weak state capacity or legitimacy. Given this overlap, the international community bears the responsibility to include peacebuilding in the recovery approach. International and domestic actors must carefully consider the politics of recovery, and ensure that their work does not exacerbate political conflict. In particular, recovery actors need to be mindful that state actions can reinforce distrust among disenfranchised populations in affected areas.

Panelists recommended that frameworks for recovery in conflict environments should explicitly address the relationship between disaster and conflict, and provide a variety of post-disaster and post-conflict capacities, tools, and approaches to be used both by national actors driving the process and by the international community. The framework should also develop methods for enhancing the trust in and legitimacy of national institutions. An effective, and conflict-sensitive recovery process must include:

- Clear and accountable leadership;
- Effective communication at all levels of government and society;
- Measures to ensure the transparency of how funds are used and decisions are made;
- Efforts to strengthen the links between divided communities;
- Clear mechanisms for community and non-state actors engagement; and
- Commitment to an equitable and impartial recovery process.

Finally, panelists suggested that conflict sensitivity should be included in the Sustainable Development Goals.

Session Six

Moderator: Betty Bigombe, *Senior Director for Fragility, Conflict and Violence, World Bank Group*

Panelists

- Lieutenant General Nadeem Ahmed, *retired, Former Chairman, National Disaster Management Authority, Pakistan*
- Abdulmalek Al-Jolahy, *Deputy Minister of Public Works, Republic of Yemen*
- Neil Buhne, Director, *UNDP Geneva Office*
- Rina Meutia, *DRM Specialist, Aceh Climate Change Initiative, Indonesia*
- Ricardo Zapata, *Team Leader, EU Post-Conflict and Post-Disaster Needs Assessment Coordination Support Office*

Business Continuity in Post-Disaster Situations

In this session, panelists discussed how the lessons of business continuity management—a private sector practice that develops contingency plans for an organization to follow in the event of a disruption—can be applied by governments, international partners, and businesses to the post-disaster recovery planning process.

Key Findings

Panelists recommended the implementation of business continuity plans for all organizations that will play a role in the response, recovery, and reconstruction of a community. For example, private enterprises have an important role to play in community resilience. If a large proportion of private sector participants can continue operating after a disaster, cash flows will continue to circulate within the local economy, and the spiraling effect of business bankruptcies and diaspora of skilled employees will be avoided.

In a post-disaster situation, the emerging practice of business continuity must be implemented at a broader level—in communities, industrial sectors, cities, or regions—rather than in a single organization. This approach requires the coordination of an increased number of practices, professions, and stakeholders, but also carries the benefit of expanding available resources and capacity.

Business Continuity Planning in Practice

In the last decade, a series of community pre-disaster recovery plans have been developed as pilot projects in the United States. Following FEMA's guidance (2011 National Disaster Recovery Framework), larger urban communities in the United States are now developing and adopting similar pre-disaster frameworks.

Similarly, the JICA Area Business Continuity Planning initiative aims to increase resilience among industrial clusters through the planning and coordination of the response, continuity, and recovery of individual enterprises, industrial area managers, local authorities, and administrators of common infrastructure. Japan's banking and insurance industries already possess strong business continuity arrangements, which ensure that payments and insurance settlements are maintained following disaster. Therefore, following the 2011 Great East Japan Earthquake, the financial sector helped stabilize local communities and support recovery efforts, even as roads and office buildings were destroyed and telephone service was disrupted.

Session Seven

Moderator: Becca O'Brien, *Associate Principal, McKinsey & Company*

Panelists

- Hitoshi Baba, *Senior Adviser, Japan International Cooperation Agency (JICA)*
- Alessandro Caillat, *Financial Officer, Treasury, World Bank Group*
- Lewis Curtis, *Director of Service, Disaster Response, Microsoft Corporation*
- Andre Le Duc, *Executive Director, Enterprise Risk Services, University of Oregon*
- David McKernan, *Director, Office of Emergency Management, Fairfax County, Virginia, United States*
- Nicholas Shufro, *Director, Advisory, PricewaterhouseCoopers LLC*
- Gavin Smith, *Executive Director, Center for the Study of Natural Hazards and Disasters, University of North Carolina*

Efficient and Effective Reconstruction: Maximizing resiliency

"There is real tension between moving quickly and moving well, because the incentives are all in the wrong place. Governments have incentives to move quickly—they're under pressure from their constituents, their opposition, the media, and they want to show results. The international community also understands that there's a short window to mobilize resources. Their incentives are to move quickly and to keep the visibility and resources. We need stakeholders to work together according to best practices, and not according to these wrong incentives."

—**Garry Conille**, Regional Director for Africa, UNOPS

Natural disasters can severely damage or destroy critical physical infrastructure, such as roads, hospitals, schools, houses, and government buildings. The price tag of recent disasters has been staggering: *The Annual Global Climate and Catastrophe Report* estimates that the United States experienced $192 billion in economic losses in 2013, while the 2011 Great East Japan Earthquake and Tsunami cost the Japanese economy between $200 and $300 billion.

While recovery is an effort that requires many different kinds of people, organizations, levels of government, and approaches, the restoration of the physical environment and reconstruction of brick and mortar assets is particularly essential to the recovery of livelihoods and the economy. Yet in many cases, especially in developing countries, governments fail to efficiently and effectively restore physical assets. Nearly two years after the 2010 Haiti earthquake, only about 15,000 new homes had been build or rebuilt—10 percent of the units required—and about two-thirds of these homes did not meet pre-earthquake safety standards.

This session addressed the trade-off between efficiency and effectiveness in reconstruction. Put simply, it addresses the question: Is it more important to replace a bridge quickly, or slowly but more resiliently?

Key Findings

Governments and multilateral organizations feel enormous pressure to move quickly, in order to maintain donor funding and visibility, and appease constituents and the media. The pressure is not only political, however, since lags in reconstruction can have enormous economic and social costs. For example, in the United States, the effects of Hurricane Katrina were multiplied by the disruption of oil shipping and delayed transportation along the Mississippi River.

However, ensuring a recovery that is actually effective is an equally important consideration that may be overlooked by governments and organizations feeling the pressure for quick results. Recovery presents a unique opportunity to ensure that physical reconstruction meaningfully contributes to long-term national goals, whether related to economic and social development, or to risk reduction efforts that make sure the next time disaster hits the same infrastructure will not be once again destroyed or damaged.

Local and international institutions must commit to the long term, and "take the politics out of the process," said Garry Conille, UNOPS Regional Director for Africa. For example, governments can establish high-level panels of technical experts to ensure that important disaster recovery decisions are determined according to best practices, rather than by those merely interested in political gain. Similarly, the

Plenary panelists discuss planning for a resilient disaster reconstruction.

vast landscape of civil society organizations created chaos in the reconstruction effort in Haiti, Conille said. With better organization and communication with major international actors, civil society organizations can ensure that they contribute meaningfully to the reconstruction process.

Recovery also suffers from a lack of adequate funding, panelists noted. International donors can fill this gap by delivering on recovery financing pledges and commitments. Additionally, panelists recommended spending public recovery funds wisely, in order to meet the needs of a recovery process that can last for years. They also recommend channeling funds to simultaneously contribute to development goals like improved health and education so that countries need not delay critical national or local projects.

Early and thorough recovery planning can resolve the tension between speed and sustainability, panelists said. Multilateral organizations should serve as resources for recovery expertise and good practices in order to improve both the efficiency and effectiveness of the recovery process.

"Back in 2011, we published the first disaster recovery framework for the United States. It was very important for us to have the whole community—at the federal level, state level, community, tribal, non-profits, the public and private sectors—all working together under one framework and one management system."

—**Elizabeth Zimmerman**, Deputy Associate Administrator for the Office of Response and Recovery, FEMA of

Plenary Three

Keynote: Ede Jorge Ijjasz-Vasquez, *Senior Director, GP-SURR, World Bank Group*

Moderator: Christoph Pusch, *Lead Disaster Risk Management Specialist, GP-SURR, World Bank Group*

Panelists

- Lieutenant General Nadeem Ahmed, *retired, Former Chairman, National Disaster Management Authority, Pakistan*
- Garry Conille, *Regional Director for Africa, United Nations Office for Project Services (UNOPS)*
- Ede Jorge Ijjasz-Vasquez, *Senior Director, GP-SURR, World Bank Group*
- Marcus Oxley, *Executive Director, Global Network of Civil Society Organisations for Disaster Reduction*
- Khamlien Pholsena, *Vice Minister, Planning and Investment, Lao PDR*
- Mohammad Hanief Arie Setianto, *Deputy Head of UKP-PPP President's Delivery Unit, Indonesia*
- Kimio Takeya, *Visiting Senior Advisor, JICA*
- Thomas van Gilst, *Advisor, European Investment Bank*
- Elizabeth A. Zimmerman, *Deputy Associate Administrator for the Office of Response and Recovery, FEMA*

Ten Years after the Indian Ocean Tsunami: A retrospective

Tsunami Memorial in Kamala Beach, Phuket, Thailand. Credit: TonyTaylorStock

On December 26, 2004, one of the most powerful earthquakes recorded (with magnitude 9.0) triggered the Indian Ocean Tsunami. The devastating tsunami affected more than 14 countries, from Asia to Africa, killing over 200,000 people. The estimated damages from the disaster exceeded $10 billion, indicating the tremendous recovery efforts and challenges faced by countries and communities.

In this session, panelists reflected upon the experiences and lessons of the 2004 tsunami recovery process, focusing on the socioeconomic conditions of the affected communities, and the progress that has been achieved in terms of disaster recovery policies and institutions. Panelists also discussed different kinds of recovery programs, and how these programs influenced the evolution of recovery as an area of public policy and government intervention.

Challenges

The panel, which included government officials, disaster risk management practitioners, and academics representing the areas of Indonesia, India, and Japan that have been affected by a major tsunami, identified the following key challenges to the recovery process:

- First, recovery is a long-term process, but funding and other resources are often short term in nature. Furthermore, there is a tendency to overspend in the early stages of recovery.
- Second, recovery programs tend to be ad hoc and improvised, and rarely align with an overall development vision.

Jakarta, Indonesia. Photo courtesy of the Australian Department of Foreign Affairs.

- Third, the needs of communities and their livelihoods can be easily neglected in the recovery process, which is generally caused by lack of consultation. Therefore, it is essential to understand cultural and community dynamics.

Recommendations

Panelists provided several recommendations to strengthen future recovery operations. First, panelists recommended institutionalizing recovery at the national and local government levels. For example, following the Indian Ocean Tsunami, Indonesia passed a new disaster management law, created the national disaster management agency (BNPB), and established a standby fund for recovery.

Second, it is important to provide easy access to knowledge that supports a government's recovery strategy. For example, India's National Emergency Communication Plan was developed to serve as a reliable information and communication network for use in emergencies. The plan will enable satellite-based mobile voice, data, and video communication between national and state emergency operation centers during a disaster, at a time when traditional telecommunications technology is often impacted.

Finally, stakeholders must promote a recovery process that encourages collaboration between development actors and communities, and places people and their needs first. For example, in the Indian state of Tamil Nadu, the lack of collaboration between development actors and communities resulted in fishing families receiving more than one boat. Panelists warned that these kinds of errors become more likely when NGOs and agencies prioritized their own agenda, rather than the community.

Session Eight

Opening Remarks: Krishna Vatsa, *Regional Disaster Reduction Advisor, UNDP*

Moderators: Jane Bullock, *Founder and Principal of Bullock & Haddow LLC;*

T. S. Sridhar, *Additional Chief Secretary and Commissioner Revenue Administration, government of Tamil Nadu, India*

Panelists

- Suprayoga Hadi, *Deputy Minister for the Development of Resources, Ministry for the Development of Disadvantaged Regions, Indonesia*
- Kaoru Saito, *Director for Disaster Preparedness, Cabinet Office, Japan*
- Yasuo Tanaka, *Professor Emeritus, Kobe University, Japan*
- V. Vivekanandan, *Chief Executive, Indian Federation of Fisherman Societies, India*

Planning for Reconstruction Before a Disaster Strikes: The experience of megacities in Japan

In an interconnected global economy, where environmental conditions shift as population densities rise in urban areas around the world, disaster risk management is increasingly important. Proactive approaches to risk management can be critical for reducing the loss of lives and averting economic setbacks. To be most effective and to contribute to stability and growth over the long term, the management of risks from natural disasters should be mainstreamed into all aspects of development planning in all sectors of the economy.

In this session, disaster recovery specialists and academics from Japan discussed their country's experience in planning for reconstruction efforts in an anticipatory manner.

Recommendations

Disaster risk reduction must be recognized by governments as a national and a local priority, with a strong institutional basis for implementation. Panelists recommended that governments build a culture of risk reduction and disaster resilience at all levels of government and society, and integrate disaster risk reduction measures into relief, recovery, and development activities.

Without effective disaster risk management, decades of development gains can be wiped out in a moment, panelists noted. The World Bank Group and other development assistance agencies were urged to mainstream disaster risk management into their standard operations. The *Learning from Megadisasters* publication, jointly produced by the government of Japan, GFDRR, and the World Bank Group and launched at a later session, was highlighted as a resource for development partners seeking to integrate disaster risk management into development policies and programs.

Credit: Phuong Nguyen

Session Nine

Opening Remarks: Yasusuke Tsukagoshi, *Special Representative to Japan, World Bank Group*

Moderator: Yuka Makino, *Senior Operations Officer, GFDRR Disaster Risk Management Hub, Tokyo, World Bank Group*

Panelists

- Yoshiaki Kawata, *Director & Professor, Research Center for Social Safety Science, Kansai University, Japan*
- Chikako Kobayashi, *Chief, Information Management Section, General Disaster Prevention Division, Tokyo Metropolitan Government, Japan*
- Shingo Kochi, *Senior Recovery Specialist, International Recovery Platform, Seconded from Hyogo Prefecture Government, Japan*

Empowering Women and Communities for Inclusive Recovery

"On January 12, 2010, an earthquake with a magnitude of 7.1 destroyed Port au Prince, Haiti's political, social, and economic capital. My house, everything, was destroyed. Fortunately, my family was safe. But most people around me were dead. About 230,000 people died in the earthquake. One thing we must acknowledge is that people from community-based organizations are often the ones who answer first at a disaster. While the government, the civil society, everywhere was collapsed, we had people from the neighborhood helping to save us from the earthquake."

—**Henriot Nader**, Project Coordinator, PRODEPUR, Haiti

Disasters compound social exclusion and existing vulnerabilities, disproportionately taxing the poor, women, children, elderly, and other socially marginalized groups. When a community's social fabric is destroyed, it is only through community empowerment that the social fabric can be rebuilt and recovery can be sustained.

Key Findings

If reconstruction and recovery programs are to achieve the oft-stated goal of making communities more resilient to future hazards and climate change, three things are required:

- A clear understanding of the pre-existing social, political, and economic factors that contributed to the vulnerability of the poor and marginalized before the disaster;
- Recognition of how relief, recovery, and reconstruction interventions can reduce, reinforce, or increase those vulnerabilities; and
- Investment in actions to ensure these groups are effectively reached, protected, and empowered.

Panelists emphasized that disaster-affected communities want and need to be engaged as leading partners in their recovery process—and not simply as "clients," "beneficiaries," or "vulnerable groups." To effectively engage with communities, it is essential to understand local contexts and capacities.

Case Studies

Naseem Sayyed Saheb Shaikh works as a community organizer for Swayam Shikshan Prayog, a learning and development organization based in India that creates collectives of women and youth dedicated to strengthening the ability of communities to respond to and recover from disaster. For example, a collective of women might participate in vulnerability mapping exercises to analyze available resources before a disaster, and damages and losses after a disaster. In the flood-prone Indian state of Bihar, women formed community task forces to encourage families to set aside emergency health savings, and to store grains, fuel, and legal documents in dry areas in anticipation of future floods.

Emi Kiyota shared lessons from the Ibasho project, which was established in Ofunato, Japan, after the 2011 Great East Japan Earthquake and Tsunami. *Ibasho* means "a place where one feels

Credit: Ibasho Café

fully accepted," and the project aims to challenge society's perceptions of the elderly while creating more disaster-resilient, sustainable communities. The project started the Ibasho Café, which employs elderly residents and operates as an environmentally, economically, and socially sustainable business. The Ibasho project is based on several principles, including the wisdom of elders, the need for informal community gathering places, community ownership of development, respect of local cultures and traditions, and environmental sustainability.

Session Ten

Moderator: Maninder S. Gill, *Director, Social Development, GP-SURR, World Bank Group*

Panelists

- Emi Kiyota, *Founder and President, Ibasho, Japan*
- Henriot Nader, *Project Coordinator, PRODEPUR, Haiti*
- Naseem Sayyed Saheb Shaikh, *Community Organizer, Swayam Shikshan Prayog, Maharashtra, India*
- Myat Thet Thitsar, *Research Director, Enlightened Myanmar Research, Myanmar*

Minding the Gaps: National post-disaster financing, transparency, and delivery accountability

While the post-disaster recovery process presents an opportunity to "build back better," these initiatives require significant levels of financing, planning, and audacity if development partners hope to avoid simply reinstating the status quo. Several gaps typically exist in recovery financing: a gap between emergency relief and long-term reconstruction needs; between available financing and a government's absorptive capacity or demand; and between plans and expectations and the reality of what can be and is achieved on the ground.

Key Findings

Drawing from their experiences, panelists noted that recovery is rarely a straightforward journey, and it is important to prepare for the inevitable delays that will be caused by bureaucratic processes. Furthermore, monitoring and evaluation of recovery processes must be established at the outset of recovery; otherwise, that aspect of recovery will always be "playing catch-up," as one panelist called it.

Panelists discussed examples from Australia, Chile, Mexico, Serbia, and the United States, where various methods were used to improve financing transparency and accountability.

- In Australia, the Queensland Reconstruction Authority introduced a new method to monitor its $14 billion in recovery grants. These measures include funding mechanisms that are dependent upon project success (for example, withholding 5 to 10 percent of funding until the project is completed), and mapping

Graeme Newton, CEO, Queensland Reconstruction Authority, speaks on Australia's experience in monitoring post-disaster financing.

Worst flooding on record across the Balkans in Serbia, 2014. Credit: © Nemar74 | Dreamstime.com

technology that enables house-by-house assessment in affected communities.

- In the Philippines, the government tracks all taxpayer money spent on post-disaster reconstruction on a special website that is accessible to the public (openreconstruction.gov.ph/home). Users can browse damaged infrastructure on an interactive map, and view the status of projects. This transparency is designed to improve government accountability.
- In Mexico, the Natural Disaster Fund (FONDEN) provides funding, as well as tools and data, to agencies that are engaged in post-disaster assessment and reconstruction. FONDEN outlines clear phases for requesting funds and reporting on the progress of post-disaster activities, leading to a measurable increase in resilience against natural disasters.
- In May 2014, Serbia suffered catastrophic floods, with nearly 2 billion euros in damages (4.8 percent of GDP). The government had no system in place for responding to these needs in a coordinated manner. Therefore, the government established an Office for Flood Affected Areas Assistance and Rehabilitation, based on the principles of responsiveness, transparency, and accountability. The office collects and verifies disaster data, drafts recovery programs by sector, coordinates the disbursement of aid, supervises project implementation, and issues reports on these activities to the government, donors, and the public.

Session Eleven

Moderator: Kai Kaiser, *Senior Economist, World Bank Group*

Panelists

- Juan Miguel Adaya, *Director of Risk Analysis, Insurance, Pensions and Social Security Unit, Ministry of Finance and Public Credit, Mexico*
- Marko Blagojević, *Director of the Flood Relief and Reconstruction Office, Serbia*
- Graeme Newton, *Chief Executive Officer, Queensland Reconstruction Authority, Australia*
- Kathleen Tighe, *Former Chair, Recovery Accountability and Transparency Board, United States*
- Luis Francisco Letelier Troncoso, *Vice President, Surmuale (NGO), Chile*

Accelerating Housing Recovery

Around the world, demand for housing is growing in urban areas, and the rapid rise in housing density has led to the increased vulnerability of populations to disasters. Post-disaster housing recovery is complex, as governments and partners are often confronted with an array of challenges, such as extreme time pressure or the need to relocate an overwhelming numbers of households.

Housing is generally one of the largest components of post-disaster damage assessments, and consequently represents a major share of reconstruction needs. However, deciding how to meet this need presents a policy dilemma. In most societies, housing is a private good that is built on private land and financed with private resources. However, after a disaster, damage to housing stock may shift the burden of providing accommodations to the government. Housing reconstruction is therefore placed in a unique category: not fully public (unlike roads and bridges for example), nor fully private (such as stores and factories).

Governments respond to this challenge with one of three approaches:

- Governments leave households to figure out how to finance and manage the reconstruction of their own homes. This approach can greatly extend the time during which households depend on short-term solutions (such as camps or temporary shelter), and may have a long-term effect on livelihoods and social stability.
- Governments take one of the following limited actions: encourage NGOs to assist households; provide guidance on building standards, policies and planning; facilitate cash transfers to certain affected households; or coordinate the agencies and organizations involved in rebuilding housing. Each of these actions is useful, but without a clear vision, the approach is often piecemeal.
- Governments take full responsibility for reconstruction. This approach often includes the physical reconstruction of housing, in effect "nationalizing" the damaged housing stock. This approach is often done with good intentions, yet because of underfunding can result in inequitable results.

Finally, housing reconstruction is often characterized by poor communication between government agencies and organizations and affected households, a delayed start to reconstruction, and inadequate funds. In many cases, households are more effective in managing their reconstruction than the government.

Key Findings

GFDRR, the European Union, and UNDP jointly produced the *Post-Disaster Needs Assessment* and *Disaster Recovery Framework Guides* to help governments develop an institutional framework for recovery, with supporting policies, financial mechanisms, and monitoring programs, based on lessons learned from housing reconstruction programs in countries around the world. By engaging in this anticipatory planning for recovery, governments can improve the predictability and effectiveness of the housing reconstruction process.

For example, panelists emphasized the importance of quickly determining the broad modalities of the housing reconstruction program—whether it will be owner-driven or state-driven. Furthermore, partners in the recovery process must agree to support and abide by policies and standards. Additionally, transparency and accountability in recovery financing are essential. To ensure that housing subsidies and grants are used for their intended purposes, and to maintain legitimacy and efficacy, subsidies must be disbursed on the condition of meeting reconstruction standards that reduce disaster risk. The practice of disbursing

The Philippines. Credit: Danilo Victoriano

project funds in tranches, coupled with regular site inspections and certification of work completed, has also proven useful as accountability mechanisms.

Finally, panelists agreed that owner-driven reconstruction—that is, enabling people to rebuild their own homes with adequate technical and financial support from government or development partners—has proven to be the most cost-effective, empowering, and culturally appropriate approach to housing reconstruction. Panelists also discussed the importance of understanding local housing culture, and emphasized the intricate link between livelihoods, community, and lifestyle. This understanding is central to designing efficient housing reconstruction programs.

Tonga provides an example of innovative institutional arrangements in terms of post-disaster housing reconstruction. Following the 2014 cyclone in Tonga, the country's national census bureau used its unique expertise to collect household information for the identification of affected and vulnerable households, and for recovery planning. Engaging a census bureau in an exercise of this nature requires preparation, mobilization of large numbers of staff, and policy making (for example, to allow disclosure of information), but it shows enormous promise.

Session Twelve

Keynote Speaker: Marisela Montoliu Munoz, *Director, Urban Development/ Disaster Risk Management, GP-SURR, World Bank Group*

Moderator: Vinod Sharma, *Executive Vice Chairman, Sikkim State Disaster Management Authority, India*

Panelists

- Shahnaz Arshad, *Senior Urban Specialist, World Bank Group, Pakistan*
- Jennifer Duyne Barenstein, *Head, World Habitat Research Centre, Lugano, Switzerland*
- Anna Konotchick, *Senior Settlements, Housing and Construction Advisor, American Red Cross, Haiti*
- Kip Scheidler, *Senior Director, Disaster Risk Reduction and Response, Habitat for Humanity International, United States*
- Chuck Setchell, *Senior Shelter and Settlements Advisor, Office of Foreign Disaster Assistance/USAID, United States*
- Rakesh Sharma, *Additional Chief Secretary, Government of Uttarakhand, India*

Durable Solutions for Post-Crisis Displacement

The displacement caused by disasters and complex emergencies calls for development-based approaches that lead to durable solutions. The post-crisis displacement of people and communities presents a variety of challenges related to land tenure, self-reliance, and resilience, including the transition from shelters to homes, from informal protections to rule of law, from informal settlements to urban planning, and from short-term income to full-time jobs.

Challenges

Panelists identified several challenges to developing solutions for the post-crisis displacement of people. First, solutions for displaced people have proven most successful when they are identified by the affected communities themselves. Unfortunately, short-term political interests often prevail over technical advice and community voices. Second, displacement from disasters and conflicts often causes disruptions in social and legal control mechanisms, leading to disempowerment and increased vulnerability for affected communities and households. To be effective, solutions for displacement must be rooted in the principles of human rights, and in recognizing and reducing the increased vulnerability of women, children, and the elderly.

Case Study

In Haiti, nearly the entire population rents (rather than owns) their housing, and about half of the population lives in cities. However, prior to the 2010 earthquake, international programs to assist displaced populations focused on homeowners. After the earthquake, the Haitian government worked with citizens and the international community to provide rental support cash grants to displaced populations, showing what can be achieved when cooperation exists between government housing departments, the ministry of public works, the civil protection directorate, and humanitarian and development agencies. Today, this approach is being considered in countries worldwide.

Recommendations

Panelists offered several recommendations for developing durable solutions for post-crisis displacement.

- First, developing solutions must come first from the community, and ensure the rights of women, children, and other vulnerable groups.
- Second, stakeholders including government and development partners must increasingly think in terms of a broader resilience framework, which encompasses disaster, conflicts, and other shocks, like health crises. Within the World Bank, panelists noted, there remains a gap between teams engaged in disaster risk management and those who work in health and conflict, even though recovery in all of these circumstances is generally entrusted to the same institutions (for example a city or state government).
- Finally, most impoverished people are tenants, rather than homeowners, and they require specific solutions tailored to this reality. Pilot projects can be useful to determine effective approaches and ensure donor support for future projects.

Session Thirteen

Moderator: Tom Corsellis, *Executive Director, The Shelter Centre, Geneva, Switzerland*

Panelists

- Clement Belizaire, *Director of Relocation Programs, Housing and Public Building Construction Unit, Haiti*
- Chaloka Beyani, *UN Special Rapporteur on the Human Rights of IDPs*
- Neil Buhne, *Director, UNDP Geneva Office*
- Lesley Cordero, *Undersecretary (Deputy Minister) of the Office of the Presidential Assistant for Recovery and Rehabilitation, the Philippines*

Credit: Ira Peppercorn

Breaking the Disaster Cycle: Engaging civil society and local government in resilient recovery in the Philippines

"The question is, how do we link top-down processes with local level resilience and capacity—without overwhelming it? I think people now realize there is value to a multi-stakeholder engagement. […] Civil society can make sure these policy frameworks, which are driven at the national level, are appropriate and relevant to the local level."

—**Marcus Oxley**, Executive Director, Global Network of Civil Society Organisations for Disaster Reduction

Disaster risk management and resilience building are crucial for the survival of citizens facing high levels of disaster risk, and for the sustainable development of their communities. Resilient recovery breaks the cycle of recurring disasters by building local capacity to manage hazards. This session focused on the collaboration between local authorities and humanitarian organizations, Cordaid and Caritas International, after Typhoon Haiyan made landfall in the Philippines in November 2013.

Background and Key Findings

Cordaid is one of the largest development aid organizations in the Netherlands, with a network of 617 civil society partner organizations in 38 countries throughout Africa, Asia, the Middle East, and Latin America. Cordaid is a co-founder of Caritas International, a global network of 164 Catholic emergency aid and development organizations.

In the Philippines, Cordaid is particularly engaged in disaster risk reduction and disaster response activities, with 15 projects in 32 locations. According to Cordaid's World Risk Index, which measures disaster risk exposure, vulnerability, susceptibility, lack of coping capacity, and lack of adaptive capacity, the Philippines ranks third in the world for disaster risk.

Opening the discussion, panelists noted that post-disaster assessments often fail to link recovery with development goals. Additionally, the prevailing emphasis on top-down planning in recovery programs is not inclusive of local stakeholders; therefore, community capacities and institutions (such as local faith-based organizations with experience in mobilizing residents) are often insufficiently acknowledged in recovery.

Panelists noted that disaster risk reduction must be integrated into recovery programming, based on capacity gaps identified through disaster assessments conducted with local stakeholders. By creating partnerships between civil society organizations, governments, multilateral organizations, and other stakeholders, recovery will benefit from better cooperation, and greater success in linking relief, rehabilitation, and development efforts.

Building Resilience in Coron

In 2013, Typhoon Haiyan hit the Philippines, affecting more than 12 million people and displacing 4 million. In Coron municipality, Palawan province, a majority of households depend on fishing or farming for their income, but their homes, boats, fishing equipment, and crops were destroyed by the storm. In partnership with local organizations, Cordaid launched a project to help communities build back better and become more resilient.

Through 10 years of managing disaster risk reduction programs,

Residents in the Philippines affected by Typhoon Haiyan carry on with daily activities. Credit: © Dominic Chavez/World Bank

Cordaid developed a strategy of building resilience during the development stage of recovery, following an emergency relief stage. The Resilient Communities in Coron project aims to bring about "stronger social capital through stronger civil society organization and multi-stakeholder cooperation; reduced vulnerability of communities to natural disasters; and diversified, resilient livelihoods and income opportunities."

The project's success, which targets 1,300 households (accounting for 6,500 people), will be measured through the following indicators:

- Six action plans supported by the government, private sector, and other stakeholders;
- Six communities with emergency preparedness plans, including early warning plans;
- Six communities that developed their own disaster plans;
- 1,040 households with restored livelihoods;
- 6,500 people reached with preventive activities related to natural resource management;
- 1,040 households with restored water and sanitation facilities; and
- 1,300 households with safe shelter.

Session Fourteen

Moderator: Marcus Oxley, *Executive Director, Global Network of Civil Society Organisations for Disaster Reduction*

Panelists

- Raja Rehan Arshad, *Lead Disaster Risk Management Specialist, GFDRR, World Bank Group*
- Athena Banza, *Disaster Risk Reduction Coordinator NASSA, Caritas Philippines*
- Josephine Sabina Ignacio, *Head of Humanitarian Unit, Caritas Filipinas Foundation, Inc.*
- Ronald Langford, *Cordaid Country Program Manager, the Philippines*
- Glenn Caesar M. Ticzon, *Administrative Assistant 3 Local Government Unit of the Municipality of Ajuy, Iloilo Province, the Philippines*
- Jan Willem Wegdam, *Recovery Specialist, Cordaid*

Not Business as Usual: Reconstructing for a changing climate

"Floods are more intense, heat waves, droughts—and especially in the Sub-Saharan Africa region. Our infrastructure and roads were built in the 1980s and 1990s, when water levels were expected to reach only five centimeters every year. Now we're reaching higher levels. Will our buildings and roads be robust enough to withstand the immense pressure that climate-induced disasters will bring?"

—**Olubankole Davy Omokivie**, Head, Projects and Programs, Enviroplus+, Nigeria

Climate-related events account for three-quarters of all disasters, and that proportion is expected to rise in the coming years. Despite this, national development strategies rarely include policies addressing the effects of climate change. Adaptation to climate change is a relatively new concept, and not yet mainstreamed into key government policies. Similarly, there is limited understanding of how climate change affects people and communities. Addressing climate change during the post-disaster recovery process is particularly challenging because recovery is a multifaceted process—including social, economic, environmental, and cultural phenomena—with competing priorities.

The session explored four possible climate change scenarios that call for adaptation and risk reduction efforts during the reconstruction process. These scenarios include: (1) rising temperatures leading to heat waves and more frequent forest fires; (2) an increase in rainfall leading to more frequent floods and landslides; (3) changes in hurricane intensity; and (4) an accelerated sea level rise that could exacerbate coastal storm surges.

Key Findings

Panelists stressed the need for resilience against climate change in both development and recovery projects, and recommended a transition from relief to development-oriented approaches in disaster risk management. They recommended mainstreaming climate change adaptation programs and policies into key development sectors—including energy, water, and land use—at both national and subnational levels. For example, beginning in 2014, the World Bank Group screens all International Development Association-funded projects for both climate- and disaster-related risks.

Furthermore, panelists recommended that countries recognize the role of ecosystems in building resilience. For example, when rehabilitating after forest fires, communities should select tree species that are more adaptable to climate change—for example, more fire tolerant and

Dawn French, Deputy Permanent Secretary, Prime Minister's Office, Saint Lucia.

Floods in Sudan, 2013. Credit: Nafeer

with seeds that can be disbursed quickly. By encouraging greater biodiversity through a mosaic of crops, forests, and pastures, communities can more effectively manage forest fires, which are occurring with greater frequency in response to climate change.

Finally, panelists recommended the adoption of new kinds of systems to manage increasing risks associated with climate change. For example, earth observation and climate monitoring systems can help a variety of actors to better understand changing risk. Additionally, public-private partnerships can foster risk transfer mechanisms. To encourage this innovation, international and national organizations must engage in greater cooperation, and exchange information that will inform more effective project design.

Session Fifteen

Opening Remarks: Marisol Estrella, *Program Coordinator, Disaster Risk Reduction, UNDP*

Keynote: James Close, *Director, Climate Change Group, World Bank Group*

Moderator: Imen Meliane, *Head of Marine Policy Unit, The Nature Conservancy*

Panelists

- Keith Alverson, *Chief, Climate Change Adaptation Unit, UNEP*
- Dawn French, *Deputy Permanent Secretary, Prime Minister's Office, Saint Lucia*
- Keshav Mohan, *Director, Institute of Land and Disaster Management, India*
- Olubankole Omokivie, *Head, Projects and Programs, Enviroplus+, Nigeria*
- Gavriil Xanthopoulos, *Researcher, Institute of Mediterranean Forest Ecosystems and Forest Products Technology, Greece*

Role of Private Sector in Recovery: The case for private sector engagement in recovery in the post-2015 framework for disaster risk reduction

Research indicates that, on average, 15 percent of wealth in a country is public, while the remaining 85 percent is privately held. Therefore, a government-centered approach alone cannot solve the challenges posed by a disaster; the private sector must play a leading role in recovery as well. If private sector participants can continue to operate after a disaster, cash flows will continue to circulate within the local economy, and the spiraling effect of business bankruptcies and the diaspora of skilled employees will be avoided.

Recently, governments and businesses have increasingly recognized the potential benefits of expanding the business sector's response to disaster recovery beyond merely self-preservationist measures. However, there is still a great deal to be done to encourage public-private collaboration in disaster risk management. The disaster risk management community must develop models for private sector engagement, particularly through the implementation of "business continuity management" arrangements, and support the inclusion of private sector firms in local, national, and regional management plans and structures.

Key Findings

Panelists noted the following challenges to integrating the private sector into disaster risk reduction and recovery activities:

- First, the private sector often does not have a clear understanding of its role in disaster risk management efforts.
- Second, there is a prevailing government-centered approach to recovery, which hinders the private sector from participating in a meaningful way.
- Finally, while most community preparedness and disaster risk reduction programs focus on people and public institutions, the private sector is equally at risk from disasters, particularly with the rise in urbanization.

There are several ways the private sector can leverage its unique strengths, panelists noted. The private sector holds a great deal of data and information related to risks in urban environments, given its activities related to commerce and infrastructure maintenance. The private sector is also adept at raising money and resources, especially since it is unencumbered by bureaucracy and has ready access to a global supply chain. Finally, the private sector is skilled in providing innovative solutions to new challenges. In summary, the private sector should not be viewed as simply a source of donations after a disaster, but as a resource with valuable skills to share.

Session Sixteen

Moderator: Jane Bullock, *Founder and Principal of Bullock & Haddow LLC*

Panelists

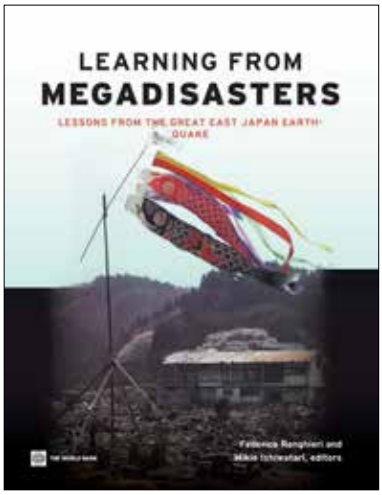
- Laurence Carter, *Sr. Director, World Bank Group*
- Ana Lucia Hill-Mayoral, *Crisis Management and Business Continuity Consultant*
- Stefan Kohler, *Head of Disaster Risk Reduction and Resilience, UNOPS*
- Hideki Kit Miyamoto, *CEO and President, Miyamoto International, Inc.*
- Graeme Newton, *Chief Executive Officer, Queensland Reconstruction Authority, Australia*
- Becca O'Brien, *Associate Principal, McKinsey & Company*

Facing page: Kingshuk Chakravarty, India.

Book Launch of *Learning from Megadisasters: Lessons Learned from the Great East Japan Earthquake and Tsunami*

In March 2011, an earthquake of magnitude 9.0 struck the coast of Japan. The earthquake was shortly followed by a powerful tsunami that flooded more than 500 square kilometers of land. About 20,000 people died or went missing, and 390,000 homes were destroyed or severely damaged. Railways, highways, and municipal roads were closed.

Learning from Megadisasters: Lessons Learned from the Great East Japan Earthquake and Tsunami, a publication by the government of Japan, GFDRR, and the World Bank, provides data, analysis, and insight on achievements and challenges following the costliest earthquake in world history. Speakers at the launch discussed Japan's different options for post-disaster recovery and relocation, as well as how to encourage participation in the recovery process at all levels of government and society.



Yoshiaki Kawata , *Director and Professor, Research Center for Safety Science, Kansai University; and Director of Disaster Reduction and Human Renovation Institution*

Key Findings

Japan had developed its approach to disaster risk management through nearly 2,000 years of coping with natural risks and hazards. Without the country's policies and practices, the loss of life and property could have been far greater. These practices include: investments in structural measures such as reinforced buildings and seawalls; risk assessments and early warning systems supported by sophisticated technology; a culture of preparedness, where evacuation drills are practiced in schools and workplaces; clearly defined roles for communities, NGOs, the private sector, and national and local governments; and effective legislation and regulation, including building codes.

However, several measures would have made Japan's response to the disaster even more effective, including: better communication about the disaster among local communities, governments, and experts to avoid delayed evacuations; improved coordination among governments, civil society,

and the private sector; and better engagement with vulnerable groups, including women, children, and the elderly.

Panelists also discussed the challenge of achieving consensus among community members on a rehabilitation plan. In the wake of megadisasters, countries often propose relocation plans and new regulations for land use in at-risk areas. The Japanese experience demonstrates that relocation is effective in mitigating disaster damage, but that managing relocation projects—and consulting with affected communities—is often difficult.

Session Seventeen

Opening Remarks: Masahiro Kan, *Executive Director for Japan, World Bank Group;* Sanjay Pradhan, *Vice President, Leadership, Learning and Innovation, World Bank Group*

Keynote: Yoshiaki Kawata, *Director and Professor, Research Center for Safety Science, Kansai University; and Director of Disaster Reduction and Human Renovation Institution*

Moderator: Abha Joshi-Ghani, *Director, Knowledge Exchange and Learning, World Bank Group*

Panelists

- Mladen Ivanovic, *Executive Director, Croatian Association of Municipalities*
- Ronald Jackson, *Executive Director, Caribbean Disaster Emergency Management Agency*
- Alex Kaplan, *Vice President, Swiss Re America Holding Corporation*
- Shingo Kochi, *Senior Recovery Specialist, International Recovery Platform, Seconded from Hyogo Prefecture Government, Japan*
- Yuichi Ono, *Professor and Assistant Director, International Research Institute of Disaster Science, Tohoku University*

Summary of the findings and lessons learned from the book project.

Credit: *"Learning from Megadisasters: Lessons Learned from the Great East Japan Earthquake and Tsunami" / Thomas Lynch*

Credit: Biswajit Patra

Livelihood Recovery and Social Protection

Disasters disproportionately affect poor and vulnerable households, who generally live in higher-risk areas and have diminished capacity to cope with and recover from disasters. Frequent and severe crises deplete a household's assets and undermine development achievements.

Social protection programs have the potential to reduce the effects of natural disasters on poor households. By providing a safety net to affected individuals, social protection programs can prevent households from depleting already-limited savings and provide them with the necessary cash to continue buying food and sending their children to school.

Case Studies

Panelists discussed Ethiopia's Productive Safety Net Programme (PSNP), established in 2005, which enables the rural poor to resist shocks, create assets, and become food self-sufficient. The PSNP offers predictable transfers of food or cash throughout the year so that households need not deplete productive assets during food deficit periods. The PSNP has had a positive impact on rural livelihoods by increasing asset protection and agricultural productivity, as well as encouraging the use of education and health services. Ethiopia's safety net program represents a shift from humanitarian response to a long-term development approach to the recovery process.

Panelists discussed livelihood recovery programs in Bangladesh, Mexico, and Pakistan, as well. For example, Pakistan's strategy includes livelihood cash grants, conditional housing grants, food- and cash-for-work programs, and programs aimed at empowering women and other excluded groups. In Bangladesh, the Chars Development and Settlement Project supports communities that are vulnerable to disaster with measures including cash-for-work initiatives and livestock restocking grants. Finally, in Mexico, the government established a National Civil Protection Council in 2013 that implements and coordinates civil protection policy at all levels of government.

Recommendations

Moving forward, panelists identified several areas for improving the success of livelihood recovery programs:

- Programs should move from safety nets to "trampolines," so that households can bounce back from shock and adopt more sustainable livelihoods in the face of recurrent disasters.
- Livelihood recovery programs should be linked with disaster risk reduction measures, including preparedness, prevention, early warning, and response activities and policies.
- Interventions should focus first on poor households, as well as excluded communities and groups.

Session Eighteen

Moderator: Xiaoqing Yu, *Global Practice Director for Social Protection and Labor, World Bank Group*

Panelists

- Lieutenant General Nadeem Ahmed, *retired, Former Chairman, National Disaster Management Authority, Pakistan*
- Ernesto Javier Nemer Álvarez, *Vice-Minister of Social Development, Ministry of Social Development (SEDESOL), Mexico*
- Weldu Berihu, *Senior Expert, Food Security, Ministry of Agriculture and Rural Development, Ethiopia*
- Neil Buhne, *Director, UNDP Geneva Office*
- Matthew Pritchard, *Leader, The Chars Livelihood Programme, Bangladesh*

Recovery in the Post-2015 Development Framework: Leveraging political consensus

"At the second World Reconstruction Conference, I feel high energy and a strong sense of determination. Because now we have the opportunity with the 2015 World Conference on Disaster Risk Reduction to include in the framework a component that guides countries, organizations, and people on recovery and reconstruction. It is a very challenging area—it's costly, it's complicated, it goes on for longer than anyone can imagine, and it causes significant impact on people's lives."

—**Margareta Wahlström**, Special Representative of the Secretary-General for Disaster Risk Reduction, UNISDR

It is often challenging for governments to institutionalize policies, standards, and institutional arrangements to support recovery management before a disaster strikes. It requires political will and fiscal support to establish and sustain disaster readiness. This session discussed important questions, including: How can governments effectively institutionalize recovery and readiness? How can recovery become a priority in the post-2015 development framework?

The Hyogo Framework for Action (2005-2015) was a valuable tool that outlined necessary steps for substantially reducing losses from disaster. However, panelists noted that progress related to disaster risk reduction has been slow, both in terms of national government systems and internationally. In particular, budgetary and financing mechanisms for post-disaster recovery must be strengthened. Additionally, international organizations must simplify their procedures for implementing recovery; otherwise, governments will be overwhelmed following a disaster. Finally, it is essential to increase political will for prevention and recovery, rather than only emphasizing post-disaster humanitarian efforts.

Key Findings

First, governments and international organizations must work together to ensure there is access to sufficient resources to finance the recovery and reconstruction process, said World Bank Group Vice President and Special Envoy for Climate Change Rachel Kyte. When disasters strike, it is often the government who bears most of the price tag of the disaster, especially where insurance penetration is low, as it is in many small developing countries. By adopting risk financing strategies to manage contingent liabilities, governments can improve the predictability of available resources. One disaster does not have to set back growth and prosperity for years to come. Financial resilience is a necessary national, subnational, community, and household effort.

Second, governments must have the capacity to properly allocate these resources. This requires effective operating procedures, protecting funds from political interests, and developing clear disbursement guidelines. These resources for recovery must be prioritized so that they survive from one political administration to the next.

Third, guidelines for recovery must be simple and practical. Countries need actionable lessons and practical recommendations, including advice on how to speed up public procurement procedures, solutions for debris management, guidelines for assisting households that do not have titles to their land, or recommendations for reducing corruption and engaging women in the recovery process. Countries need simple how-to guides, based on international good practices, which are made readily available. International organizations and donor governments can play a particularly strong role in facilitating knowledge sharing.

Jorge Melendez, Presidential Secretary of Vulnerability, El Salvador.

Finally, effective partnerships and coordination at all levels of society and government are essential for resilience to be achieved. The right policies, legislation, and checks and balances from the central government can enable local governments and communities to lead their own recovery process. Similarly, the World Bank has an obligation not to overwhelm its clients with paperwork and bureaucracy during an already chaotic recovery process, said Kyte. As the number of international development organizations continues to increase, they must become better coordinated and reduce the burden on governments.


Saber Hossain Chowdhury, President, IPU and Member of Parliament, Bangladesh.

Conclusion

This session ended with a joint statement from 37 countries and organizations in support of strengthening resilient recovery in the post-2015 framework for disaster risk reduction. The statement built upon growing support in the international community for integrating disaster risk reduction in recovery efforts, from the first World Reconstruction Conference in 2011 to UNISDR regional platforms for disaster risk reduction in Africa, Latin America and the Caribbean, and the Asia Pacific.

According to the statement, "recovery must be viewed as part of a continuum, inseparable from preparedness, response, mitigation,

Sam Worthington, President, InterAction.

and sustainable development. It is important to acknowledge the critical role that recovery can play in seizing opportunities that arise through the adversity of disasters and steering countries toward a state of greater resilience." The statement called for the post-2015 framework to actively promote the development of recovery systems as a means to risk reduction and sustainable development, and to better define and measure outcomes such as resilient recovery and "building back better."

Closing Plenary

Keynote: Rachel Kyte, *Vice President and Special Envoy for Climate Change, World Bank Group*

Margareta Wahlström, *Special Representative of the Secretary-General for Disaster Risk Reduction, UNISDR*

Moderator: Kathleen Koch, *Author and former CNN journalist*

Panelists

- Saber Hossain Chowdhury, *President, IPU and Member of Parliament, Bangladesh*
- Jorge Melendez, *Presidential Secretary of Vulnerability, El Salvador*
- Kaoru Saito, *Director for Disaster Preparedness, Cabinet Office, Japan*
- Sam Worthington, *President, InterAction*
- Hesham Youssef, *Assistant Secretary General for Humanitarian Affairs, Organization of Islamic Cooperation*

"Resilience is all about people. We have to put people and the bonds that bind them at the heart of all of our efforts. Resilient communities bend, but they do not break. And we have to respect the innate adaptation capacity that is already in many communities. This means that we have to give households ownership of the recovery process—to let them make decisions on where and how they rebuild their homes and livelihoods within guidelines based on science and technology that we bring to them."

—**Rachel Kyte**, Vice President and Special Envoy for Climate Change, World Bank Group

Credit: Goodshoot/ThinkstockPhotos

Appendix: Post-Conference Evaluation

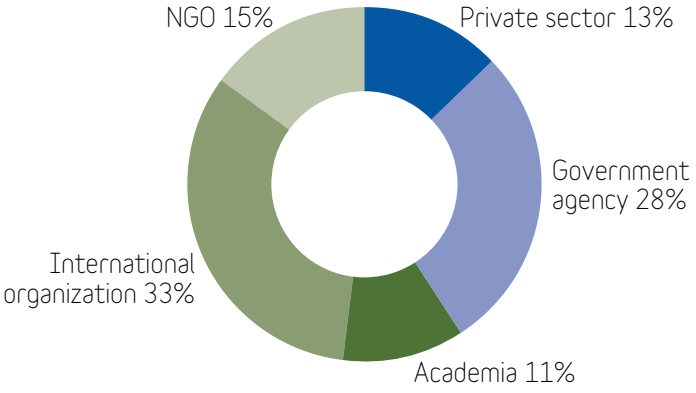
After the conference, GFDRR launched an online survey to assess the achievement of the conference's key objective, to build consensus on resilient recovery as an imperative for sustainable development and poverty reduction, both in the post-2015 framework for disaster risk reduction and beyond. The findings below are based on the 62 participants who took the survey:

- 89 percent of respondents said the conference was successful in "advancing consensus on the importance of resilient recovery for sustainable development and poverty reduction."
- 92 percent of respondents agreed that the joint conference statement served to "strengthen the focus on resilient recovery and reconstruction in the post-2015 framework for disaster risk reduction."
- More than 95 percent of respondents rated the *Disaster Recovery Framework Guide and Post-Disaster Needs Assessment Guide* as excellent or good tools for post-disaster recovery.
- 95 percent of respondents said the conference was an excellent or good tool for knowledge sharing.

Respondents recommended several topics of focus for future conference sessions, including:

- Monitoring and evaluation of disaster recovery
- Anticipatory response to disaster in developing countries
- Post-conflict reconstruction interventions
- Crowdsourcing technology for better prevention of hazards

Participants affiliation



How would you rate the conference's success in advancing consensus on the importance of resilient recovery for sustainable development and poverty reduction?

Answer Choices	Responses	
Excellent	42%	26
Good	47%	29
Fair	11%	7

How would you rate the quality and relevance of the following products launched during the conference?

	Excellent	Good	Fair	Poor	Total
Post Disaster Needs Assessment (PDNA) Guide	51% 30	46% 27	3% 2	0% 0	59
Disaster Recovery Framework (DRF) Guide	47% 27	48% 29	3% 2	2% 1	60
Country case studies on resilient recovery	37% 21	49% 28	12% 7	2% 1	57

Abbreviations

BNPB	National Disaster Management Agency, Indonesia
CEPREDENAC	Coordination of Natural Disaster Prevention in Central America, Guatemala (Centro de Coordinación para la Prevención de los Desastres Naturales en América Central)
DRF	Disaster Recovery Framework
ERRA	Earthquake Reconstruction and Rehabilitation Authority, Pakistan
FEMA	United States Federal Emergency Management Agency
FONDEN	National Disaster Fund, Mexico
GDP	Gross domestic product
GFDRR	Global Facility for Disaster Reduction and Recovery
HFA	Hyogo Framework for Action
IDP	Internally displaced people
IFRC	International Federation of Red Cross and Red Crescent Societies
IRIDeS	International Research Institute of Disaster Science, Japan
JICA	Japan International Cooperation Agency
Lao PDR	Lao People's Democratic Republic
NEDA	National Economic Development Authority, the Philippines
NGO	nongovernmental organization
PDNA	Post Disaster Needs Assessment
PSNP	Productive Safety Net Programme, Ethiopia
UAV	Unmanned aerial vehicle
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UN-Habitat	United Nations Human Settlement Programme
UNISDR	United Nations Office for Disaster Risk Reduction
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
UNOPS	United Nations Office for Project Services
USAID	United States Agency for International Development
WRC 2	World Reconstruction Conference 2

GFDRR

Global Facility for Disaster Reduction and Recovery

www.gfdrr.org

The Global Facility for Disaster Reduction and Recovery (GFDRR) helps high-risk, low-income developing countries better understand and reduce their vulnerabilities to natural hazards, and adapt to climate change. Working with over 400 partners—mostly local government agencies, civil society, and technical organizations—GFDRR provides grant financing, on-the-ground technical assistance to mainstream disaster mitigation policies into country-level strategies, and a range of training and knowledge sharing activities. GFDRR is managed by the World Bank and funded by 25 donor partners.