

ROUTLEDGE EXPLORATIONS IN ENVIRONMENTAL STUDIES

Disaster Risk Reduction for Economic Growth and Livelihood

Investing in resilience and development

Edited by
Ian Davis, Kae Yanagisawa and
Kristalina Georgieva



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Disaster Risk Reduction for Economic Growth and Livelihood

The prevalence of natural disasters in recent years has highlighted the importance of preparing adequately for disasters and dealing efficiently with their consequences.

This book addresses how countries can enhance their resilience against natural disasters and move towards economic growth and sustainable development. Covering a wide range of issues, it shows how well-thought-out measures can be applied to minimize the impacts of disasters in a variety of situations. Starting with the need for coping with a rapidly changing global environment, the book goes on to demonstrate ways to strengthen awareness of the effectiveness of preventive measures, including in the reconstruction phase. The book also covers the roles played by different actors as well as tools and technologies for improved disaster risk reduction. It focuses on a variety of case studies from across Asia, Africa and Latin America, drawing out lessons that can be applied internationally.

This book will be of great interest to professionals in disaster management, including national governments, donors, communities/citizens, NGOs and the private sector. It will also be a highly valuable resource for students and researchers in disaster management and policy, development studies and economics.

Ian Davis, an architect, is a Visiting Professor in Disaster Risk Management in Copenhagen, Kyoto, Lund and Oxford Brookes Universities. He works in Disaster Risk Reduction and Recovery. In 1996 he received the UN Sasakawa Award for his contribution to Disaster Prevention.

Kae Yanagisawa is Vice President of Japan International Cooperation Agency (JICA). She has a long-term career in international development at JICA and the United Nations Development Programme (UNDP). She gained knowledge and experience in disaster risk reduction while she was leading the disaster relief operations of JICA. She is a Visiting Professor in development cooperation at Meiji University, Japan.

Kristalina Georgieva is Vice President of the European Commission. From 2010 to 2014, she was the European Commissioner for International Cooperation, Humanitarian Aid and Crisis Response. Before joining the European Commission, she held various positions at the World Bank, including Director for Sustainable Development and Vice President and Corporate Secretary.

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Lisa Palmer

"We cannot eliminate extreme poverty and boost shared prosperity without building resilience to climate change and natural disasters. This book combines an excellent overview of lessons learnt and sound analysis that provide a valuable contribution to the global discussions around the post-Hyogo Framework for Action to reduce the devastating impact of disasters on countries and communities."

Jim Yung Kim, President, World Bank Group

"The International Federation of Red Cross and Red Crescent Societies strongly supports the Hyogo Framework for Action 2 (HFA2) and will set ambitious targets to improve community resilience programming. This book will add great value to discussions around the implementation of the HFA2, particularly actions that address underlying risks and vulnerabilities and underpin sustainable development efforts."

**Tadateru Konoé, President, International Federation
of Red Cross and Red Crescent Societies**

"This publication offers innovative solutions to building resilience to disaster, focusing on three essential components: protecting development through risk informed decision-making; managing uncertainties linked to unsustainable growth patterns and climate change; and strengthening the enabling environment through advanced risk governance processes. It is a worthwhile contribution to the discussions on the post-2015 frameworks for disaster risk reduction and development."

**Helen Clark, Administrator, United Nations
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Foreword

Sustainable development is an overarching goal that the international community has agreed to pursue in the “post-2015” period. It requires an environment in which social and economic progress is not interrupted. In reality, however, growth and development are often disrupted or slowed down by a number of factors. Disasters comprise one major downside risk to development, affecting people’s livelihoods, well-being and property. Human security is also threatened as a result of severe disasters.

As the magnitude of natural hazards as well as vulnerability of societies to such hazards continues to increase, robust, innovative and flexible approaches to risk reduction are necessary at each stage of the disaster risk management process. In particular, pre-disaster investment is the key factor in sustaining growth and development, and more needs to be done to put this concept into action. Moreover, the post-disaster recovery process should be seen as an opportunity to increase resilience to future disasters. “Build back better” is indeed a concept that connects the post-disaster stage to the subsequent step of pre-disaster investment.

Disasters actually affect a wide range of social and economic activities, and thus they should not be treated as separate factors, isolated from development. Disaster risk reduction should therefore be mainstreamed within development policies, both at national and local levels, and across all sectors, in such a way that a wide range of actors are involved, including governments, communities, academic and research institutions, and the private sector as well as civil society. Above all, the strong leadership of governments is essential in promoting this mainstreaming.

This book was planned in the hope that it will provide a useful addition to the existing literature and assist countries in their endeavors to enhance resilience to disasters. To this end, professionals specializing in DRR were invited both from Japan and around the world to share their rich knowledge and experiences. JICA is grateful for the precious time and efforts devoted by the authors and hopes that this book will contribute to the deepening of discussions within the international community on the post-Hyogo Framework for Action and Sustainable Development Goals.

Akihiko Tanaka
President
Japan International Cooperation Agency

Foreword

This book is an admirable contribution to highlighting the economic impact of disasters upon our daily lives and across many sectors in this increasingly interconnected world. It also brings to the fore many positive measures that can be taken to avoid the creation of new risk and to reduce exposure to existing risk.

Disasters can affect everyone, and are therefore everybody's business. Disaster risk reduction should be part of everyday decision making: from how people educate their children to how they plan their cities. Each decision can make us either more vulnerable, or more resilient. This simple truth applies particularly to the private sector which is responsible for 70 to 85 percent of investment in the world we are building around us.

The UN Secretary-General, Ban Ki-moon, has warned that "economic losses from disasters are out of control." Losses to date this century are in the range of US\$2.5 trillion, at least 50 percent higher than previous estimates.

When it expires in 2015, the current global blueprint for disaster risk reduction, the Hyogo Framework for Action, will be able to take some credit for reducing mortality linked to disasters and spreading a culture of resilience around the world.

However, as we prepare for the Third World Conference on Disaster Risk Reduction in Sendai, Japan in March 2015, there is raised awareness that much still needs to be done to address the underlying drivers of risk such as rapid urbanization, climate change, population growth, environmental degradation, poor land use and deficient building codes.

As this book makes clear, the world cannot afford to perpetuate a disconnect between disaster risk reduction, sustainable development and climate change. The post-2015 framework for disaster risk reduction which will be adopted in Sendai must be a pillar of the post-2015 development agenda, with clear links to the Sustainable Development Goals and the new climate change agreement. This volume is a very worthwhile contribution to the debate as we prepare for the World Conference.

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

Preface

Kristalina Georgieva

We are living in an increasingly fragile world. Climate change, urbanization, population growth and environmental degradation mean that the frequency and intensity of disasters and their impact have been steadily rising. Over the past three decades the average annual losses caused by natural disasters have quadrupled – from US\$50 billion in the 1980s to some US\$200 billion today. The book in your hands sheds disturbing light on this trend and how it manifests itself in different parts of the world. It tells us that we must get used to a “new normal,” where we face multiple challenges with finite resources.

Disasters know no borders. Rich and poor countries may be hit at any time. Still, the poorest suffer the most, as their cities, economies and people are more fragile, less prepared and unable to absorb either the losses or the costs to rebuild ruined infrastructure and lives. Consider, for instance, Haiti, which suffered tragically in 2010 when an earthquake killed 230,000 people in a matter of seconds. Its economy, already weak, was devastated. Years of development gains and investments evaporated overnight.

The rich also pay their price. Remember “Katrina” and the tragic days and nights in New Orleans? Or “Sandy” which hit the east coast of the United States in 2012, killing 285 and causing US\$72 billion in losses? Or the 2011 Great East Japan earthquake? Europe is also not spared – it lost over 100,000 lives during the past decade and suffered damage of over US\$180 billion. The 2014 floods in Eastern Europe alone (Serbia, Bosnia and Herzegovina, Croatia and Bulgaria) caused combined losses of over US\$3.5 billion.

Yet, the difference between disaster impact upon the rich and upon the poor is significant. Haiti is still struggling to recover, while the developed world is able to rebuild better and faster, and to invest more in preparedness and prevention activities.

Disaster trends of the past decades have opened our eyes to the fact that effective disaster management is at the heart of poverty reduction and economic and social prosperity. This book gives us numerous practical examples and case studies proving that in today’s more fragile world no national or regional economy can grow unless prevention, risk reduction and resilience are “embedded” in its planning and budgetary systems. Medicine invented immunization to strengthen human resistance to diseases: the same logic applies to economic

health. Prevention, risk reduction and resilience are the “immunization” of the economy and people’s well-being against disasters. The contributors in this publication offer us real solutions – tried and tested by policymakers and communities in different parts of the world.

And they convey a hopeful message: that our policies and practices are changing for the better. We no longer debate whether it makes sense to be prepared or to manage risk. The issue is how quickly we are doing it and how much we are willing to invest in risk reduction and resilience.

The outcomes of initiatives such as the Rio+20 Summit, the UNFCCC and the extensive international support for the resilience agenda make it clear that risk management policies are not only saving lives, but are also essential to ensure sustainable development and economic growth in developed countries, emerging economies and the developing world. Investments in disaster risk management bring extended economic benefits: they strengthen the resilience to increasing global shocks and threats and also act as a strong driver of innovation, growth and job creation. This can open new markets and business opportunities and help ensure structural sustainability of public and private finances in times when economic and financial downturn continues to put pressure on national budgets.

Against this background, a renewed international framework for disaster risk reduction (DRR) offers the opportunity to shift the paradigm of our approach in dealing with risks in today’s increasingly complex and fragile world. This is the key conclusion of this book, dedicated to the Third World Conference on Disaster Risk Reduction in Sendai (Japan) on March 14 to 18, 2015. The Conference will adopt the successor of the Hyogo Framework for Action as a blueprint for societies and countries to better manage risks to achieve resilience in the decades to come. It should also prove that the lessons we learned after Hyogo will be implemented into actions after Sendai.

Building on successes and lessons learned, it is my hope that the arguments and evidence will now lead to a firm political commitment to forge an ambitious renewed international framework. The European Union has been a strong advocate for it: including in formulating a common EU position on the post-2015 Hyogo Framework for Action building on the achievements of a range of EU policies that may be shared and underpin the new framework.

A few key messages stemming from this common position can help us make our *Investing in Resilience and Development* a reality, leading to concrete risk management steps and tangible reduction of vulnerabilities.

First, saving lives and economic losses starts with changing minds. We need a mindset change when it comes to making disaster risk management (DRM) and resilience part of our daily lives. This requires a constant, non-stop all-generations and all-society sectors effort to adapt our cities, our economies and our lives to the new realities. Japan’s example can inspire us all on this: it is one of the world leaders in this field, integrating disaster management into its education, public debate and policy at all levels. The chapters in this book that outline the Japanese experience and practices in disaster risk reduction should

inform the thinking of policymakers and practitioners elsewhere. Transparency, good governance and result-oriented actions can only add value to this concept. The best and the brightest of the scientific minds must be engaged, helping us to create new measures for success and new horizons to reach.

Second, while we think globally, we must act locally. Local communities are the first and the last defensive wall against all disasters. If we help them to manage better the upcoming challenges and build resilience; if we empower local leaders, minorities, women, professionals and volunteers alike, we will win most of the battles ahead.

Third, we must invest properly in disaster risk management and resilience. We need to engage fully the private sector, the insurance companies and the scientific centers to combine the power of money with the power of intellect. Innovative ideas, best practices and knowledge sharing supported with proper funding can prevent or reduce the negative impact of most of the trouble Mother Nature has in store for us.

So let us start building our new defense lines against disasters and make the lives of our children safer and more predictable. We must never forget that they will judge us by our deeds, not by our intentions.

Kristalina Georgieva
European Commission Vice President and former EU Commissioner for
International Cooperation, Humanitarian Aid and Crisis Response

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