

Urban Disaster Risk Management, Resilience & Land Tools and Analytical Services

Additional Resources

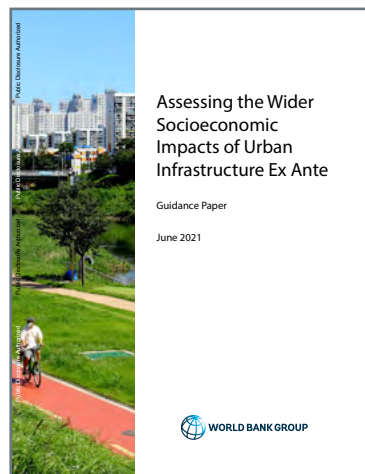
CityStrength



CityStrength is a rapid diagnostic that aims to help cities enhance their resilience to a variety of shocks and stresses. A qualitative assessment, the diagnostic takes a holistic and integrated approach and encourages collaboration between sectors to tackle issues and unlock opportunities within the city more efficiently. CityStrength is flexible and can adapt to different needs of clients in terms of depth and breadth and can be implemented in any city or combination of cities within a country regardless of size, institutional capacity, or phase of development. While it is not in current active use within the World Bank, it continues to be used externally.

Cathy Lynch
(clynch@worldbank.org)

Assessing Wider Socioeconomic Impacts of Urban Infrastructure Ex-ante Guidance Paper

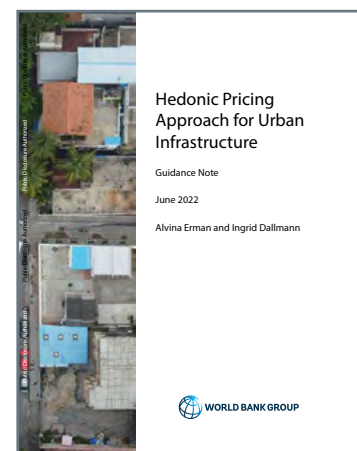


A practical guide to the ex ante assessment of the wider socioeconomic impacts of urban infrastructure projects, covering a variety of both quantitative and qualitative approaches, aimed at enhancing the capacity of World Bank task teams and counterpart stakeholders to conduct the required analysis. It provides impact frameworks for urban infrastructure investments in 13 different sectors: water & sanitation; solid waste management; urban roads; public transport; flood protection; earthquake & landslide protection; housing upgrading; paving & streetlighting; streetscaping;

greenspaces; tourism & heritage; heating; and electricity.

Mark Roberts
(mroberts1@worldbank.org)

Hedonic Pricing Approach for Urban Infrastructure : A Project Economic Analysis Guidance Note

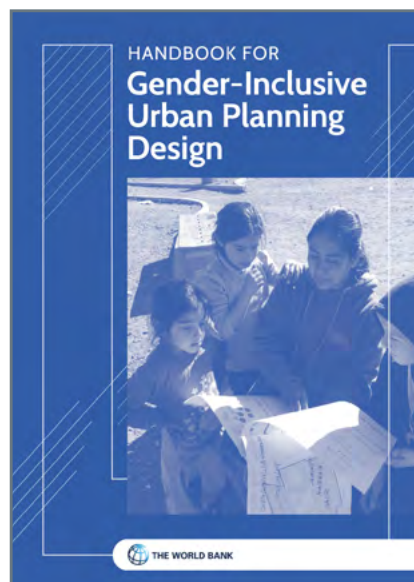


Urban infrastructure investments often have benefits that are particularly challenging to quantify, especially investments like parks, recreational areas, noise reduction, or streetscaping, which carry substantial potential positive externalities or co-benefits. The challenge is even more prominent in data-scarce developing country environments. This note provides step-by-step guidance on how to apply the hedonic pricing method,

focusing particularly on considerations for developing countries. The focus is on types of data needed to capture the most relevant variables for the purpose of project evaluation — namely, data on property values, data that capture access to the urban infrastructure being evaluated, and data for the most important control variables. The note also discusses the challenges and limitations of the hedonic pricing method.

 **Mark Roberts**
(mroberts1@worldbank.org)

Handbook for Gender-Inclusive Urban Planning and Design (also in Spanish)



This handbook aims to illuminate the relationships between gender inequality, the built environment, and urban planning and design; and to lay out a menu of simple, practicable processes and best practices for urban planning and design projects that build more inclusive cities – for men and women, for those with disabilities, and for those who are marginalized and excluded.

 **Carina Lakovits**
(clakovits@worldbank.org)

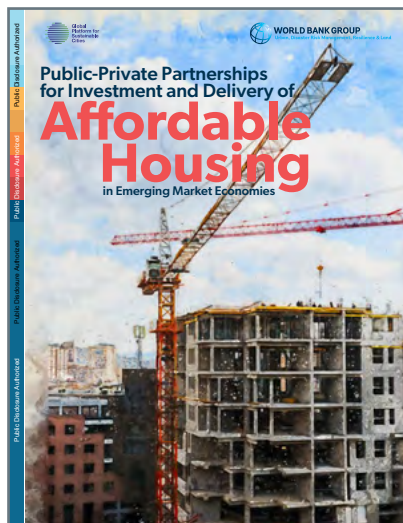
How to Identify Gender Gaps in Urban Forced Displacement: Guidance Note (English)




This guidance note offers comprehensive insights on how to conduct a gender gap analysis of the needs of displaced women and girls in situations of urban forced displacement.

 **Victoria Stanley**
(vstanley@worldbank.org)

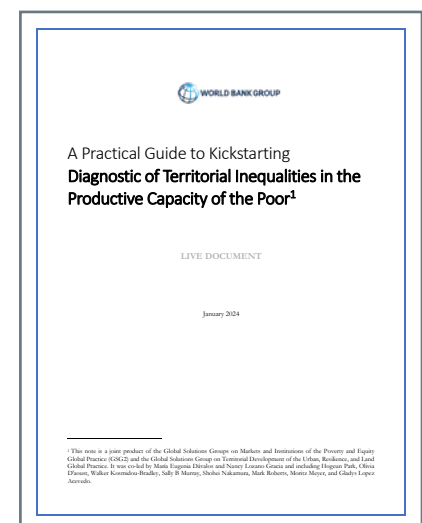
Public-Private Partnerships for Investment and Delivery of Affordable Housing in Emerging Market Economies



This note seeks to establish the first layer of a knowledge base for understanding PPPs for housing delivery and to initiate an approach to evaluate potential partnerships between the public and private sectors in emerging economies. The main audience are World Bank task teams as well as housing practitioners engaged in designing affordable housing projects and programs that require private sector participation and investment.

 **Yan Zhang** (yanzhang@worldbank.org);
Angelica Nunez (anunez@worldbank.org)

A Practical Guide to Kickstarting Diagnostic of Territorial Inequalities



This guidance note provides a roadmap for TTLs on how to engage in discussions on territorial inequalities, both to assess the extent to which they are a problem in the country of focus, to identify the key constraints to address them, and to engage in a policy discussion on priorities to tackle. The note includes a list of key questions to ask, the possible ways to answer these questions, and key data sources and literature to explore when confronted with questions on how to tackle territorial inequalities.

 **Nancy Lozano**
(nlozano@worldbank.org)

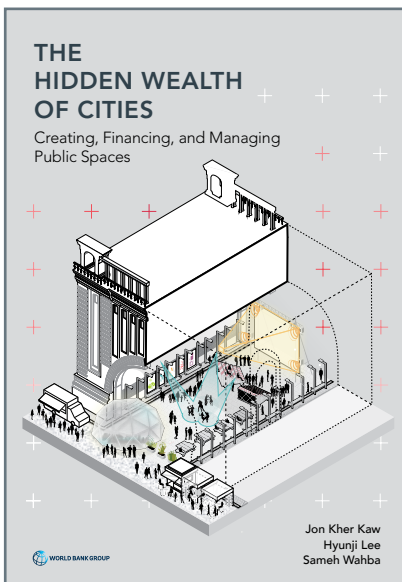
Land Value Capture: A Practitioner's Guide



A paper covering the detailed analysis of 16 different land value capture (LVC) tools used globally. The paper also proposes a framework on how to assess opportunities and gaps for cities.

Jon Kher Kaw
(jkaw@worldbank.org)

Framework for Creating, Financing, and Managing Public Spaces



This report discusses the complexities that surround the creation and management of successful public spaces and draws on the analyses and experiences from city case studies from around the globe. In doing so, it

identifies—through the lens of asset management—a rich palette of creative and innovative strategies that every city can undertake to plan, finance, and manage both government-owned and privately owned public spaces.

Jon Kher Kaw (jkaw@worldbank.org);
Hyunji Lee (hlee25@worldbank.org)

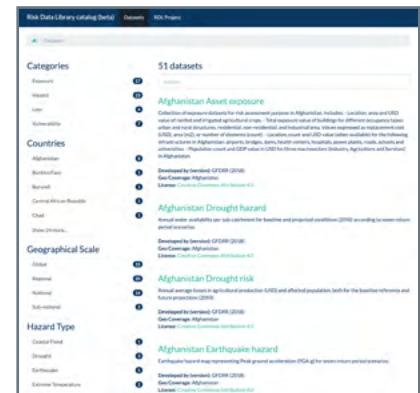
Reconsidering Sites and Services: A Global Review



This review provides guiding principles to TTLs/operations teams on designing “sites and services 2.0” projects. The review, conducted by the Urban Poverty, Inclusive Cities and Housing Global Solutions Group (GSG), provides a clear understanding of the large-scale first-generation sites and services of the 60s and 70s by assessing their structure and guiding principles, establishing their effectiveness in meeting the set objectives, examining reasons most governments and donors abandoned the intervention, identifying factors that contributed to their success or failure in countries where they were adopted, identifying how building technologies, land and housing markets have changed over time in support of or against sites and services, and draws lessons and potential guiding principles for potential future projects.

Sheila Kamunyori
(skamunyori@worldbank.org);
Keziah Mwangi
(kmwangi@worldbank.org)

Risk Data Library

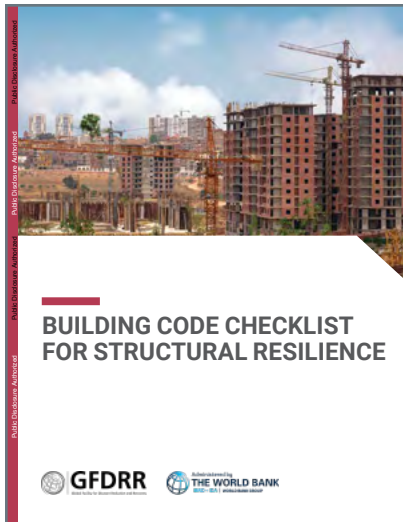


We provide access to a growing metadata catalog of disaster risk information at global, national, and local levels identified from World Bank data catalog and external platforms. The Risk Data Library is made possible thanks to the Risk Data Library Standard (RDL), an open data standard that provides a common description of the data used and produced in risk assessments, including hazard, exposure, vulnerability, as well as loss & damage data.

Pierre Chrzanowski
(pchrzanowski@worldbank.org)

Building Code Checklist for Structural Resilience

This set of checklist tools supports countries in assessing the comprehensiveness and depth of their building code provisions, focusing on four major elements: structural resilience, fire safety, green buildings, and universal accessibility. This will help countries' governments and code review bodies (or professionals commissioned by governments) to assess their own codes against consolidated checklists referring to global examples of good practices. The methodology was developed for experts



in each relevant discipline with broad engineering and architectural backgrounds.



Ana Campos

(acamposgarcia@worldbank.org);

Keiko Sakoda (ksakoda@worldbank.org)

Building Regulatory Capacity Assessment (BRCA) Methodology



The Building Regulatory Capacity Assessment (BRCA) is a methodology to help countries and cities assess their building and land use regulatory framework and identify opportunities for priority reforms and improvements. This is a pressing issue, as in many countries, rapid urbanization is occurring without comprehensive building regulatory frameworks and corresponding capacity to better manage disaster risks. BRCA 2.0 is an updated version of the original BRCA methodology published in

2017 and provides a simplified set of assessment questions, elaborated guidance to formulate practical and high priority recommendations, along with a reporting template to streamline report delivery. It aims to support governments' decision makers in charge of defining the priority and scope of legal, policy, and institutional reforms related to resilient, sustainable, and inclusive built environments. The BRCA identifies critical gaps and provides the necessary information to develop a baseline for formulating technical assistance to governments and consolidating findings that can be used to determine areas for improvements and investments.



Ana Campos

(acamposgarcia@worldbank.org);

Keiko Sakoda (ksakoda@worldbank.org)

Building Code Checklist for Green Buildings



Globally, buildings account for 37 percent of energy and process-related carbon dioxide (CO₂) emissions. With increasing urbanization and population growth, demand for energy will continue to increase faster than the supply of renewable energy. This means that increasing the efficiency of current energy use is critical to climate change mitigation efforts while also meeting the

development requirement of growing economies. Regulations that can increase the energy efficiency of buildings and reduce the carbon footprint of buildings are thus vital to reducing greenhouse gas (GHG) emissions and to achieving the Paris Agreement's goal of keeping the increase in average global temperature below 2°C. This checklist aims to facilitate a robust approach to reviewing green building provisions in building regulations by providing a discussion of fundamental green building components of building regulations, and a systematic approach to review green building provisions in regulations.



Ana Campos

(acamposgarcia@worldbank.org);

Keiko Sakoda (ksakoda@worldbank.org)

Building Code Checklist for Fire Safety



Urban fire risk is a global problem — one that can be heightened during periods of rapid urban development. Inadequacies in urban planning, infrastructure and construction practices related to fire prevention and mitigation significantly increase the potential for fire ignition, fire spread, and potential conflagration. This checklist aims to facilitate a robust approach to reviewing fire safety provisions in building and/or fire regulations by providing a discussion

of fundamental fire safety components of building and/or fire regulations, a systematic approach to review fire safety provisions in regulations.

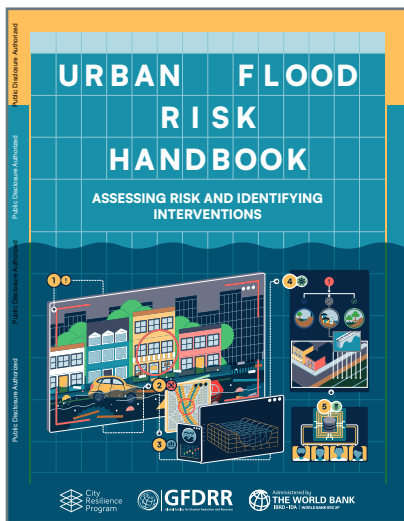


Ana Campos

(acamposgarcia@worldbank.org);

Keiko Sakoda (ksakoda@worldbank.org)

Urban Flood Risk Handbook: Assessing Risk and Identifying Interventions



This Urban Flood Risk Handbook: Assessing Risk and Identifying Interventions is a roadmap for conducting an urban flood risk assessment in any city in the world. It includes practical guidance for a flood risk assessment project, covering the key hazard and risk modeling stages as well as the evaluation of different flood-mitigating infrastructure intervention options and management of the project. The Handbook has been developed based on lessons learned from implementing urban flood risk assessments around the world in a diversity of contexts. It is intended for a wide variety of practitioners: project managers, city officials, and anyone else interested in conducting a strategic study of a city's flood risk and developing potential solutions for it. We expect this Handbook to contribute to the understanding of urban flood risk, make this specialized knowledge more

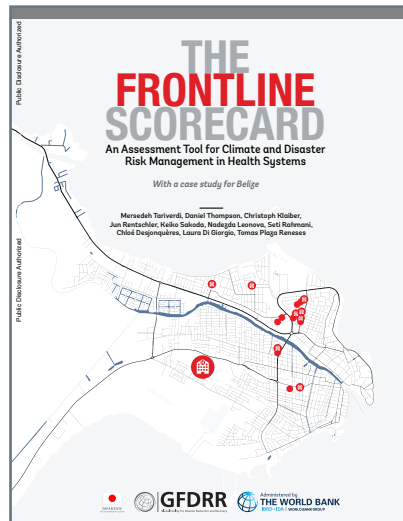
accessible to a wider public, and support the process of building cities that are not only capable of withstanding floods but also provide safe, inclusive, and sustainable environments for all their residents.



Ross Marc Eisenberg

(reisenberg1@worldbank.org)

The Frontline Scorecard: An Assessment Tool for Climate and Disaster Risk Management in Health Systems



Health care systems are at the frontline of delivering critical care during emergencies, mitigating illnesses and deaths. Yet many countries struggle to meet even routine demands for health care. Climate change, disasters, pandemics, and demographic changes are bound to increase pressures on already strained health systems (Rentschler et al. 2021). Preparing and equipping health systems to adequately respond to crises are vital to ensure sustained access to health services and to provide reliable essential health care that protects people's well-being. Having a robust assessment of their country's health system's climate and disaster risk management (CDRM) capabilities allows policy makers to make these systems more resilient against shocks. This policy note introduces the Frontline Scorecard,

a new rapid diagnostic tool that decision makers can use to conduct a high-level assessment of the CDRM capabilities of their health system and illustrates its application in a case-study country, Belize.



Meresdeh Tariverdi

(mtariverdi@worldbank.org);

Jun Rentschler

(jrentschler@worldbank.org);

Christoph Klaiber

(klaiber@worldbank.org)

The Nature-Based Solutions Opportunity Scan



Access to actionable information that outlines opportunities for nature-based solutions (NBS) investments at early stages of project design is essential for enabling the scale up of these solutions, which can effectively reduce climate risks, while bringing important socioeconomic benefits. This report summarizes how the Nature-Based Solutions Opportunity Scan (NBSOS) supports the World Bank, its clients, and development partners to identify NBS investment opportunities, understand the associated benefits, and integrate these interventions into projects. The NBSOS is a geospatial analysis and participatory process that provides an on-demand service tailored to each specific case in both cities and coastal areas, ensuring World Bank

project teams have a clear understanding of available NBS investment opportunities in a given project area.



Boris Ton Van Zanten

(bvanzanten@worldbank.org)

Nature-Based Solutions: Guidance for Municipalities and the Private Sector



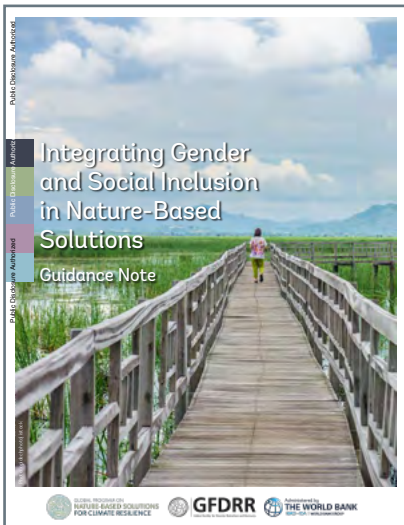
The purpose of this catalogue is to raise awareness in municipalities and the private sector of nature-based solutions (NBS) projects in urban settings that focus on scaling the resilience of cities to address the urban heat island effect, flooding, drought, water, and air pollution, and more.



Boris Ton Van Zanten

(bvanzanten@worldbank.org)

Integrating Gender and Social Inclusion in Nature-Based Solutions: Guidance Note



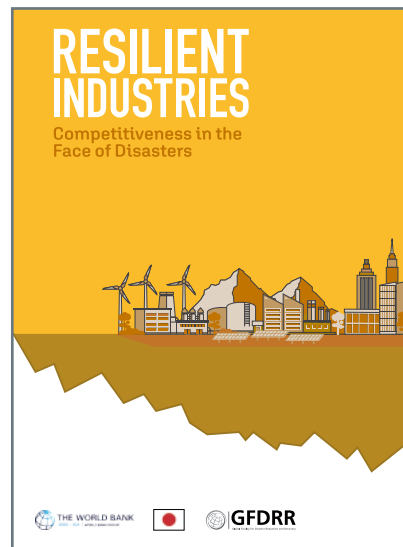
The goal of this note is to provide guidance on gender and social inclusion in nature-based solutions. Specifically, the note presents factors for consideration in NBS projects from the early stages of project conceptualization through the project design and implementation process. It is intended to help World Bank staff working on operations involving NBS, governments and other development officials trying to design and implement inclusive NBS. It is also designed to contribute to the literature on NBS, because it provides insights, lessons, and case studies from the World Bank-financed NBS portfolio and other sources.



Boris Ton Van Zanten

(bvanzanten@worldbank.org)

Resilient Industries: Competitiveness in the Face of Disasters



Industrial activity creates jobs, catalyzes investments and innovation, and raises standards of living in many countries. As climate change and disasters intensify, so too does the risk environment for industry activity. More recently, a viral pandemic has threatened industries and national economies, and the imperative to secure business continuity and competitiveness during growing instability has thrust resilience into the spotlight. The suite of

risks posed by climate change and natural disasters threatens industry's potential to grow, generate jobs, and compete. For many developing countries, disaster-related liabilities may exceed the capacity of governments to respond, and even national economies may be threatened. The emergence of industry resilience as a global discourse is timely; however, industry resilience is a nascent discipline, and frameworks for its application and operation remain limited even as threats intensify. Disasters offer the opportunity, with the right frameworks in place, to strengthen competitiveness through build back, better initiatives, and to adapt to long-term climate change and disaster risks. Despite these insights, and the urgency to act, however, the evidential basis for policy intervention and conceptual frameworks for industry resilience are far from definitive, and gaps in knowledge remain. As a result, industry resilience policy and action remain low in both the public and private sectors, and firms and economies still face significant costs of inaction.



Paolo Avner (pavner@worldbank.org);

Frederico Pedroso

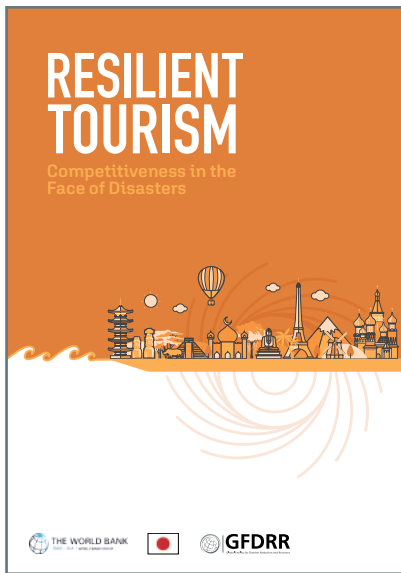
(fpedroso@worldbank.org);

Natalia Romero

(nromero@worldbank.org)

Resilient Tourism: Competitiveness in the Face of Disasters

Enhancing Competitiveness in the Face of Disasters presents the case to government decision makers, tourism private sector stakeholders, and development partners that the industry must act urgently to integrate resilience as a core component of its competitiveness agenda. Its objectives are to: build knowledge of how and why the tourism sector is vulnerable to disaster and climate risks; raise awareness of disaster and climate impacts on tourism competitiveness; examine barriers to proactive mitigation and risk-informed decision-making;



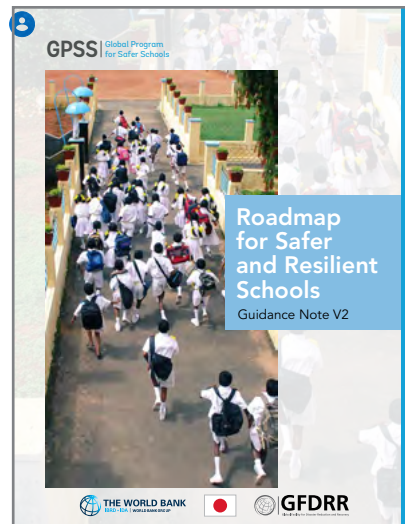
and present examples of approaches in different countries. The report flags the need for research and methodology in this emerging field and proposes a Resilient Tourism Framework to integrate preparedness, response, and recovery actions into the sector. This report is part of a series under the World Bank's Resilient Industries Program, which proposes ways to integrate disaster and climate resilience considerations into the industrial development investment projects the World Bank supports. Its flagship report, Resilient Industries: Competitiveness in the Face of Disaster, details a Resilient Industries Framework which informs the Resilient Tourism Framework.



Paolo Avner (pavner@worldbank.org);
Frederico Pedroso
 (fpedroso@worldbank.org);
Natalia Romero
 (nromero@worldbank.org)

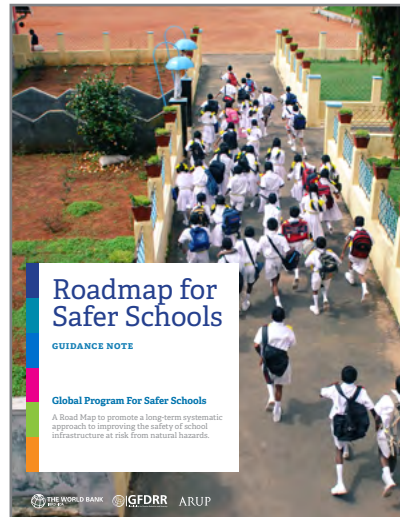
A Roadmap for Safer Schools: Guidance Note

This Guidance Note is a roadmap to promote a long-term systematic approach to improving the safety of school infrastructure at risk from natural hazards.



Carina Fonseca
 (cferreira2@worldbank.org);
Fernando Ramírez
 (framirezcortes@worldbank.org)

Roadmap for Safer and Resilient Schools: Guidance Note 2



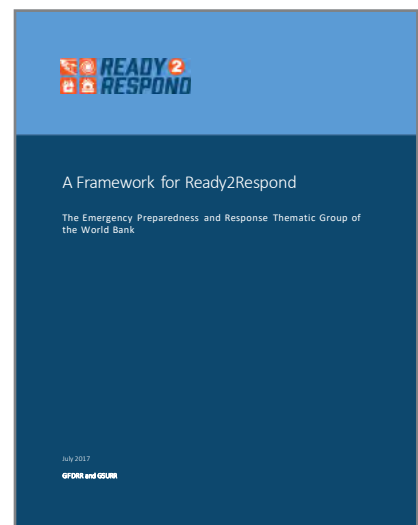
The Roadmap for Safer and Resilient Schools (RSRS) is a step-by-step guide intended to provide support to governments of developing countries that are exposed to natural hazards. Specifically, it focuses on the design of intervention strategies and investment plans to make schools safer and resilient at scale. The guide also encompasses the recovery and reconstruction of school facilities affected by disasters. The RSRS

aims to promote cooperation among stakeholders involved in the planning, design, and implementation of risk reduction programs across large stocks of school facilities. Key stakeholders in this effort are school infrastructure managers, relevant government agencies, ministries of finance, the World Bank, and other international financing institutions (IFIs) and development partners. The RSRS stems from the experience of World Bank task teams working in this field.



Carina Fonseca
 (cferreira2@worldbank.org);
Fernando Ramírez
 (framirezcortes@worldbank.org)

Ready2Respond: A Framework for Emergency Preparedness and Response



Ready2Respond improves national, sub-national and city resilience mechanisms and protects development gains through investments in emergency preparedness and response (EP&R) systems informed by the encompassing City Resilience Program (CRP) and other World Bank platforms. Ready2Respond provides timely, technical expertise, and global support to World Bank teams with implementation tools and techniques as they pursue EP&R development investments. The purpose of this framework document is to provide a knowledge base for the generation of more

targeted guidance and reference materials for task team leaders and their clients regarding EP&R programs, and to inform future World Bank Group operations and technical assistance to countries.



Mary Elinor Boyer
(mboyer@worldbank.org)

Expanded Crisis Toolkit to Empower Countries Amid Intertwined Crises

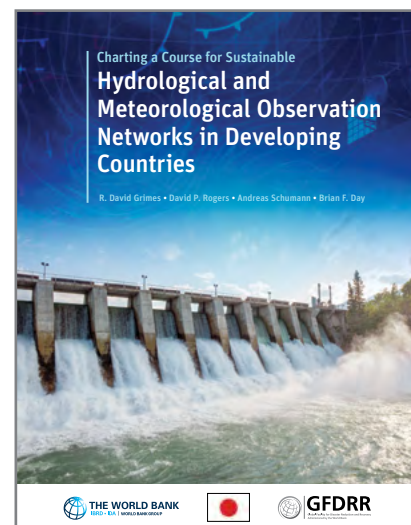


The expanded Crisis Toolkit fills gaps based on lessons learned from previous crisis response and substantially expands tools available to countries to ensure comprehensive protection in times of crisis.



Mary Elinor Boyer
(mboyer@worldbank.org)

Charting a Course for Sustainable Hydromet Observation Networks

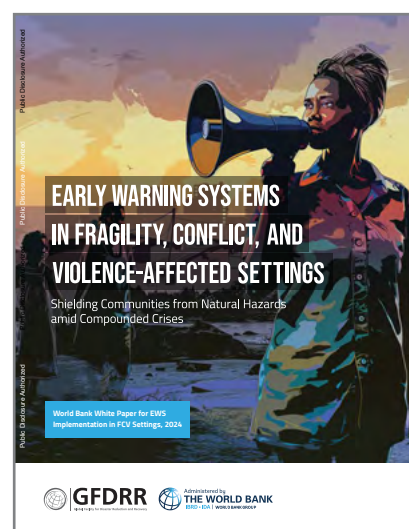


This report aims to facilitate the development of more strategic and viable roadmaps for investments in weather and climate observation networks where those investments are likely to be substantial in the coming decades, as countries improve resilience to natural hazards and economies transform in response to climate change challenge.



Moussa Sidibe
(msidibe3@worldbank.org);
Anna-Maria Bogdanova
(ambogdanova@worldbank.org)

Early Warning Systems in Fragility, Conflict, and Violence-Affected Settings



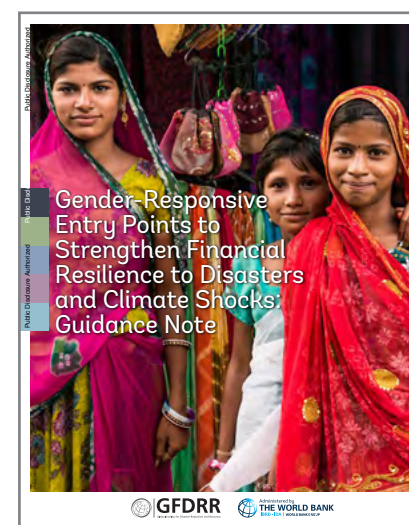
This study, led by the Global Facility for Disaster Reduction and Recovery (GFDRR) teams working on the Disaster-FCV Nexus thematic area and the Hydromet Services and Early Warning Systems thematic area, aims to contribute to GFDRR's overarching objective: to help low- and middle-income countries understand and reduce their vulnerability to natural hazards and climate change. More specifically, the purpose of this report is to provide valuable insights into the nuances of early warning systems (EWS) implementation within fragile, conflict, and violence (FCV)-affected contexts against growing natural hazards, offering practical recommendations and identifying

entry points for enhancing stakeholder coordination, optimizing resource allocation, and fostering community resilience. It is aimed at development practitioners, especially World Bank staff, who work with communities and governments to enhance the scaling-up of EWS coverage to populations living in contexts affected by FCV.



Karima Ben Bih
(kbenbih@worldbank.org)

Gender-Responsive Entry Points to Strengthen Financial Resilience to Disasters and Climate Shocks: Guidance Note



Increasing global temperatures, rising sea levels, and changing precipitation patterns are associated with high risks of disasters around the world. Climate change is increasing the cost of disasters and extreme weather events, resulting in a growing burden on public and private spending. It is predicted that multiple disaster shocks occurring concurrently with pandemics will have an even larger impact on economic development and the well-being of the world's population. Effective financial and insurance solutions can help governments and private actors manage increasing disaster- and climate change-related risks, improve social protection systems targeting the most vulnerable

groups, such as women and the poor, and advance sustainable development.



Mirtha Escobar

(mescobar2@worldbank.org);

Zoe Trohanis

(ztrohanis@worldbank.org)

Toward More Gender-Inclusive Emergency Recovery Projects Responding to Natural Disasters: Sectoral Entry Points



The objective of this guidance note is to identify entry points for gender considerations in sectors typically financed by Emergency Recovery Projects (ERPs) (financed by the World Bank or other development partners) that respond to the impacts of natural hazards, excluding epidemics and pandemics. Making gender entry points accessible to teams and government counterparts can help them find relevant ways to integrate gender consideration into project design early on in preparation. As per the definition used in this note, considering gender in a project means that the project identifies gender gaps, presents actions to address those gaps, and uses relevant indicators to measure progress. The analysis in this note captures good practices and lessons learned through a review of World Bank-financed ERPs

carried out from fiscal year FY2017 to FY2021 that responded to the impacts of natural hazards.



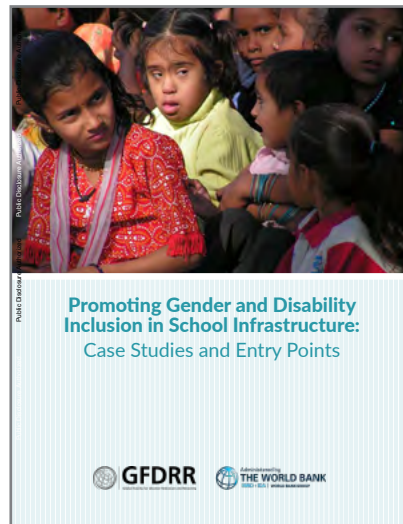
Mirtha Escobar

(mescobar2@worldbank.org);

Zoe Trohanis

(ztrohanis@worldbank.org)

Promoting Gender and Disability Inclusion in School Infrastructure: Case Studies and Entry Points



In many low and middle-income countries (LMICs) around the world, lack of access to inclusive school infrastructure disproportionately affects girls, children with disabilities, and other disadvantaged groups, hampering their education and future employment opportunities. The negative, gender-specific effects of limited access to education due to inadequate infrastructure are worsened in some cultures by existing discriminatory practices, gender-based social norms, and a lack of legislation related to inclusive school facilities (UNESCO 2020). In addition, climate change and increasing disasters threaten education outcomes in LMICs, with a disproportionate impact on girls and other disadvantaged groups (Hassani 2022; INEE 2022; Kwauk & Steer 2023). This note presents findings from a study on gender-inclusive and disability-sensitive safer school infrastructure.

It draws from a review of World Bank projects involved in constructing or rehabilitating schools in LMICs. The Global Facility for Disaster Reduction and Recovery (GFDRR) shares these lessons learned to help incorporate gender- and disability-inclusive perspectives into the World Bank's school construction and rehabilitation interventions. The note mainly focuses on school facilities providing basic, primary, and secondary education services.



Mirtha Escobar

(mescobar2@worldbank.org);

Zoe Trohanis

(ztrohanis@worldbank.org)

Entry Points for Social Inclusion and Gender in Disaster Risk Management and Climate Resilience Development Policy Operations: Guidance Note



This note's objective is to identify entry points for integrating inclusion and gender considerations into disaster risk management (DRM) and climate resilience development policy operations while providing actionable recommendations. The note identifies gaps, actions, and indicators grouped by five policy areas that had a greater emphasis on efforts to enhance social inclusion: (i) social

protection; (ii) national DRM framework; (iii) health emergency preparedness and response; (iv) schools and educational infrastructure; and (v) urban, territorial, and physical development planning. This analysis is supported by country-specific case studies and best practices.



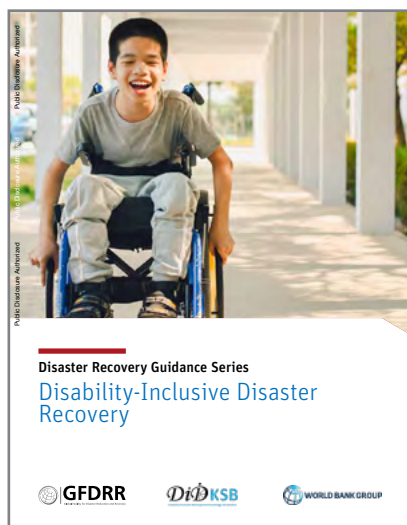
Mirtha Escobar

(mescobar2@worldbank.org);

Zoe Trohanis

(ztrohanis@worldbank.org)

Disability-Inclusive Disaster Recovery



The guidance note provides action-oriented direction for government officials and decisionmakers with responsibility for post-disaster recovery and reconstruction. The guidance will enable the development of disability inclusive planning and programming across sectors and government. The note is expected to be of interest to wider government and nongovernment actors, including disabled persons' organizations (DPOs), concerned with inclusive recovery. Key considerations and critical information for recovery planning are highlighted in text boxes. A summary and action points are provided at the end of each section. The note is organized around the following topics: Key principles for disability-inclusive recovery, Disability data for

the post-disaster needs assessment and inclusive recovery, Enabling policies and legislation for disability-inclusive recovery, Institutional mechanisms for inclusive recovery, Financing mechanisms and Implementation arrangements.



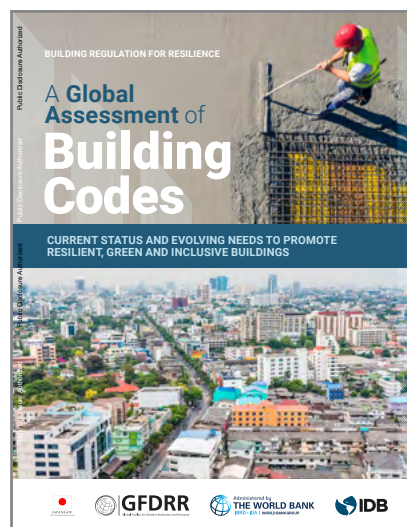
Mirtha Escobar

(mescobar2@worldbank.org);

Zoe Trohanis

(ztrohanis@worldbank.org) and

A Global Assessment of Building Codes: Current Status and Evolving Needs to Promote Resilient, Green and Inclusive Buildings



This report assesses building codes in selected countries, focusing on structural safety, green building practices, and universal accessibility to support resilient, inclusive, and sustainable urban development. By analyzing technical content and implementation mechanisms, it provides guidance for policy makers, practitioners, and development partners to improve building regulations and ensure safe, adaptable, and environmentally responsible cities.

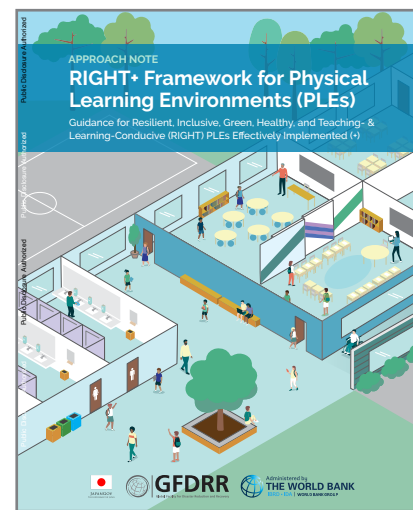


Ana Campos

(acamposgarcia@worldbank.org);

Keiko Sakoda (ksakoda@worldbank.org)

RIGHT+ Framework for Physical Learning Environments (PLEs): Guidance for Resilient, Inclusive, Green, Healthy, and Teaching and Learning-Conducive (RIGHT) PLEs Effectively Implemented



The RIGHT+ framework offers guidance for designing and implementing resilient, inclusive, green, healthy, and learning-conducive physical learning environments at three levels: learning spaces, the school as a whole, and the network of education facilities. It provides a flexible, context-sensitive approach to assess, rehabilitate, or construct PLEs, emphasizing data-driven, locally tailored interventions that enhance student learning, well-being, and equity.



Carina Fonseca

(cferreira2@worldbank.org);

Fernando Ramírez

(framirezcortes@worldbank.org)

Growing Resilience: Unlocking the Potential of Nature-Based Solutions for Climate Resilience in Sub-Saharan Africa

This report analyzes over a decade of nature-based solutions (NBS) projects in Sub-Saharan Africa, identifying



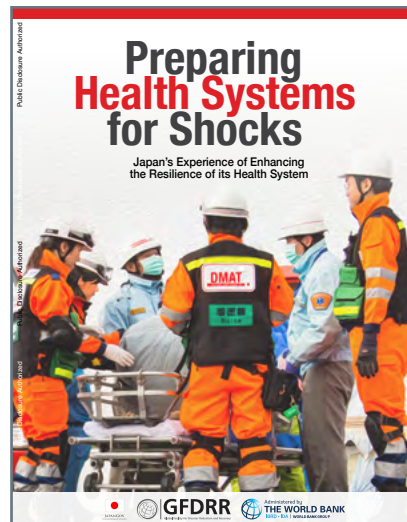
policy, financial, institutional, social, and technical barriers to adoption and assessing regional climate risks. Based on project data and insights from over 50 interviews with developers, funders, and investors, it provides strategic recommendations for scaling up NBS investments to enhance climate resilience.



Boris Ton Van Zanten
(bvanzanten@worldbank.org)

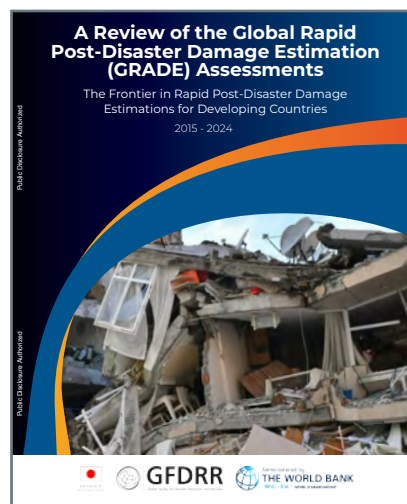
Preparing Health Systems for Shocks: Japan's Experience of Enhancing the Resilience of its Health System

This report examines Japan's experience in strengthening health system resilience, highlighting lessons from major earthquakes, floods, infectious disease outbreaks, and the COVID-19 pandemic. It illustrates how integrated regulations, governance mechanisms, and capacity-building initiatives have enhanced the system's ability to prepare for, respond to, and recover from crises, offering practical insights for policy makers and practitioners globally.



Mersedeh Tariverdi
(mtariverdi@worldbank.org);
Jun Rentschler
(jrentschler@worldbank.org);
Christoph Klaiber
(klaiber@worldbank.org)

A Review of the Global Rapid Post-Disaster Damage Estimation (GRADE) Assessments: The Frontier in Rapid Post-Disaster Damage Estimations for Developing Countries 2015-2024



This report reviews GRADEs conducted between 2015 and 2024, examining their evolution, methodology, and application across 66 disaster events. Through in-depth case studies and comparative analysis with other post-disaster assessment approaches, it highlights GRADE's efficiency, accuracy, and flexibility in supporting disaster risk management and climate resilience.



Rashmin Gunasekera
(rgunasekera@worldbank.org)

Strategic Planning for Resilient Housing Reconstruction: Scenario-Based, Participatory, and Visual Approaches



Preparedness for housing reconstruction is essential for saving lives, protecting communities, and ensuring rapid, equitable recovery after disasters. Global experience demonstrates that the most effective housing reconstruction efforts begin long before a disaster strikes, through proactive planning, capacity building, and strategic coordination.



Luis Miguel Triveno Chan Jan
(ltriveno@worldbank.org);
Sarah Elizabeth Antos
(santos1@worldbank.org);



WORLD BANK GROUP
Urban, Disaster Risk Management, Resilience & Land