Inclusive Approaches to Disaster Risk Management— A Qualitative Review

GFDRR
Global Facility for Disaster Reduction and Recovery

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Acknowledgements

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Abbreviations and Acronyms

ASP	Adaptive Social Protection
AFR	Africa
ASA	Analytical and Advisory Services
BWCSRP	Bangladesh Weather and Climate Services Regional Project
CAP	Common Alerting Protocol
CBDRM	Community-based disaster risk management
CDD	Community-driven development
CNICs	Computerized national identity cards
CSOs	Civil society organizations
DRM	Disaster risk management
DRR	Disaster risk reduction
EAP	East Asia and the Pacific
ECA	Europe and Central Asia
EEA	European Environment Agency
EU	European Union
FCV	Fragility, conflict, and violence
GBV	Gender-based violence
GFDRR	Global Facility for Disaster Reduction and Recovery
GRID	Green, resilient, and inclusive development
ICT	Information and communication technologies
IDs	Identification cards
IDP	Internally displaced people
IPCC	Intergovernmental Panel on Climate Change
IPF	Investment Policy Lending
M&E	Monitoring and evaluation
MNA	Middle East and North Africa
NGOs	Nongovernmental organizations
OPDs	Organizations of persons with disabilities
PAD	Project Appraisal Document
PDNA	Post-Disaster Needs Assessment
SDGs	Sustainable Development Goals
TAG	Technical Advisory Group
TTLs	Task Team Leaders
UN	United Nations
UNDP	United Nations Development Programme
UNDRR	United Nations Office for Disaster Risk Reduction
WASH	Water, sanitation, and hygiene
WGS	Washington Group Questions
WG-SS	Washington Group Short Set on Functioning

Executive Summary

This report presents a qualitative review of inclusive approaches to disaster risk management (DRM)—a part of the first stocktaking exercise that the Global Facility for Disaster Reduction and Recovery (GFDRR) conducts to assess lessons learned and generate knowledge to help mainstream inclusive approaches and strategies across GFDRR activities. The findings are based on a literature review, analysis of portfolio data, and internal consultations with World Bank task team leaders of GFDRR-funded activities. The reviewed literature includes GFDRR project documentation and knowledge products, World Bank operational documents and research findings, and relevant publications from other scholars and organizations. The stocktaking exercise emphasizes gender, disability-inclusive DRM, citizen engagement, and community participation. It will help create a framework for GFDRR engagement on inclusive DRM and inform development of an inclusive DRM workplan for implementation beginning in fiscal year 2022. As such, GFDRR's work in these areas reflects its commitment to the World Bank Group's Gender Strategy 2016–2023 (World Bank Group 2015), the Disability Inclusion and Accountability Framework (World Bank 2018), and the Strategic Framework for Mainstreaming Citizen Engagement in World Bank Group Operations (World Bank 2014).

Ultimately, social inclusion in DRM is about promoting opportunities for, abilities of, and dignity of marginalized groups in all aspects and stages of the DRM continuum.[1] Although not unique to the disaster context, mechanisms of exclusion tend to exacerbate existing inequalities during disasters. Therefore, inclusive DRM is a critical component of the broader social inclusion agenda. Moreover, DRM actions will not effectively reduce disaster risks for everyone if the needs of vulnerable or marginalized population groups are not considered. Although the underlying patterns driving disaster vulnerability are sometimes difficult to assess and quantify, failure to address them is likely to result in enormous social and economic costs. Yet, inclusive DRM approaches are not just about supporting disadvantaged groups that suffer disproportionately from the effects of disasters—it is about empowering marginalized people to help increase the resilience of their communities. Figure 1 presents a summary of the main elements of inclusive DRM.

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[1] The three dimensions of social inclusion (opportunity, ability, and dignity) are explained in the Inclusion Matters framework (World Bank 2013a). There are four phases in the disaster continuum: preparedness, response, recovery, and mitigation. The review refers to this as a "continuum" or "cycle" because it is continuous, and one phase may blend into the next without a clear beginning or ending.

Figure 1 Inclusive Disaster Risk Management (DRM) Approach

Mainstreaming climate and disaster risk management into development
could reverse the trend of disaster losses

Social, economic, and political conditions mediate **exposure and susceptibility** to physical impacts of disasters.

Marginalized groups tend to live in **higher-risk areas**, often have **limited resources**, and are often excluded from or **underrepresented in decision-making bodies**.

Inclusive DRM

The operationalization of inclusive DRM encapsulates various approaches that consider the **heightened vulnerability** of certain groups that are disadvantaged in the context of disasters.

Analysis of vulnerable groups and the diverse set of factors driving their vulnerability.

Addressing disaster risk vulnerabilities of marginalized and excluded groups should be a cornerstone of the commitment to fight poverty and advance the social inclusion agenda.

Recognition of **social vulnerabilities can increase the cost-effectiveness** of DRM measures.

Meaningful citizen engagement and broad community participation

In identifying and analyzing **risks and vulnerabilities** in planning, **designing, implementing, and monitoring DRM interventions.**

Source: Original figure for this publication.

Main Findings

Although this report focuses on the specific needs of women, men, and people with disabilities, it also aims to explain inclusivity in DRM more broadly and as a holistic concept. Some of the lessons learned from gender- and disability-inclusive activities are relevant for identifying other vulnerable groups as well. Moreover, the concept of *vulnerable groups* does not imply that they are homogenous collectives with clearly defined boundaries. Rather, the premise is that group identities overlap and are inherently diverse and dynamic. Individuals and groups are excluded or included based on their gender, gender identity, sexual orientation, race, caste, ethnicity, religion, age, and disability status (among other characteristics), so certain sociodemographic characteristics may also lead to an accumulation or even a multiplication of disadvantages. This notion of *intersectionality* is crucial for the understanding of inclusive DRM. To identify vulnerable groups that may be at greater risk and have special needs during and after disasters occur, practitioners must understand the elements identified in Figure 2.

Figure 2 Key Elements of Vulnerability

The nature of potential impacts	The availability of tools, methods, and data
○ **Disasters have a wide range of effects** on natural and human systems, generally referred to as "effects on lives, livelihoods, health, ecosystems, economies, societies, cultures, services and infrastructure" (UNISDR 2018, 86). ○ **The distinction between immediate, short-term effects** (e.g., fatalities, injuries, displacement, destruction of homes, water shortages, disruption of essential services, infectious diseases) and more indirect, long-term effects (e.g., employment effects, market dynamics, social cohesion, public health impacts, nutrition, or migration) (EEA 2017). ○ **The wide-ranging social and economic impacts are often subtle and not easily measurable.** For instance, stress and anxiety have important mental health implications in the short and long term and affect peoples' future lives, work, livelihoods, and social participation (EEA 2017). ○ **Some social groups may be at greater risk from a disaster (because of greater exposure or greater vulnerability to a hazard)**, have different dimensions, and require different kinds of support.	○ **Assessment methodologies to measure vulnerability.** Given its multidimensional nature, there is no consensus on the definition, conceptualization, and measurement of vulnerability, but it is highly context specific, and to be relevant for policymakers, assessments must account for diverse socioeconomic, demographic, political, and cultural characteristics. ○ **Quantitative approaches** focused on indicator development, indices, and weighting make a valuable contribution to the research field (Arnold et al. 2014). Qualitative research provides detailed, place-specific, and hazard-specific information that can play a crucial role in understanding perceptions and experiences in the context of disaster risks.[2] ○ **The merits of qualitative and quantitative data should be considered for disaster risk assessments**, although choice of methodology will depend on a research context (e.g., practical and political constraints) and level of analysis (geographic and temporal scales).

Source: Original figure for this publication.

Effective mainstreaming of social inclusion in DRM requires thorough understanding of the various societal barriers marginalized groups face when interacting with their social and physical environments. The approach used in this report explored the factors or drivers of vulnerability by examining five distinct types of constraints: physical, financial, information, attitudinal, and institutional. These constraints may prevent people from accessing critical markets, services, and spaces with dignity. By shifting attention to shortcomings in the social system rather than focusing on people's abilities, this perspective acknowledges marginalized groups as agents of change, emphasizing that the adverse effects of disasters on these groups are avoidable. Understanding the underlying risk factors is a key element of DRM. Inclusive DRM approaches pay special attention to various factors related to vulnerability beyond the hazard itself or the likelihood of exposure. Hence, inclusive DRM is about understanding these factors or drivers of vulnerability in groups likely to disproportionally experience the direct and indirect consequences of disasters.

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[2] For example, Rufat et al. (2015) have reviewed case studies that assess social vulnerabilities to floods and found "a large gap between the contextual complexity revealed through qualitative studies and generalized, quantitative metrics produced by social vulnerability indices."

Figure 3 Drivers of Vulnerability Associated with the Identified Types of Constraints

Persons with mobility impairments

Migrants/IDPs

Ethnic minority women

Widows

Older persons

Women with hearing disabilities

Rural employment men

Physical constraints

Institutional constraints

DRM

Financial constraints

Attitudinal constraints

Information constraints
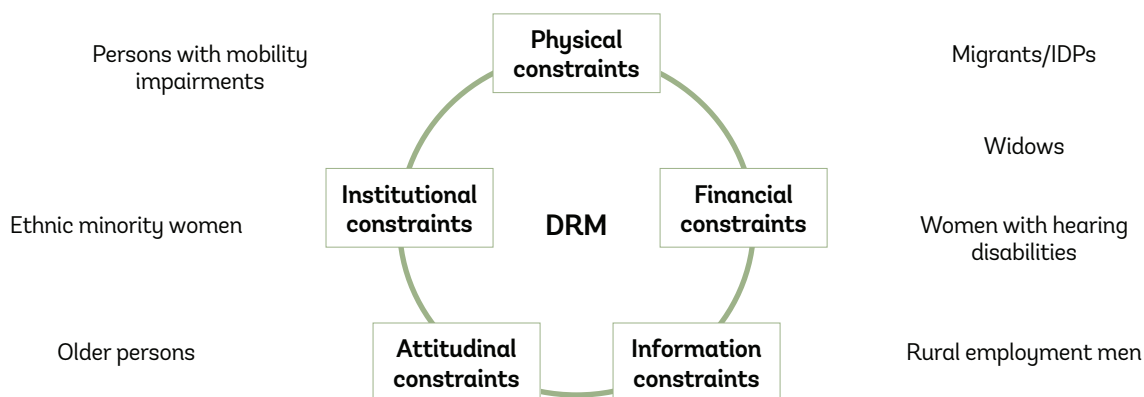
Source: Original figure for this publication.

Recommendations

○ **Increase efforts to integrate various agendas and approaches to inclusive DRM.** There is potential to harmonize and integrate GFDRR's frameworks and approaches subsumed under the umbrella of inclusive DRM. A key principle of this approach is that mainstreaming inclusion generates community benefits beyond the initial target group. The report identifies common patterns, gaps, and opportunities across the agendas of gender equality, disability inclusion, and citizen engagement in the context of DRM. The specific objective of these efforts is to develop and implement a more systematic and results-focused approach to the analysis, design, and monitoring and evaluation of inclusive DRM policies, programs, projects, analytics, and advisory services. This objective will be achieved through a number of targeted interventions focused on knowledge, learning, and innovation, and programming, analytics, and advisory services. Since at the country level, constraints affecting people's ability to anticipate, cope with, respond to, and recover from disasters represent a unique combination of psychical, financial, information, attitudinal, and institutional constraints, a special focus will be made on tailoring inclusive DRM policies, programs, projects, and tools to the needs of diverse vulnerable groups in various country-specific contexts, cultural settings, and institutional environments. The results of these efforts will also be used to support policy dialogue how effectively and efficiently tackle various constraints, including discriminatory social norms in patriarchal societies and institutional discrimination at the country and regional levels. This will help raise awareness about the importance of this topic among various stakeholders at different levels of the political and economic systems and society as a whole.

○ **Promote collaboration between DRM, social inclusion experts, and external stakeholders.** Successful mainstreaming of gender and inclusive DRM requires continued technical and financial support for DRM task teams, in engaging communities. A key challenge is to translate global knowledge into project-specific inputs. GFDRR may seek opportunities to promote collaboration between DRM, gender, and social inclusion experts to integrate their agendas and mobilize the required expertise in the context of DRM operations. Additional guidance and funding opportunities are needed to move from community engagement as a standard reporting requirement to real participatory approaches. Knowledge exchange and guidance for DRM task teams are also needed to leverage entry points and government buy-in. This includes diagnostics and specific tools to reiterate why inclusion matters in the DRM context. Furthermore, approaches to inclusive DRM need to consider the costs and consequences of both addressing and not addressing vulnerabilities of marginalized and disadvantaged groups and individuals. In addition to internal actors, GFDRR may support activities that enhance collaboration between DRM, gender, and social inclusion actors who represent nongovernmental entities, social society organizations, and other external stakeholders who could contribute to identifying country-specific recommendations, for example, organizations of persons with disabilities (OPDs), women's associations, and indigenous peoples' organizations, among many other actors.

○ **Continue to support governments' capacity to collect, analyze, and manage relevant data.** Data collection and analysis are vital building blocks of inclusive DRM. The evidence base must be improved so that vulnerable groups can be identified, and the diversity of their needs and capabilities can be captured. One of the most cited obstacles to designing, implementing, and monitoring inclusive DRM is general lack of reliable, sufficiently disaggregated data. Qualitative diagnostics to provide the required nuance should be used to complement wider efforts to improve the collection of high-resolution quantitative geo-coded data. In addition to supporting efforts to address data gaps, GFDRR may also promote a wider, more strategic use of available data and diagnostics.

○ **Improve the monitoring and evaluation framework with a focus on results and operational leverage.** There is an opportunity to revamp the GFDRR's monitoring and evaluation framework to better track inclusion outputs and outcomes in the new strategy. This consists of reviewing the indicators and reporting methodology to incorporate the inclusion angle better, but there also seems to be a need to support task teams in developing strong results frameworks with clear, measurable, realistic inclusion targets in World Bank–financed projects. Tasks teams would benefit from specific guidance on inclusion targets and outcome indicators to integrate approaches to inclusive DRM during the preparation phase. In addition, the indicators and reporting methodology need to reflect how the inclusion aspects of GFDRR-financed activities inform other operations.

I. INTRODUCTION

The objective of this desk review is to provide evidence-based elements to promote the mainstreaming of inclusive approaches DRM as part of GFDRR's technical assistance, capacity building, and analytical and advisory support.

▬▬▬ **The objective of this desk review is to provide evidence-based elements to promote the mainstreaming of inclusive approaches to DRM as part of GFDRR's technical assistance, capacity building, and analytical and advisory support.** The stocktaking exercise places a special emphasis on gender,[3] disability-inclusive DRM, citizen engagement, and community participation. However, it also aims to contribute to a better understanding of inclusivity in DRM more broadly and as a holistic concept. Some of the lessons of gender-inclusive and disability-inclusive activities are relevant for the identification of other vulnerable groups as well. At the same time, all general principles based on these lessons need to be tailored to the needs of diverse vulnerable groups in various country-specific contexts, cultural settings, and institutional environments. The review will inform the development of an inclusive DRM action plan for implementation beginning in FY22. Ultimately, the objective is to contribute to leveraging World Bank operations to scale up their impact.

This report is aligned with the SDGs and the Sendai Framework to achieve gender equality and empowerment of all women and girls, the World Bank's goal is to ensure equal opportunities for women and girls. In support of this commitment, the World Bank Group's (WBG) Gender Equality Strategy tackles the challenges facing Gender equality. The strategy emphasizes outcomes and results,[4] which requires: (i) Strengthening the country-driven approach, with better country-level diagnostics, policy dialogue, and sex-disaggregated data; (ii) Building more systematically on what works by developing and bringing evidence to WBG task teams and clients; (iii) Adopting a strategic approach to project design and implementation, including more robust monitoring and evaluation system; and (iv) Leveraging partnerships for effective outcomes. Building on the World Bank corporate commitments, GFDRR's inclusive DRM initiative is aligned with the World Bank vision and strategy on gender, expanding the scope to incorporate all aspects of inclusion. The Initiative also builds on the 2018 World Bank Group's ten commitments to accelerate global action for disability-inclusive development[5] in key areas such as education, digital development, data collection, gender, post-disaster reconstruction, transport, private sector investments, and social protection. The inclusive DRM initiative supports countries' commitment to post-disaster reconstruction and, more generally, promotes universal accessibility in all GFDRR financed activities. Finally, GFDRR remains dedicated to mainstreaming citizen engagement as outlined in the World Bank's Strategic Framework for Citizen Engagement (2014)[6] to increase inclusive citizen engagement by engaging the community and facilitating citizens to be leaders for the production dissemination and review of risk information. Thus, creating ownership and improving the development impact of DRM activities.

▬▬▬ **This report presents the findings of a qualitative review on inclusive approaches to DRM.** The review is part of the first stocktaking exercise by the GFDRR with the objective to assess lessons and generate knowledge to support the mainstreaming of inclusive approaches and strategies across GFDRR activities. GFDRR is a global partnership that helps developing countries better understand and reduce their vulnerability to natural hazards and climate change. GFDRR is a multi-donor funded program, managed by the World Bank, that supports disaster risk management projects worldwide. With over 400 local, national, regional, and international partners, GFDRR provides knowledge, funding, and technical assistance.

1. Scope of the Review

2. Background and Methodology

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[3] This review uses the definition of gender derived from the World Bank Gender Strategy (2016-2023) and the GFDRR Gender Action Plan FY16-21 (GFDRR 2016b), according to which gender refers to "the social, behavioral and cultural attributes, expectations, and norm associated with being male or female" (World Bank 2015, 6; GFDRR 2016b, 4).

[4] The World Bank Group Gender Strategy (FY16-23): Gender Equality, Poverty Reduction and Inclusive Growth delineates the support that the World Bank Group will provide to client countries and companies to achieve greater gender equality as a key pathway toward lasting poverty reduction and share security and propensity.

[5] The full 10 commitments can be found at https://www.worldbank.org/en/topic/disability#2

[6] The Strategic Framework for Mainstreaming Citizen Engagement in WBG Operations was developed in 2014 to more systematically mainstream citizen engagement in WBG-supported operations.

The findings of this report are based on a literature review, results of a separate analysis of portfolio data[7], and internal consultations carried out with Task Team Leaders (TTLs) of GFDRR-funded activities between April and July 2021. The reviewed literature includes global and regional GFDRR knowledge products, project documentation from GFDRR-funded activities, World Bank's operational documents and pertinent research, as well as relevant publications by other scholars and organizations. The key rationale behind the qualitative review's focus on gender- and disability-inclusive DRM, citizen engagement, and community participation is related to GFDRR' commitments and requirements in these areas (GFDRR 2016). Since 2009, GFDRR has increasingly underscored in its strategic documents the importance of integrating gender dimensions into its activities as a core operating principle (ibid.). In addition, beginning in 2015, implementing teams have been requested to indicate in project proposals whether the project supports gender equality aspects. Furthermore, through its *Inclusive Community Resilience Initiative*, GFDRR expressed its commitments to leverage country investment programs that work directly with poor communities, support civil society and broader citizen engagement in DRM, and continue to use its role as convener to support community level innovations and promote voice of vulnerable communities in national and global DRM policy dialogue (GFDRR 2014).

This review is in line with the World Bank's *Green, Resilient, and Inclusive Development* (GRID) strategy that promotes economic growth that goes hand in hand with both environmental goals and inclusion (World Bank 2021). Specifically, following the GRID strategy, the review addresses various issues related to disasters, climate change, vulnerability, and inclusion, emphasizing a more comprehensive approach that seeks to address the relations between sustainability, resilience, and inclusiveness simultaneously and systematically (ibid). Such an integrated approach is particularly useful since it builds on synergies and acknowledges the linkages between human, environmental, socioeconomic, institutional, and other factors. For example, both the GRID agenda and this review consider social safety nets as critical elements because they support vulnerable communities in disaster situations and help strengthen resilience by making public finance more equitable, particularly when combined with additional measures, including gender- and disability-inclusive infrastructure. In today's extremely complex and rapidly changing globalized economy, an integrated approach of synchronized measures can serve as a basis for more sustainable and inclusive societies (ibid.).

The report is structured as follows: the *Introduction* (part I) provides an overview of the rationale, conceptual framework, and policy commitments. In the *Analysis and Main Findings* section (part II), chapter 1 presents available evidence of differential impacts of disasters, illustrating the challenges related to identifying vulnerable groups. Chapter 2 explores the key drivers of vulnerability to disasters, particularly (but not exclusively) among women, men, and people with disabilities. It consolidates insights on local circumstances and different types of constraints that are relevant for assessing disaster risks – a prerequisite to devising effective and inclusive DRM measures. Chapter 3 illustrates lessons from practice across the various priority areas of the GFDRR's new strategy (2021–2025). Finally, chapter 4 explores challenges and opportunities for monitoring inclusive DRM. The report concludes with the *Conclusion and Recommendations* section (part III) that synthesizes these findings and presents potential implications for practitioners.

3. Definition and Importance of Inclusive DRM

The negative impacts of disasters, climate change, and other hazards do not affect all groups equally. Although this review primarily refers to disasters and climate change, its findings can be attributed to various types of hazards, including natural hazards associated with natural processes, anthropogenic hazards induced by human activities, and socionatural

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[7] This report is complemented by a portfolio review of inclusive DRM elements in GFDRR's FY16-20 portfolio.

hazards associated with a combination of natural and anthropogenic factors, including environmental degradation and climate change. While hazards are not discriminatory per se (in principle, they can affect anybody), their impacts are, in fact, very unevenly distributed. This is because the exposure and susceptibility to the physical impacts of disasters are mediated by social, economic, and political conditions (Arnold and de Cosmo 2015, 6). The evidence is clear: research from many different contexts and countries shows that poor and marginalized groups tend to suffer disproportionally from disasters and climate extremes (Arnold et al. 2014; Hallegatte et al. 2016; Bowen et al. 2020; UNDRR 2020b; World Bank 2021a), either because they are more exposed to a given hazard or because they are more vulnerable to its negative effects. Marginalized groups tend to live in higher-risk areas, often have limited resources, and in most cases are excluded from or under-represented in decision-making bodies.

The term "inclusive DRM" encapsulates various approaches to DRM that take into consideration the heightened vulnerability of certain groups that – in some way or another – are disadvantaged in the context of disasters (as was previously shown in Figure 1). Firstly, DRM can be defined as a combination of risk identification activities that help understand and assess disaster risks and impacts; risk reduction measures through informed development strategies, plans and projects; preparedness measures that help reduce the impact of disasters; financial protection strategies that help protect governments, businesses and households from the economic burden of disasters; and resilient recovery and reconstruction that help drive longer-term resilient development (World Bank 2014). Both within GFDRR's work and in the wider DRM community, there is a variety of concepts that describe different aspects of *inclusiveness* in DRM research and practice. For instance, these include "social resilience", "inclusive community resilience", "community-based DRM", "community-based resilience", "community-driven development", and "disaster-responsive social protection", among others. For the purposes of this report, inclusive DRM will be used as the umbrella term for this diverse set of perspectives and approaches (the next chapter provides working definitions of its core concepts).

While inclusive DRM has become increasingly important in disaster risk management and research, "inclusivity" has also become more and more differentiated. While earlier research and guidance notes (including from the World Bank and GFDRR) have been more heavily focused on poverty as a key dimension of vulnerability, more recent publications have increasingly emphasized the need for a more nuanced analysis of vulnerable groups and a diverse set of factors driving vulnerability, as was previously shown in Figure 2 (see, for instance, Erman at al. 2021; World Bank 2021a; Australian Journal of Emergency Management 2018). Hence, attention has shifted to the heterogeneity within the poor as well as the identification of vulnerable populations among more affluent societies (see, for instance, Prior et al. 2017). Groups that stand out as particularly vulnerable among the poor include children, people with disabilities, the elderly, women, indigenous groups, landless tenants, and migrants, among other groups.

Many of the conditions that make certain groups particularly susceptible to disaster risks also constitute roadblocks for fighting poverty and marginalization more broadly. Population groups that face the highest risks in the context of disasters tend to be disproportionately affected by poverty, material deprivation, and lack of access to basic services. As Arnold and de Cosmo (2015, 6) put it: "Poverty makes people more vulnerable to the adverse effects of disasters, and disasters breed more poverty." The same is true for other dimensions of social exclusion. Hence, there is a consensus among development partners that addressing disaster risk vulnerabilities of marginalized and excluded groups ought to be a cornerstone of the commitment to fight poverty and advance the social inclusion agenda across the globe (World Bank 2013b, 5; GFDRR 2021a).

Moreover, the global COVID-19 pandemic is a painful reminder of the importance of inclusive DRM. As other crises before, there is ample evidence of the pandemic's disproportionate impact on the poor and vulnerable (see, for instance, UNDRR 2020b). The hardships experienced by those in vulnerable situations also illustrate how existing inequalities and exclusion tend to be exacerbated during disasters. Additionally, the global pandemic reminded us that there is also an economic case for increased attention to disaster risk vulnerabilities among marginalized and socially excluded groups. However, this is by no means a new finding: for instance, earlier attempts to integrate social aspects into cost-benefit analysis of disaster risk reduction seem to suggest that greater recognition of social vulnerabilities can contribute to increased cost-effectiveness of DRM measures.[8]

This results in measures and investments that insufficiently address their needs and priorities, as well as fail to recognize their skills, resources, and capacities. Therefore, a key component of inclusive DRM is the active involvement of affected communities in the identification and analysis of risks, as well as the direct participation in the planning, design, implementation, and monitoring of DRM activities. The importance of participatory community-based approaches[9] is now widely recognized in the DRM community. It is key to empowerment and a precondition to overcome stigmatizing and paternalizing narratives. Research has shown that greater citizen participation can lead to a better use of local knowledge and expertise, contributing to increased effectiveness (IIED 2020). Hence, empowering citizens, particularly those most excluded, to contribute to DRM can result in improved resilience to disasters, better development outcomes, and more sustainable solutions (IIED 2021, 11; Blanchard et al. 2017, 5).

Disaster risks are commonly defined as a probabilistic function of three elements: hazard, exposure, and vulnerability (IPCC 2012, 5; World Bank 2010). This framework is a helpful starting point to situate the debate around inclusiveness within the DRM discourse. Disasters are a result of these three components. In other words, a hazard's effect on society (e.g., of floods, storms, droughts, and earthquakes) is determined by the combination of exposure and vulnerability. Strictly speaking, "disasters, not hazards, cause deaths and damage" (World Bank 2010, 25). The understanding of *hazard* (the probability of a natural phenomenon with adverse effects) and *exposure* (the population and assets subject to the hazard) has greatly improved over the years and has been the focus of disaster risk research in the last decades. However, evidence on *vulnerability* (the susceptibility to loss because of hazard exposure) is, albeit growing, more fragmented and incomplete (Birkmann 2013, 3).

4. Conceptual Framework

The concept of *vulnerability* was introduced into disaster risk assessments to stress the importance of understanding the preconditions and context of communities and their built environment (ibid., 10). The United Nations Office for Disaster Risk Reduction (UNDRR) defines vulnerability as "the conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards" (UNDRR n.d.). Hence, it relates to the potential loss and the "predisposition, susceptibilities, fragilities, weaknesses, deficiencies, or lack of capacities that favor adverse effects on the exposed elements" (Cardona et al. 2012, 69). While different disciplines have emphasized different dimensions of vulnerability (such as environmental, economic, socio-demographic, or institutional), the term will be used here in a broad sense, encompassing both physical and social environments, as well as their interactions.

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[8] Cost-benefit analysis of measures for risk reduction of avalanches in Switzerland found that investing in reducing communities' vulnerability has a greater economic return than alternative measures for reducing hazard exposure or the hazard itself (Prior et al. 2017, 22). That said, the accurate quantification of disaster impacts on complex social systems certainly has its limits and, therefore, the respective conclusions should be taken with caution.

[9] Specific types of community-based approaches and their distinction will be discussed in chapter 8.

Community **is another core concept that requires closer consideration for the discussion of disaster risk vulnerabilities.** According to a widely used definition, community is "a group of people living in the same place or having a particular characteristic in common" (Oxford Dictionary n.d.). Hence, there is a spatial[10] and a socio-cultural aspect determining the closeness or common identity of a given group or community. Here, the term "community" will be used in this broad sense, encompassing both social and spatial dimensions and recognizing the diversity of people living in a given geographic area (e.g., a town, neighborhood, or settlement). Such an understanding of communities also underscores the importance of considering conflicts and a level of social cohesion among different groups of people. A nuanced understanding of communities is instrumental for the assessment of community vulnerability and for devising approaches for community engagement.

From a social inclusion angle, the distinction between social vulnerability and other types of vulnerability is misleading. This is because various forms of vulnerability in the context of disasters (e.g., structural vs. non-structural, physical vs. socioeconomic, political vs. economic, etc.) are the consequence of socially mediated norms and processes. Due to existing patterns of exclusion in society, marginalized groups face disadvantages in preparing for, coping with, and recovering from disasters. These disadvantages are related to both tangible, quantifiable, and imminent "hard factors", as well as more subtle and indirect "soft factors" that are more difficult to measure. This holistic view of disaster risk vulnerability will be explored throughout the following sections of this report.

The World Bank's Unbreakable Report (2017) conducted risk assessment separately for poor and nonpoor people. The analysis took into account the various dimensions of inequality of poor and nonpoor people in the face of disasters and the distribution of losses across individuals. The analysis showed that losses concentrated on fewer or poorer individuals have a larger impact than the same losses affecting richer people or shared across larger populations (figure 4). This analysis extend to vulnerable populations and the dispoporciated impacts that disaster have on their well-being

Figure 4 Disasters impact affect well-being
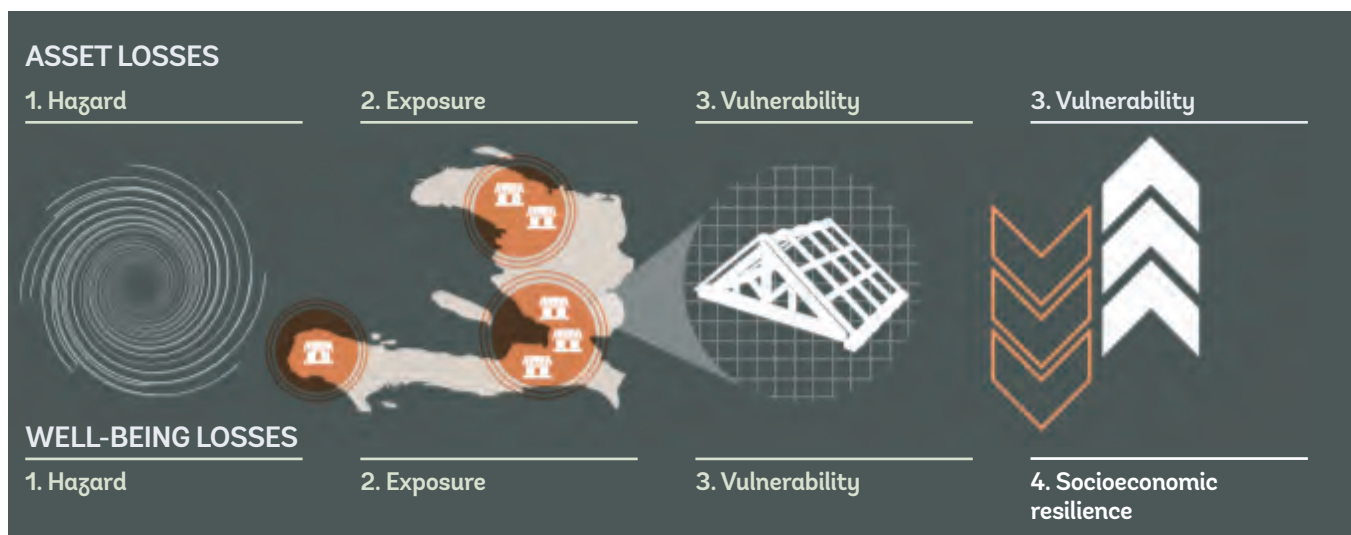
Source: Hallegattev et al. 2017

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[10] Communities can be rural or urban, and are not necessarily referring to clearly delineated spatial units.

This review utilizes the pressure and release model to address various groups with limited access to power, structures, resources, and economic and political systems and to emphasize distinctions in their vulnerability. This model has two key dimensions: hazards and vulnerability, which impact the risk. The risk level depends primarily on the magnitude of the hazard and vulnerability of a particular group under consideration. Based on this model, the review highlights that it is necessary to take all these dimensions into account in order to reflect the complexity of a community's vulnerability.

In today's rapidly changing world, disaster risk is increasingly dynamic. Recently, there has been an increased focus on new risk drivers that are associated with changes in the political and economic systems of various countries around the globe. Such drivers as migration, the forced reallocation of people due to conflicts and wars, the digital divide, urbanization, and climate change are reinforcing the intersectional disparities related to gender, gender identity, ethnic, sexual orientation, and age-based discrimination accompanied by other forms of exclusion practices. All these factors combined lead to a systemic risk and complex multiple vulnerabilities. In this context, from a human rights-based approach, it is extremely important to enhance the ability to respect, protect, and guarantee human rights to all people without exception, and to tackle all new challenges from a holistic perspective that includes the connections between people, communities, governance systems, and other stakeholders.

The review pays particular attention to citizen engagement and community participation, recognizing the importance of transforming local actors into a force that could play a critical role in the reduction of all disparities and in the response to new risk drivers. Furthermore, citizen engagement and community participation are core elements of the rights-based approach because they "create accountability for the fulfilment of rights rather than just meeting the needs of beneficiaries" (UNDRR 2021). From a policy perspective, this approach is particularly useful due to the fact that people whose rights are violated can legally claim compensation or redress (ibid.). In this context, it is important that inclusive DRM policies contain mechanisms to encourage effective citizen and community participation based on the rights to a healthy environment, health, life, and freedom from discrimination based on social norms contributing to a systemic risk and complex vulnerabilities.

5. Strategic and Operational Frameworks

The recognition of the special needs of vulnerable groups in DRM is anchored in key international frameworks. The Sendai Framework for Disaster Risk Reduction 2015–2030 calls for "a more people-centered preventive approach to disaster risk" that is inclusive and engages with all relevant stakeholders, including "women, children and youth, persons with disabilities, poor people, migrants, indigenous peoples, volunteers, the community of practitioners and older persons" (UNISDR 2015, 10). The Sendai Framework covers "integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery" (ibid., 12). Facilitating the implementation of the Sendai Framework, as well as the achievement of the Sustainable Development Goals (SDGs)[11], lies at the core of GFDRR's mission to mainstream inclusive approaches to DRM in development interventions. The Sendai Framework identifies the following groups as being particularly vulnerable and meriting special attention in the context of DRM: women, children and youth, the elderly, people with disabilities, migrants, ethnic minorities, and indigenous people (UNISDR 2015).

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[11] More specifically, targets under SDG#11 (cities) and under SDG# 9 (building resilient infrastructure) reaffirm the interrelationship between disaster risk reduction and sustainable development.

GFDRR and the World Bank share the goal of making countries and societies more resilient to disasters and climate change, while placing a special emphasis on the protection of the most vulnerable. Bringing the two agendas of social inclusion and disaster risk reduction together is central to the World Bank's mission. By implementing GFDRR's mission, World Bank teams also contribute to the Bank's twin goals of poverty reduction and shared prosperity. The World Development Report 2014 underlined the key role of effective risk management for development (World Bank 2013b). Subsequent strategic and operational frameworks have increasingly acknowledged the importance of DRM for social inclusion and vice versa. This is particularly pronounced when it comes to mainstreaming three core Bank mandates: gender equality, the inclusion of people with disabilities, and citizen engagement. As such, GFDRR's work in these areas reflects its commitment to the World Bank Group's Gender Strategy 2016–2023 (World Bank Group 2015), the Disability Inclusion and Accountability Framework (World Bank 2018), and the Strategic Framework for Mainstreaming Citizen Engagement in World Bank Group Operations (World Bank 2014).

II. ANALYSIS AND MAIN FINDINGS

While this report focuses on the specific vulnerabilities of women, men, and people with disabilities, it also aims to contribute to a better understanding of inclusivity in DRM more broadly and as a holistic concept.

While this report focuses on the specific vulnerabilities of women, men, and people with disabilities, it also aims to contribute to a better understanding of *inclusivity* in DRM more broadly and as a holistic concept. Some of the lessons of gender-inclusive and disability-inclusive activities are relevant for the identification of other vulnerable groups as well. Moreover, it is important to note here that the concept of *vulnerable groups* does not imply that these are regarded as homogenous collectives with clearly defined boundaries. Rather, the premise is that group identities overlap and are inherently diverse and dynamic. Individuals and groups are excluded or included based on their gender, gender identity[12], sexual orientation, race, caste, ethnicity, religion, age, and disability status[13], among many other variables. Some identities that were not acknowledged as sources of social exclusion in the past are considered relevant today. Yet, "individuals are members of different groups at once and may be excluded through one of their identities but not another" (World Bank 2013a, 6). Certain socio-demographic characteristics may also lead to an accumulation or even a multiplication of disadvantages. This notion of *intersectionality*, which simultaneously situates people in multiple "social structures and realms", is crucial for the understanding of inclusive DRM presented here.

To identify groups that potentially have an elevated risk and special needs during disasters, practitioners need to understand the nature of potential impacts. Impacts of disasters comprise a wide range of effects on natural and human systems, generally referring to "effects on lives, livelihoods, health, ecosystems, economies, societies, cultures, services and infrastructure" (UNISDR 2018, 86). It is important to distinguish between immediate, short-term effects (such as fatalities, injuries, displacement, destruction of homes, water shortages, disruption of essential services, infectious diseases), and more indirect, long-term effects (such as employment effects, market dynamics, social cohesion, public health impacts, nutrition, or migration) (EEA 2017, 96). Moreover, disasters have wide-ranging social and economic impacts that are often subtle and not easily measurable. For instance, stress and anxiety have important mental health implications both in the short and in the long term and affect peoples' future lives, their work, livelihoods, and social participation (EEA 2017, 97). Groups facing a higher risk – either due to higher exposure or higher vulnerability to a given hazard – may do so along quite different impact dimensions, and hence will require different kinds of support.

The understanding of vulnerability to disasters and the identification of vulnerable groups requires a diverse set of tools, methods, and data. Given its multidimensional nature, there is no consensus on the definition, conceptualization, and measurement of vulnerability. However, there have been several initiatives that have developed sound assessment methodologies. For instance, quantitative approaches that have focused on indicator development, indices, and weighting are a valuable contribution to the research field (Arnold et al. 2014). Yet, vulnerability is highly context-specific, and assessments need to account for diverse socio-economic, demographic, political, and cultural characteristics to be relevant for policymakers.

6. Inclusivity in DRM – Who is Excluded?

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[12] Gender identity refers to "each person's deeply felt internal and individual experience of gender (e.g., of being a man, a woman, in-between, neither or something else), which may or may not correspond with the sex they were assigned at birth or the gender attributed to them by society" (World Bank 2019, iv). In this context, gender identity is internal, and not visible to other people.

[13] Since not all countries recognize disability from a regulatory and policy perspective, a broader approach would necessitate the use of the term "ability" instead of "disability" in the related context.

6.1 Gender

Men and women, boys and girls face different vulnerabilities in the context of disasters. Gendered differences in disaster outcomes tend to reinforce existing inequalities in a broad range of aspects in their lives, including human capital, economic opportunities, and voice and agency (Erman et al. 2021; World Bank 2021a; World Bank 2021c). These inequalities, in turn, determine gendered capacity to cope with and recover from future shocks. Hence, the objectives of gender-inclusive DRM go hand in hand with the cause for greater gender equality in the prevailing socioeconomic conditions. Here, *gender* refers to "the social, behavioral, and cultural attributes, expectations, and norms associated with being male or female" (World Bank Group 2015, 6)

Emerging evidence on the impacts of the COVID-19 pandemic illustrates how these gendered differences can play out during a crisis. Although women are not more vulnerable per se or disadvantaged across all aspects of the pandemic, there are clear indications that they are disproportionally affected by its social and economic impacts. For instance, while men seem to be more susceptible to the virus, women are overrepresented in some of the occupations that are being hit hardest (Erman et al. 2021, 17). Women's childcare and domestic responsibilities led to a disproportionately higher burden when schools and childcare facilities closed. Additionally, there have been troubling reports of a surge in gender-based violence during lockdowns. Finally, in some countries the lack of control over housing, land, and property is a cause for a great concern, especially during disasters and health crises. In such cases, if their partners decease, women can lose their housing and livelihoods (Erman et al. 2021, 17).

Recent reports, including work funded by GFDRR, have documented the varying ways men and women, boys and girls are impacted by disasters (Erman et al. 2021; World Bank 2021a,b,c). Given their disadvantaged position in society at large, women and girls tend to be disproportionately affected by the adverse consequences of disasters compared to men and boys. This is due to multiple factors that may increase their vulnerability during and after disaster events. A review of gender-responsive DRM in the Caribbean (World Bank 2021c) concluded that women face inequalities in virtually all aspects of their lives, including human capital endowments, economic opportunities, and voice and agency.[14] These inequalities often result in more devastating disaster impacts on girls and women. Yet, this does not mean that females always have worse disaster outcomes. For instance, global evidence suggests that disasters disproportionately affect women's life expectancy. A study reviewing natural disasters[15] from 141 countries between 1981 and 2002 finds that a reduction in the life expectancy was greater for women than for men, including both direct casualties and indirect consequences, such as higher morbidity (Erman et al. 2021, 19). However, a more nuanced view of specific contexts and types of disasters is warranted to make more accurate and useful conclusions. For example, in Europe and the United States, men made up 70 percent of all flood-related deaths in the same period (ibid., 9). This is partly explained by an overrepresentation of men in rescue professions. Moreover, it is important to recognize that certain subgroups are more vulnerable to disasters than others, for example, single, widowed, or abandoned women (World Bank 2021a).

Gendered dynamics can be observed in a wide range of disaster impacts. Women often suffer negative economic impacts that are more pronounced compared to men. For instance, they face a higher risk to lose livelihoods and employment, as well as certain assets following

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[14] For example, the review indicates that "higher unemployment rates, access to fewer economic opportunities, lower wages, vulnerable employment, and insufficient social support systems result in women's limited access to safety nets compared to men" (World Bank 2021, xii).

[15] As natural disasters, the study includes droughts, earthquakes, extreme temperatures, famines, fires, floods, landslides, volcano eruptions, waves/surges, and windstorms.

a disaster (Erman et al. 2021). Several studies show that female-headed households are often more severely affected by disasters (Erman et al. 2021, 27), such as in the 2015 earthquake in Nepal where they accounted for 26.5 percent of all affected households (World Bank 2021a, 9). Moreover, economic shocks resulting from disasters can trigger negative coping mechanisms, including transactional sex, with severe long-term repercussions – especially among lower-income women and girls (World Bank 2021a, 10). One of the most explicit manifestations of gender inequality und uneven power dynamics is the increase in gender-based violence that is often observed during times of crisis (World Bank 2021a; Erman et al. 2021, 9). For instance, this was the case in Albania during the floods of February 2015 (World Bank 2021b, 8).

Insufficient gender considerations in many DRM-related policies and programs are often combined with impacts of multiple biases faced by women and other disadvantaged groups due to overlapping and interdependent systems of discrimination in the case of indigenous populations, ethnic and religious minorities, age groups, and migrant communities, to name just a few. Yet, despite the importance of such overlapping and interdependent systems of discrimination, the intersectional approach is lacking in most DRM policies, strategies, and plans designed and implemented both at the national and sectoral levels. This review highlights the fact that treating women as a homogenous group, focusing on their singular identity, results in the underestimation of multiple vulnerabilities that can significantly reinforce disaster impacts on particular groups of women, such as the poor, migrants, those living in rural areas, etc. To a large extent, it can be traced back to the lack of disaggregated quantitative data at the national and sectoral levels. As a result, these data gaps further facilitate and contribute to exclusion of the already disadvantaged groups.

Some examples to illustrate the intersectionality of gender with other types of discrimination include:

- **India:** After a super cyclone hit Odisha in 1999, women from low-caste groups were the hardest hit due to the fact they lacked robust houses to shelter in and social networks to help them cope during the disaster (World Bank 2021a).

- **Antigua and Barbuda:** The impact of Hurricane Irma posed more challenges to Barbuda's women's representing ethnic minorities since they had been excluded for a long time from decision-making processes regarding the land redistribution on the island (World Bank 2021c).

- **Dominica:** After Hurricane Maria hit Dominica, many women, particularly the elderly female household heads, were unable to leave shelters because they had neither a housing insurance nor access to reconstruction materials and hired labor necessary for rebuilding their homes (Government of the Commonwealth of Dominica 2017).

- **Saint Vincent and the Grenadines:** A report by the Caribbean Development Bank found that female students and unemployed young women were particularly stressed after the December 2013 floods which aggravated their pre-existing economic challenges (World Bank 2021c).

Persons with disabilities make up a diverse group with different needs and experiences. A common way to distinguish different needs is a classification of disability into physical disabilities, vision disabilities, hearing and speech disabilities, cognitive disabilities, and psychosocial disabilities (GFDRR 2017a, 8). However, the extent to which these characteristics translate into actual vulnerabilities depends on the social and institutional environment, including social and health services, as well as informal support systems. *Disability* is a contested and evolving concept that essentially results from "the interaction between persons with impairments and attitudinal and environmental barriers that hinder their full and effective participation in society on an equal basis with others" (UN 2006).[16]

Common barriers affecting people with disabilities can be "physical, informational, and communicational in nature and can involve legislation, regulation, policy, and attitudes" (GFDRR 2017a, 8). Specifically, "barriers may include unavailability of assistive devices and technology, inaccessible public spaces and transportation, and discriminatory prejudice in society" (World Bank 2018, 1). Yet, people with similar impairments may still experience certain barriers or types of discrimination differently. This may be related to individual circumstances, the social context and support structures, but also to the extent to which disability intersects with other identities and bases of discrimination. For instance, the intersection of disability and poverty can be a powerful amplifier of the process of social exclusion (World Bank 2021a, 12). The diversity among people with disabilities is recognized in the United Nations (UN) Convention on the Rights of Person with Disabilities (UN 2006). Importantly, persons with disabilities should be recognized not only for their vulnerabilities, but also for their capacities and coping mechanisms.

While available evidence demonstrates the disproportionate impact of disasters on people with disabilities, a lack of data is a common limitation for accurate disability-sensitive risk assessments. Globally, more than a billion people, or about 15 percent of the world's population, are estimated to have a disability (World Bank 2018, iv). This number is expected to increase, especially in developing countries, because of aging, wars and conflicts, natural disasters, and forced displacement, among other factors (ibid.). Available data indicates that persons with disabilities are up to four times more likely to die in a disaster (UN-ESCAP 2015). Persons with disabilities face unique challenges within the disaster context, given attitudinal, environmental, and economic barriers to access services and participate in public life. For instance, mobility constraints lead to a high risk of being abandoned or losing essential assistive devices during a disaster. However, persons with disabilities are often invisible in disaster risk assessments – both because they are often missing from the findings but also because they tend to lack a voice in the process (GFDRR 2017a, 32). The 2013 UN Survey on Living with Disabilities and Disasters (the first ever conducted) found that people with disabilities are usually not consulted about their needs in disaster contexts (UNISDR 2014).

The historic lack of disability-disaggregated data collection makes it difficult to accurately assess the differential impacts disasters have on people with disabilities. Existing assessments are likely to underestimate the number of people with disabilities and the true effects on their well-being (GFDRR 2017a, 17; Twigg et al 2018, 4). In many parts of the world, disability data is difficult to collect due to a reluctance of survey respondents to identify themselves or any of their household members who may have a disability. Social stigmas around disabilities, concerns about privacy, or distrust of the authorities, may lead to an unwillingness to share respective information even if this means that they will not be reached by critical services or support schemes (GFDRR forthcoming). Collecting disability-

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[16] The Convention on the Rights of Persons with Disabilities (CRPD) describes disability as "long-term physical, mental, intellectual, or sensory impairments, which, in interaction with various barriers, may hinder their full and effective participation in society on an equal basis with others" (UN 2006).

disaggregated data through national censuses and surveys is an important part of risk and vulnerability assessments. The most used set of survey questions to identify persons with disabilities who face an elevated risk is the Washington Group Short Set on Functioning (WG-SS), which contains a list of six questions on six different domains (Washington Group on Disability Statistics n.d.).[17] Additionally, a variety of qualitative techniques may be used to develop community-based vulnerability and capacity assessments.

Although there is an increasing number of countries that recognize the rights and needs of people with disabilities in the disaster context, much more needs to be done to remove a wide range of existing barriers to inclusion. Many countries have developed disability-inclusive policies, standards, and guidelines (some being more advanced than others), however, concrete practices on the ground are more difficult to find (Twigg et al 2018; GFDRR 2017a; World Bank. 2021a, 12). For instance, Australia, Bangladesh, Ecuador, Indonesia, New Zealand, and the United States have demonstrated some good practical examples of working with persons with disabilities to promote their inclusion in DRM (GFDRR 2017a, 33). Yet, significant leaps in disability-inclusive DRM can only be achieved by challenging the social norms and institutional discrimination that underpin the stigmatization, marginalization, and exploitation experienced by people with disabilities, particularly in times of disasters.

▬▬▬ **The different aspects of vulnerability, which will be explored in more detail in the following chapter, illustrate the diversity in circumstances within a given population.** Understanding the underlying risk factors is a key step of DRM. Inclusive DRM approaches pay special attention to various factors related to vulnerability beyond the hazard itself or the likelihood of exposure (as was outlined at the outset of this report). For instance, poverty, poor-quality housing, and poor health may be factors that contribute to an elevated risk of certain population groups. Hence, inclusive DRM is about understanding these factors or drivers of vulnerability among groups that are likely to suffer disproportionally from the direct and indirect consequences of disasters (as was previously shown in Figure 3). This chapter will discuss – in more nuanced ways – the dynamics of exclusion in the disaster context – the how and why. This is an important step toward devising actions for inclusive DRM that promote resilience for all (which will be discussed in chapter 8). The report focuses on exclusion or disadvantages based on gender and disability characteristics, but also includes considerations that apply to marginalized communities more broadly.

While the identification and understanding of vulnerabilities lies at the heart of inclusive DRM, it is important to note that groups considered to be vulnerable in the disaster context also have unique abilities that can be an important source of resilience. For example, given their experience, older persons can be a valuable source of local information in the context of disasters (World Bank 2021a, xii). At the same time, they may have special needs in relation to reduced mobility or sensory impairments. However, marginalized groups are often reduced to their role as victims rather than agents of change. Several GFDRR and World Bank publications have emphasized that to be effective and truly inclusive, DRM interventions must consider both the needs and capabilities of vulnerable groups (World Bank 2021a; GFDRR 2020c; GFDRR 2017a). Moreover, it is important to emphasize that, although natural hazards pose a great risk for communities, the aspects of vulnerability discussed here should be considered as avoidable. Following this understanding of disaster risk vulnerability, this chapter is structured along five types of constraints – physical, financial, information, attitudinal, and institutional (Figure 5).

7. Constraints Affecting People's Ability to Anticipate, Cope with, Respond to, and Recover from Disasters

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[17] The Washington Group on Disability Statistics, established by the UN's Statistics Commission, developed the Washington Group Questions (WGQ) to use in national censuses and surveys. They were designed to avoid the use of the term "disability", recognizing that respondents may be reluctant to acknowledge if someone in their household has a disability due to the stigma and/or lack of understanding of disability.

Figure 5 Summary of Five Types of Constraints to Inclusion[18]

Type of constraints	Specific areas	Examples of constraints
Physical constraints	Geography and location	○ Poorly accessible areas susceptible to hazard risks, such as riverbanks or slopes
	Public infrastructure and housing	○ Building codes without basic accessibility standards[19] ○ Poor housing quality and Water, Sanitation and Hygiene (WASH) services ○ Inaccessible shelters ○ Gender-insensitive infrastructure facilities
Financial constraints	Incomes	○ Poverty and limited economic opportunities ○ Financial dependence on household members
	Savings & social protection	○ Livelihood strategies that are vulnerable to disruption, such as seasonal and informal work ○ Unsustainable coping mechanisms ○ Lack of insurance and other financial services
Information constraints	Access to information	○ Information sharing without accommodating hearing, visual, physical, intellectual or language barriers ○ Gate-keepers filter information
	Risk perception	○ Capacity constraints; distrust ○ Disempowering effects of discrimination (experience, beliefs, and expectations)
Attitudinal constraints	Social norms	○ Stereotyping and stigmatizing narratives ○ Discrimination and exclusion (from subtle to severe forms such as physical harm) ○ Lack of self-esteem and self-efficacy ○ Household roles, social expectations
	Trust and social cohesion	○ Weak social networks ○ Migration and disrupted family structures ○ Tensions along religious, cultural, and ethnic lines ○ Lack of CSOs and volunteers ○ Distrust in public institutions
Institutional constraints	Government documentation	○ Unequal access to ID cards, disability certificates, or property titles
	Representation and decision making	○ Unequal access to local representatives and decision-makers ○ Exclusion from decision making is underpinned by social norms
	Public services	○ Low quality, inadequate or inaccessible health, education, and social services

Source: Original figure for this publication.

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[18] Critical assumptions: (i) The constraints focus on the shortcomings or gaps in the social system (not of the people or population groups of concern): These shortcomings affect people's ability to anticipate, cope with, respond to, and recover from disasters (at the individual, household, and community level); (ii) The five types of constraints interact with each other: The constraints driving vulnerability should not be observed in isolation. Moreover, not all aspects are equally relevant in a given situation or throughout the different phases of a disaster cycle or continuum, and their relevance varies across population groups; and (iii) The identification and understanding of underlying factors and sources of resilience: The perspective proposed ultimately aims to empower vulnerable groups to increase their resilience while tackling existing barriers in the markets, services, and spaces people interact with in their daily lives. It is important to note that groups considered to be vulnerable in the disaster context also have unique abilities that can be an important source of resilience; and (iv) Effective and truly inclusive DRM interventions: To be effective and truly inclusive, DRM interventions must consider both the needs and capabilities of vulnerable groups (see World Bank 2021a; GFDRR 2020c; GFDRR 2017a).

[19] Public infrastructure does not only include the availability of inclusive building codes/development control policies, but also the implementation and compliance (which is linked to attitudinal constraints) since countries often need technical support on the latter.

It is well known that the poor tend to suffer most from disasters around the globe (Hallegatte et al. 2017). Financial resources play a major role in households' vulnerability to disasters during all phases. Poor households are less able to invest in risk-reducing measures and are often forced to live in areas susceptible to hazard risks.

a) *Geography and location:* **Some groups within remote or physically isolated communities may face barriers, further elevating disaster risk vulnerability.** Marginalized groups often live in areas that are poorly accessible and susceptible to hazard risks, such as riverbanks or slopes. People with disabilities, for instance, may face additional mobility barriers as poor infrastructure is a common characteristic of remote settlements. Moreover, they often depend on public services and assistive devices which may be inaccessible in the aftermath of a disaster, and if assistive devices are provided, they are often unfit for the geography. For example, the project provides wheelchairs, but wheelchairs cannot be used because the roads or sidewalks are not navigable for a wheelchair user.

Some examples illustrating these types of constraints are provided below:

○ **India:** The floods that devastated India's southern state of Kerala in 2018 disproportionately affected many remote and inaccessible tribal settlements in the state's hilly districts (World Bank 2021a, 15).

○ **Romania:** A large share of the Roma population lives in informal settlements that tend to be located on the outskirts of Romania's villages and towns.[20] It is estimated that at least 37 percent of informal settlements are in areas that are potentially vulnerable to natural and industrial risks (e.g., close to tailings dumps, waste dumps, electricity grids, and gas pipelines) (PACT Foundation 2018, 22).[21]

○ **Globally:** The Intergovernmental Panel on Climate Change (IPCC) has observed an increase in informal settlements (in their numbers and extent), which is clearly linked to an increase in the exposure of the respective populations to flooding, landslides, and other natural hazards, given that they are often located on marginal lands or in areas close to river systems (IPCC 2012, 79). However, the unavailability of precise data on informal settlements is a limitation for risk assessments around the globe.

○ **Nepal:** After the 2015 earthquake, the damages in the remotely located Janajati (indigenous) communities were difficult to assess because the connecting roads were damaged (World Bank 2021a, 15). Consequently, limited information and communication inhibited a timely distribution of relief materials. Limited government presence and a lack of essential public services in remote communities may exacerbate existing patterns of exclusion in the context of disasters.

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[20] According to the PACT Foundation (2018, 4), this is the case for more than 60,000 Roma families in Romania. However, precise data is lacking. The report on informal housing in Romania is based on a literature review and on case studies that present the field reality in the years 2017-2018; case studies included field observations and interviews with authorities and community members in the selected localities (PACT Foundation 2018).

[21] Unfortunately, the legislative framework and available funding mechanisms in Romania make it difficult (and even illegal in some cases) for local governments to invest in improved public services and infrastructure in these settlements (PACT Foundation 2018, 4). Informal housing is neither clearly defined, nor sufficiently recognized as a priority in the European Union (EU) and national government policies (ibid.).

Gender-insensitive infrastructure contributes directly to gendered social and economic inequities and exacerbates social and economic inequalities experienced by different groups, including women, girls, sexual and gender minorities, and those with disabilities.

Baku, Azerbaijan. Photo: aquatarkus
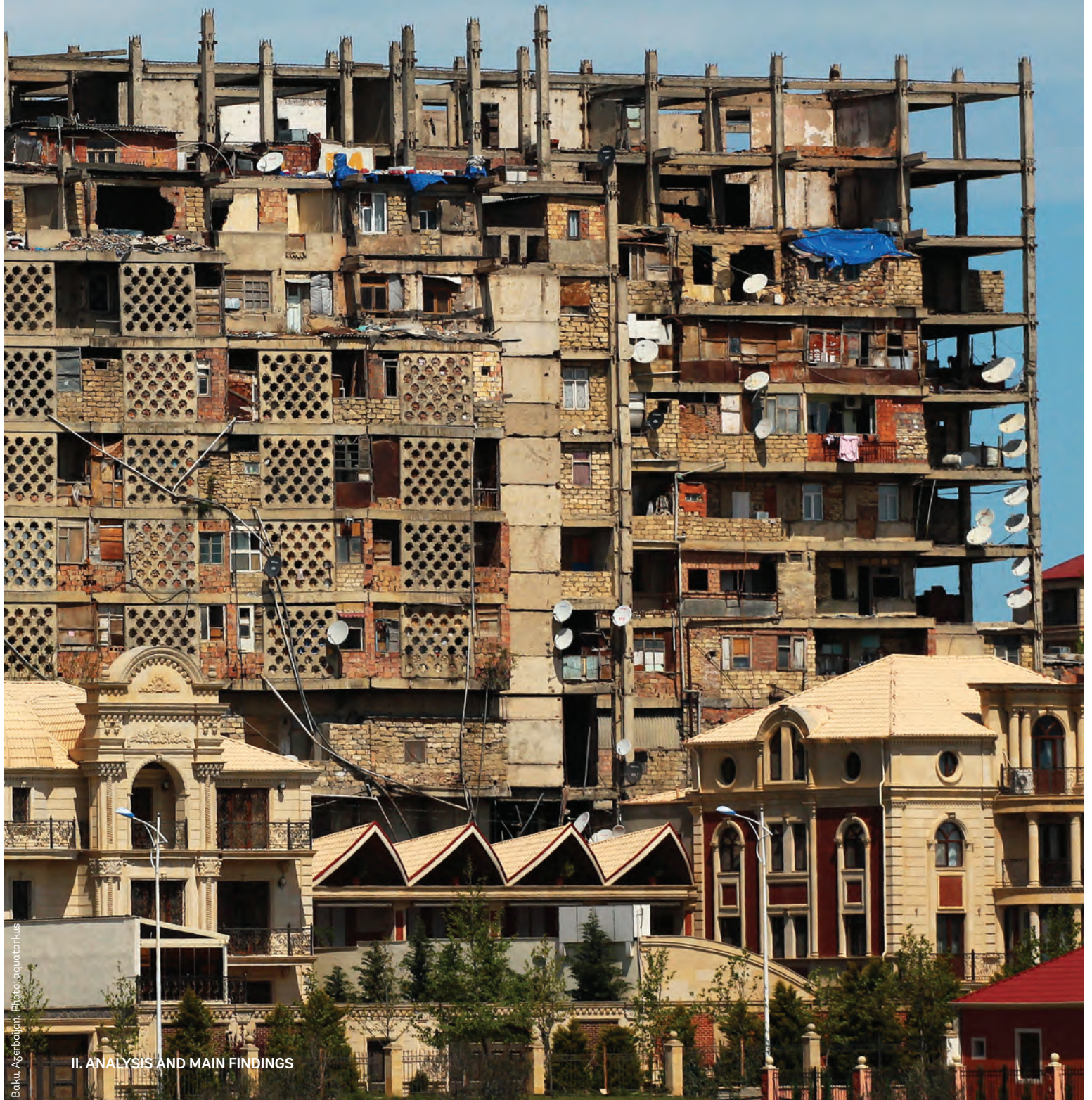
○ **Pakistan:** Geography can be a barrier to participation in community meetings, public consultations, or DRM planning processes. People living in remote communities may not be able to participate in such meetings without financial and logistical travel support (GFDRR 2019d, 9). Women tend to face restrictions on their mobility (such as not being allowed to access public spaces on their own). In remote or inaccessible locations, long travel times further limit their mobility and make it even more difficult to voice their concerns regarding DRM planning (World Bank 2021a, 91).

b) *Public infrastructure and housing:* **The physical structures and spaces of communities are, unfortunately, all too often failing to reflect the unique and diverse social needs of the people who interact with them daily.** Ensuring continuity of services and the resilience of key public infrastructure, such as roads, school buildings, and hospitals, is a core element of DRM. Often physical barriers are the direct result of disasters, underlining the importance to incorporate the needs of people with mobility impairments in DRM. Damaged roads, debris, and disrupted public transportation pose additional challenges for people with disabilities (and their families) limiting their capacity to evacuate or respond to an emergency.

In practice, mitigation planning, infrastructure development and building design often fail to adequately include the voices and needs of people with disabilities (GFDRR 2017a). Moreover, poor housing quality and inadequate access to basic water and sanitation services remain a major vulnerability for many marginalized communities. Inadequate housing conditions, that are vulnerable to hazard exposure, are common among the poor and disproportionately affect people with disabilities. Common problems include overcrowding, dilapidation, and unsafe structures, among other challenges.

Other services, such as access to transportation, are not only a concern during an emergency response, but are also crucial for people trying to reach their workplaces, markets, or support services during times of recovery. For women, infrastructure design that is not gender-sensitive can pose important barriers throughout the DRM continuum. Furthermore, women experience unique post-disaster impacts, given that damaged health facilities and disrupted infrastructure may prevent access to critical services, including reproductive healthcare, modern contraception, family planning, feminine hygiene products, and maternal care (Erman et al. 2021, 22). Hence, women's reproductive and maternal health needs require broader consideration in DRM-related planning, including, but not limited, to physical barriers and spaces.

Gender-insensitive infrastructure contributes directly to gendered social and economic inequities and exacerbates social and economic inequalities experienced by different groups, including women, girls, sexual and gender minorities, and those with disabilities. Gender-insensitive infrastructure prevents them from accessing gainful employment, education, and other basic human endowments, limits their opportunities to accumulate wealth and achieve economic independence, makes them spend more on basic services, results in fewer social freedoms and fewer social networks to cope with risk, stress, and shock (World Bank 2020c). Finally, it prevents them from exercising agency in public decision-making (ibid.).

Disruptions can significantly aggravate livelihoods and recovery, particularly affecting marginalized neighborhoods or settlements.[22] For instance, evacuees with disabilities may find shelters inaccessible or unable to use. For instance, when medical care, bathrooms, and other critical services are located in inaccessible locations. Persons with disabilities may also have difficulty accessing settings in which they can maintain their privacy and dignity. For instance, people with autism may suffer in shelter settings, given that there are often no quiet spaces to avoid sensory overload. Special needs also include more space in bathrooms or more private space for personal hygiene (GFDRR 2017a, 20).

Global experience shows that few building codes comprehensively integrate both safety and accessibility issues (GFDRR 2017a, 38). Consequently, efforts to build or rebuild public infrastructure or to implement structural mitigation measures may not incorporate basic accessibility standards. For instance, raising the ground floor of a house built during recovery above anticipated flood waters can render it inaccessible to wheelchair users (GFDRR 2017a, 20). This creates barriers for people with disabilities both in a disaster situation, as well as to their social inclusion more broadly.

More examples illustrating these types of constraints include the following:

- **Romania:** A series of World Bank lending projects[23] incorporated gender-sensitive design measures in disaster response buildings (including dedicated facilities for women in firefighter and gendarmerie buildings). These considerations are basic requirements of universal design. In fact, a recent World Bank report highlights that the abovementioned design elements were not sufficient to fulfill the World Bank's "Gender Tag" criteria (World Bank 2021b, 37).

- **Sri Lanka:** Physical spaces also need to be designed to promote safety and privacy of women and girls, and men and boys (e.g., segregated sleeping arrangements and bathing facilities, and adequate lighting). For instance, deficits in such arrangements were found in an assessment of inclusion challenges in flood risk management in Sri Lanka (World Bank 2021a, 37). Global evidence suggests that the incidence of gender-based violence can increase during and after disasters, especially in the context of disaster-induced displacement (World Bank 2021a, 10).

- **El Salvador:** In households that were most affected by the earthquakes that hit El Salvador in 2001, children were about three times more likely to work than attend school (World Bank 2010, 44). While even temporary interruptions of schooling can have lasting effects on education outcomes, in some cases getting children back to school after a disaster has proven to be a challenge.[24]

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[22] For instance, in Romania, limited accessibility disproportionally affects Roma communities, including poor access to roads or pathways and/or limited availability of public transportation (Gatti et al. 2016:151). The SocioRoMap survey from 2015 showed that roughly half of identified segregated Roma communities are located at the margins of settlements (Horváth and Kiss 2018:14). About a quarter of Roma live more than 1 kilometer away from the nearest bus stop, while almost half of Roma live more than 10 kilometers from the nearest city centers (UNDP/World Bank/EC Regional Roma Survey 2011).

[23] These projects include the following: Romania Strengthening Preparedness and Critical Emergency Infrastructure Project (P168120); Romania Improving Resilience and Emergency Response Project (P168119); and Romania Strengthening Disaster Risk Management Project (P166302).

[24] This effect was observed in other countries as well. For example, a World Bank's report indicates that "children withdrawn from schools during droughts in Central Mexico between 1998 and 2000 were about 30 percent less likely to resume their studies" (World Bank 2010, 44)

The lack of adequate insurance and social protection compounds already precarious living conditions during shocks, driving people further into poverty. Moreover, complex livelihood strategies, often involving seasonal migration, are common among the poor. These are particularly vulnerable to disruption and restricted mobility in the event of a disaster. It is important to note, however, that poverty correlates with numerous other factors that increase people's vulnerability in the face of a disaster. The poorest households tend to rely on unsustainable coping mechanisms, such as reducing food and health expenditure, withdrawing children from school to help in the household, taking on debt, or selling productive assets. While healthy and educated adults may cope relatively well with temporary deprivation, others suffer severe long-term consequences. Children, the elderly, and pregnant women are among those that are particularly vulnerable to material deprivation.

a) ***Employment and income disparities:*** Given limited incomes, overall, persons with disabilities can be seen as a financial burden within the household or community, rather than as a financial asset (GFDRR 2017a, 36). This financial dependency on the other household members, informal community support, or social benefit schemes, increases their vulnerability in the event of external shocks or disasters. Compared to persons without disabilities, persons with disabilities face higher rates of multidimensional poverty and lower rates of economic and labor market participation (World Bank 2018, iv). If engaged in paid work, persons with disabilities are often involved in the informal economy. Evidence of the long-term economic and human development outcomes of disasters is particularly alarming for children: they can suffer permanent effects, especially during the first years of life (World Bank 2013b, 113). For instance, even temporary malnourishment among children younger than three can lead to stunting in growth and permanently lower cognitive abilities (World Bank 2010, 43).

The gender gaps in economic opportunities and financial independence are well established in most countries. Existing economic inequalities between men and women partly explain the disparities in disaster outcomes. For instance, persistent gender pay gaps, fewer leadership positions compared to their male counterparts, insufficient financial inclusion, and occupational segregation often constitute disadvantages for women when disasters strike (UNDRR 2020b; Erman et al. 2021). The resulting financial constraints limit women's ability to take preventive measures, and recover quickly. For instance, in the Europe and Central Asia (ECA) region women, who make up slightly less than half of the labor force, earn on average 30 percent less than men (World Bank 2021b, 7).

Some examples to illustrate these types of constraints are included below:

○ **ECA:** Women tend to have much lower rates of formal labor market participation, making them particularly vulnerable to economic shocks. Female labor participation ranges between 29 percent and 78 percent (World Bank 2021b, 7).[25] High levels of informality among women in paid work are associated with higher income instability and diminished or inexistent labor protection. This applies particularly to women that face additional forms of exclusion, such as women with disabilities or women belonging to ethnic minorities.

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[25] In ECA, labor participation rates (age 15–64) range from a low of 29 percent in Turkey to a high of 78 percent in Kazakhstan" (World Bank 2021b, 7).
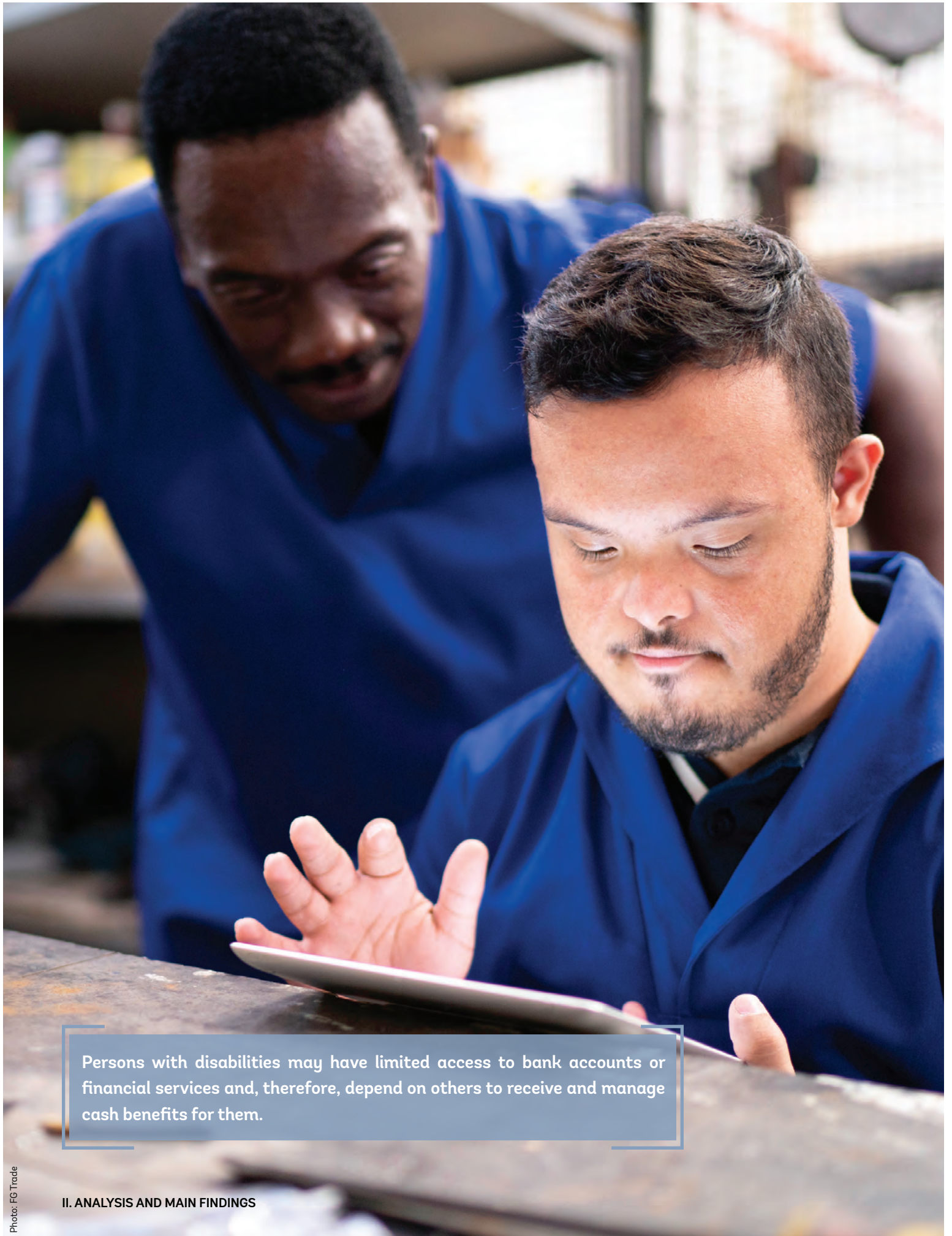
> Persons with disabilities may have limited access to bank accounts or financial services and, therefore, depend on others to receive and manage cash benefits for them.

- **Romania:** Women are more likely than men to lose employment after a disaster (Erman et al. 2021. 26). Roma women in Romania have extremely low levels of formal employment, which compounds their vulnerability as domestic workers and caregivers without social protection.[26] Those working in the informal sector also tend to be excluded from state compensation schemes if laid off because of a disaster, as was observed during the Covid-19 pandemic (Korunovska and Jovanovic 2020).

b) *Savings, safety nets, and social protection, including adaptive social protection (ASP) programs:* **Despite existing barriers in relation to their economic opportunities, disadvantaged groups often face additional constraints limiting their access to social protection systems.** These may include a lack of awareness or understanding of existing entitlements to social benefits, incomplete social registries that fail to capture disability status or specific needs of all people with disabilities, or a lack of basic documentation, such as personal identification cards (GFDRR 2017a, 37). These barriers can be particularly severe for women with disabilities, as well as persons with psychosocial or cognitive disabilities, due to amplified stigma and systemic disadvantages (ibid.). For those who qualify and do have access to social protection benefits, the means to access funds and in-kind benefits can be a challenge as well.

Despite the global rise of safety nets, including ASP, limited access to such programs, particularly among the poorest and most vulnerable groups, remain in many countries (Bowen et al. 2020). Insufficient efforts by many governments to build effective ASP programs is a reason for concern because ASP is particularly dedicated to identifying how social protection programs can be leveraged to increase household resilience to shocks. Thus, low ASP coverage of vulnerable groups in many parts of the world leads to low household resilience, which is especially worrisome in countries at high risk of natural disasters. As a result, in such countries many vulnerable groups lack access to social protection when they need it, including in the aftermath of disasters.

Persons with disabilities may have limited access to bank accounts or financial services and, therefore, depend on others to receive and manage cash benefits for them. This applies to persons with vision impairments if no adapted mobile phone technologies are available. Mobility constraints create difficulties when collecting in-kind benefits, such as food assistance. As a recent report states, "women with disabilities, being entitled to cash that they cannot directly access or otherwise use independently, can create a high risk of abuse and gender-based violence" (GFDRR 2017a, 37).

Some examples to illustrate these types of constraints include the following:

- **Bangladesh:** In the aftermath of a disaster, men are more likely to find employment under a government program or in the formal sector (World Bank 2021a, 51). In the patriarchal Bangladeshi society, women's economic opportunities outside their domestic responsibilities are limited, making it more difficult to restore their pre-disaster livelihoods (ibid.).

- **COVID-19:** UNDRR estimates that the Covid-19 pandemic will dramatically increase women's unpaid care work in the Asia-Pacific region, where around 65 percent of women

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[26] Only 13 percent of Roma women declared "employed" as their activity status, compared to 42 percent of Roma men (FRA EU-MIDIS II survey).

in paid work are engaged in informal employment (UNDRR 2020b, 2). This is partly the result of an increase in domestic duties, which is commonly observed after disasters (Erman et al. 2021, 26). Women usually carry most of the additional burden of domestic duties, at the expense of missing out on income-generating activities.

- ○ **Nepal:** In the aftermath of the 2015 earthquake that struck Nepal, more women became economically inactive than men (21.8 percent vs. 8.3 percent, respectively). Simultaneously, women spent more time on unpaid care (World Bank 2021a, 81). Similar trends are observed in all countries and regions of the world (World Bank 2021b, 7; ILO 2018, xxix).[27]

7.3. Information Constraints

Information constraints are regulated by social norms and local power dynamics, especially in areas and population groups where many rely on word of mouth for DRM-related information. Effective risk communication is not just about access to information but translating information into knowledge. Human perception of the factors of risk is a key determinant of a community's preparedness and coping behavior facing natural hazards.

a) *Access to information:* **Access to timely and locally relevant information on disaster risks and DRM measures is a key aspect of resilience.** The delivery of early warning and emergency messages, as well as the dissemination of information related to DRM policies, strategies, and programs are important public responsibilities. Yet, developing dissemination and communication approaches that reach the entire target population is challenging for governments – even in high-income countries. Designing communication, both in message and in method, in ways that are sensitive to the varying needs of recipients is critical from an inclusion perspective.

Information sharing activities that do not accommodate the hearing, visual, physical, and intellectual needs of people with disabilities will exclude a part of the population from critical aspects of DRM. For instance, early warning systems that rely solely on audible methods (e.g., sirens, radios, and loudspeakers) are inaccessible to people with hearing disabilities and will fail to ensure that they can evacuate in a timely manner (GFDRR 2017a, 20). The same applies to way-finding information, emergency numbers, evacuation directions, information on shelters and relief measures, as well as instructions to claim financial support. A lack of captioning or sign language interpretation for people with hearing disabilities, Braille or large print for people with visual disabilities, and failure to use plain language for people with cognitive disabilities, among others, will systematically exclude people from information that is vital for their well-being and survival (GFDRR 2017a, 20).

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[27] As a World Bank's report indicates, "in Eastern Europe, women spend a considerable amount of time carrying out unpaid work" (World Bank 2021b, 7). For example, in 2012, women in Serbia and Bulgaria spent close to 300 minutes (five hours) per day on unpaid work, while women in Romania spent 19 percent of their time on unpaid care and domestic work, compared to 9.4 percent spent by men (Charmes 2019). In the same period, in Kazakhstan, time spent by women on unpaid care work per day was estimated at 246 minutes, and in Azerbaijan – 349 minutes (ibid.). Similarly, women in the Western Balkans undertook most of the unpaid care work, which, in turn, affected how they coped with disasters (UNDP 2016b). Furthermore, a report by the International Labor Organization states that in all countries and regions of the world, women perform more than three-quarters of unpaid care work (76.2 percent) and dedicate on average 3.2 times more time to such work compared to men: 4 hours and 25 minutes per day against 1 hour and 23 minutes, respectively (ILO 2018, xxix).

Public education campaigns that aim to raise awareness of existing risks and **related DRM measures often rely on existing community institutions that are not universally accessible.** Face-to-face meetings and oral communications are an integral part of risk communication and awareness raising involving, for instance, community meetings, women's groups, youth clubs, and other formal and informal forums (GFDRR 2017a, 20). However, in many parts of the developing world, community-based initiatives often fall short of universal access standards or fail to be inclusive of vulnerable groups, such as people with disabilities and their families (GFDRR 2017a, 31). Inclusive community-based DRM does not only require people with disabilities to be informed, but also that they are involved in and contribute to the generation of risk information. This aspect of participation will be explored in chapter 8.

In addition to disabilities, there may be other reasons for community members to have limited access to risk information and certain communication channels. For instance, persons who are illiterate or do not speak the official language (e.g., migrants or ethnic minorities) face similar challenges in accessing vital information via mass communication channels (such as radio, television, mobile phones, and newspapers) if their language barriers are not considered. Supporting diversification and redundancy by using multiple channels to share information about disasters will make it more accessible and reliable (GFDRR 2017a, 21).

Some examples to illustrate these types of constraints include the following:

- **Sri Lanka:** As an example, a case study on flood protection and early warning systems in Sri Lanka revealed that despite the recent efforts by the government to incorporate disability considerations into DRM policies and programs, public service announcements (including for early warning messages) did not use sufficient alternative communication channels to reach people with visual and hearing impairments (World Bank 2021a, 37). This has been partly related to the structural shortage of sign language interpreters in the country, as well as a lack of legal recognition of sign language (ibid.).

- **South Asia:** patriarchal norms exclude vulnerable community members, particularly women, from information sharing (World Bank 2021a, 20).[28] Official information and messages tend to be passed through the local leader, typically men, who often disseminate information selectively, following existing systems of kinship and patronage (ibid.). Moreover, communication between government and communities is also shaped by levels of trust and potential conflicts. Particularly, in fragile and conflict-affected settings, tensions can limit the effective dissemination of information (GFDRR 2019d, 10). While, in principle, information sharing can contribute to trust-building between public institutions and local communities, it is important to understand that communication always has a potential political and cultural dimension.

b) *Risk perception:* **The ability to translate information into knowledge and action is another important aspect of resilience.** Disaster risk reduction actions (e.g., during emergency response) can only be effective if the population is well-informed and aware of the risks and appropriate risk-reducing measures and behavior. The public understanding

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[28] As the report indicates, "the Bangladesh and Sri Lanka case studies (…) explore the exclusion factors facing an agrometeorological early warning system and disaster early warning system, respectively, and highlight entry points for how social inclusion approaches can be strengthened" (World Bank 2021a, 21).

of disaster risks and its components (hazard, exposure, and vulnerability) can be crucial in the implementation of DRM. Risk perception and behavior by marginalized groups is also shaped by attitudes and perceptions prevailing within the community. For instance, stigma and discrimination related to disability can have disempowering effects for people with disabilities and may shape their understanding and interpretation of risks. They can result in their perception that "they have no societal role to play in mitigating [disaster] effects" (GFDRR 2017a, 30). People with disabilities, especially women, are rarely considered to have the necessary skills or capacity to contribute to the DRM process (ibid.). Marginalized groups may also decide to opt out or disengage from public institutions, which corroborates the general distrust towards public authorities and official sources of information. This, in turn, may lead to distorted perceptions and attitudes towards disaster risks and DRM, such as early warning or relief efforts.

Perceptions and attitudes towards risks and related policies vary due to social, cultural, and economic factors, including, but not limited to, language barriers, education level, previous experience with disasters, and access to and use of information and communication technologies (ICT) or certain media channels. Literacy, education levels, and ICT skills are important factors in determining the capacity to access, read, and understand warning or recovery information. The correlation between education levels and lower awareness of disaster risk mitigation can even be observed among marginalized groups, such as the traditionally excluded caste groups or ethnic minorities in India (see World Bank 2021a, 15).[29] Previous exposure to disasters can also influence risk perceptions and behavior and has been used by some researchers as a proxy for hazard awareness (although prior experience does not necessarily imply better risk awareness). Moreover, differences in risk-taking behavior can also be observed in core demographic indicators. There is an extensive body of research into the patterns of risk perceptions and ways to improve risk communication and public education in the context of disasters (see GFDRR 2019d; Natural Hazards Center 2020). An example of this is found in the United Kingdom:

- **United Kingdom:** Butler et al. (2016, 3) find in a study of flood events in the United Kingdom that "stakeholder perspectives can be seen as central to problems of blame cultures and a diminished quality of public debate about responses to floods." The way the causes of disasters are framed in public debates can influence views on the solutions, the response behavior, and acceptability of DRM in a community. However, "it is not information per se that determines action, but how people interpret it in the context of their experience, beliefs and expectations" (IPCC 2012, 81). This aspect is especially relevant for marginalized communities which, due to their isolation, are often not effectively reached by public outreach and communication campaigns.

Information constraints are directly related to the lack or limited disaggregated data in all countries, which, in turn, makes it difficult for policymakers to design policies or initiatives to reduce vulnerabilities of diverse disadvantaged groups in these countries. It is also necessary to note that at the country level, constraints often represent a unique combination of multiple factors, which makes it particularly important to contextualize global best practices accordingly to the needs of diverse vulnerable groups in various country-specific contexts, cultural settings, and institutional environments. In this sense, it is critically important to conduct social analysis of needs of various groups, using both quantitative and qualitative

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29 Moreover, the 2007-2008 Gallup survey of 118 countries shows that globally, education is the biggest predictor of climate change awareness (Ming Lee et al. 2015).

methods, as well as to measure gaps and disparities related to human capital endowments, economic opportunities, and voice and agency.

The formulation and design of inclusive DRM policies also require an analysis of country-specific norms, stereotypes, barriers, facilitators, and other relevant factors for inclusion. In this regard, it is particularly important to achieve and maintain equitable participation in the policy formulation in order to include unique experiences of groups in the policy design. The policy adoption stage also needs to be based on an inclusive consultation process that incorporates a wide variety of actors and stakeholders, including organizations addressing critical issues affecting women, children, the elderly, minority groups, people with disabilities, and other vulnerable groups. The participatory consultation process allows the policymakers to hear voices of those marginalized populations who otherwise could be left behind and left out of the policy focus. Equitable participation is also important at the policy implementation stage as it allows for reducing differences in the policy reach, access to resources, and benefits generated during this stage. Finally, at the evaluation stage, it is essential to collect data on specific changes resulting from the policy implementation and to trace progress on inclusion in the targeted areas.

Attitudes of people towards themselves and others are probably one of the most significant barriers for marginalized groups to build disaster resilience. Regardless of the context, exclusion of certain groups within DRM-related interventions, as well as in society more broadly, is usually underpinned by social norms and belief systems (World Bank 2021a, 18).

a) *Social norms:* **For persons with disabilities, common stereotyping and stigmatizing create discrimination, which, in turn, leads to a host of barriers, including physical, financial, informational, and institutional constraints (see respective sections in this report).** For instance, beliefs that persons with certain disabilities will bring bad luck can cause severe forms of exclusion and physical harm, such as being turned away from shelters (GFDRR 2017a, 22). Further, a common stereotype experienced in the disability community (especially among persons with cognitive and psychosocial disabilities) is the premise that they are passive beneficiaries entirely dependent on others (GFDRR 2017a). Even well-intentioned behavior can violate the autonomy of people with disabilities if it is based on patronizing approaches that ignore their wishes and fail to acknowledge them as active contributors. These attitudes restrict opportunities for persons with disabilities to prepare for, respond to, and cope with disasters.

The way communities cope with disasters is determined by social norms that are highly gendered. Gender norms that define certain household roles, social expectations, and power dynamics often lead to increased vulnerability of women and girls during and after a disaster. Women do the bulk of the care and domestic work and are also more likely to be the sole adult household member (e.g., as a single parent or widow or in households where men have migrated or do seasonal work). The distribution of domestic and care responsibilities affects women's ability to cope with disasters. As mentioned above, when the demand for care work increases because of a disaster, women are the ones who carry most of that additional burden, which, in turn, has negative effects on their economic opportunities. This means that women play a key role in community resilience, while at the same time, they face barriers during the recovery phase.

7.4. Attitudinal Constraints

Given their social roles, women and girls are often limited in their mobility and autonomy in disaster contexts, regardless of their physical and mental capabilities (Erman et al. 2019; World Bank 2021c,b). Commitments of women and girls as caregivers directly affect their opportunities for participation in DRM planning, response, and relief activities, as well as their ability to evacuate in a timely manner. But other cultural norms can restrict women's mobility and participation in public life as well: a case study from Sri Lanka illustrates how patriarchal norms restrict the autonomy of Muslim women in a disaster context (World Bank 2021a, 16). Their participation in DRM activities is limited, given predominant cultural expectations.

Some examples to illustrate these types of constraints include the following:

- **Pandemics:** Experience with pandemics (Ebola, HIV, and COVID-19) shows that during a public health crisis, diseases are often stigmatized or used to reinforce discrimination narratives (UNDRR 2020b, 3). This is particularly true for those groups that already face stigma on other grounds. This can lead to both overt and more subtle forms of discrimination. The attitudes of others also have implications for the way we perceive ourselves. For instance, self-esteem is an important aspect of empowerment. Research shows that cash transfer programs (for example, in Nicaragua) can contribute to enhanced self-esteem among marginalized groups because they affect their attitudes –towards themselves and the attitudes of others toward them (World Bank 2013a, 31).30 Another striking example of disempowering and patriarchal norms is the common observation of increased gender-based violence in the aftermath of disasters. Restricted mobility limits access to protection mechanisms for women and children to prevent violence in the household, as was the case during lockdowns in the Covid-19 pandemic (UNDRR 2020b, 3).

- **Post-flood damage:** Post-flood damage assessments suggest that Muslim women living alone cannot be visited by surveyors unless they are accompanied by Muslim men (ibid.). Around the globe, social norms cement a widely observed power asymmetry and exclusion from decision-making (which will be explored further in chapter 8), both within the household and in the community. A case study from Pakistan shows that decisions to evacuate during floods are mostly made by the male adults in the household (World Bank 2021a, 16). As the study indicates, "while women may want to evacuate earlier to save their assets, men may feel bound by community honor to stay behind" (ibid.)

b) *Trust and social cohesion:* **Trust and cooperation are fundamental pillars of cohesive and resilient communities. Communities — groups of people who share a location and/ or identity and interact frequently — work through "informal networks based on trust, reciprocity, and social norms" (World Bank 2013b, 23).** This characteristic of communities and their level of social capital and cohesion help members effectively manage risks, and, thereby, represent an important aspect of disaster vulnerability (ibid.; World Bank 2010, 25).

Distinct groups put their trust into different institutions and organizations, and, consequently, will not be equally receptive to a given intervention. Levels of trust vary between religious, cultural, and ethnic groups, and by political affiliation, socioeconomic status, and gender, among other characteristics (IPCC 2012, 45).

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30 For example, a World Bank's study found that "in Lesotho, for example, recipients of social pensions indicated an increase in respect for them in society once the national social pension was introduced. The pension also contributed to greater self-esteem because recipients were able to contribute more financially to their grandchildren's upbringing and education" (World Bank 2013a, 31).

Some examples to illustrate these types of constraints include:

○ **ECA:** Evidence from the ECA region shows that people with strong social networks and high levels of trust are significantly less likely to resort to costly coping behavior after a shock, presumably because they have better availability of informal support[31] (World Bank 2013b, 143). Labor migration and disrupted family structures may explain limited "social assets" in low-income urban settlements, decreasing the chances of self-reliance and resilience within households and communities (World Bank 2008, 2019).

○ **United Kingdom:** Butler et al. (2016) found in a study conducted in the United Kingdom that strong social networks can be key support mechanisms (both material and emotional) during and after floods, especially in the absence of an adequate state response and public support services. Another aspect related to trust and cohesion is the degree of collective action or community mobilizing during and after a disaster. The presence and extent of grassroots community organizations and volunteers can be essential elements of community resilience. They provide various forms of direct support, but can also point people towards institutions and more formal types of support.

○ **Fragility, Conflict, and Violence (FCV):** Trust issues can be a constraint on effective uptake of risk and preparedness information. A lack of trust in public authorities and official communication channels is common in the developing world, particularly in FCV contexts and among marginalized groups, such as ethnic minorities (GFDRR 2019d, 9). Gender dynamics also affect varying degrees of trust in DRM-related organizations.

○ **Serbia:** Findings from a study in Serbia show that women and men tend to rely on different types of organizations. While men reported trust in "the fire department, emergency aid bodies, and themselves", women were more confident in "international humanitarian organizations, nongovernmental humanitarian agencies, neighbors, religious community affiliations, and the army." (World Bank 2021b, 21) The study also found that women had more realistic views about certain aspects of disaster preparedness (ibid.).32

○ **Bangladesh:** Efforts to address cultural barriers explaining women's reluctance to access shelters illustrate that in some contexts, women are more likely to trust other women (Erman et al. 2021, 30). A widely reported lack of collaboration between public institutions and people with disabilities and their representative organizations (even in countries with progressive disability legislation) is likely contributing to an erosion of trust among people with disabilities in critical DRM processes and stakeholders (Twigg et al. 2018, 5).

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[31] This behavior includes reducing consumption of stable foods and forgoing medical care.

[32] As the study (World Bank 2021b) indicates, "women had more realistic views about being prepared for disaster while also reporting more household- and family-level cares, concerns, and preparedness behaviors in selected areas. In addition, women reported a greater tendency to organize essential supplies and emergency amenities, to save important documents, and to deal with the household's finances (Cvetković et al. 2018)."

7.5. Institutional
Constraints

While important advances have been made in client countries, in terms of both policy reforms and DRM investments, there is usually a gap between policy commitments and legal frameworks, on the one hand, and effective implementation of inclusive DRM activities, on the other. For instance, a review of DRM activities in South Asia shows that the five countries where case studies have been conducted — Bangladesh, India, Nepal, Pakistan, and Sri Lanka — all recognize the need to emphasize inclusion in formal ways (World Bank 2021a, 4). Yet, the governments face challenges when translating national-level policies into concrete activities on the ground that provide opportunities for meaningful participation of vulnerable and marginalized groups. Specifically, this relates to institutional barriers and lack of incentives to increase the number of individuals representing vulnerable groups in decision-making positions related to disaster management and climate change. There is also a lack of evidence-based policies on inclusion of ethnic minorities, indigent people, people with disabilities, and other vulnerable groups in DRM decision-making processes. At the same time, inclusive DRM approaches point to the importance of vulnerable groups' participation in decision-making processes in DRM and climate change policymaking, as well as the implementation, monitoring, and evaluation of the related programs and initiatives.

a) *Government documentation:* In many cases, lack of access to government documentation, such as ID cards, disability certificates, or property titles, can impede access to relief measures and reinforce existing inequalities in access to social protection and public services. Informality and a lack of legal documentation create difficulties for accessing social protection, credit, insurance, and certain public services, which are crucial to cope with disasters. Ownership of and control over land and properties are often cited as important factors in determining adequate measures for DRM and achieving more inclusive and resilient outcomes.

Some examples to illustrate these types of constraints include the following:

○ **Nepal:** Gender bias in the possession of citizenship certificates posed significant barriers for female-headed households and led to many unmarried or divorced women being unable to receive reconstruction grants (World Bank 2021a, 22).

○ **Pakistan:** The introduction of computerized national identity cards (CNICs) did not reach the entire population. Reports of people being turned away from relief providers due to a lack of CNICs are concerning (ibid., 98). Likewise, targeted assistance for people with disabilities usually hinges on the possession of respective documentation (disability certificates), which de facto excludes a sizable portion of vulnerable people who lack the required documents.

○ **Romania:** Dwellers in informal settlements who lack property titles and other legal documentation are not eligible for restoration assistance provided by the government after a disaster (World Bank 2021e). Roma households tend to have no formal legal rights to their land and buildings, even when they have been living on the land for years, decades, or centuries. The identification of Roma as owners is complicated due to the lack of inheritance papers and the existence of unauthenticated handwritten sale contracts (ibid.).

○ **Bangladesh:** Historically, ethnic minorities and indigenous people around the globe have struggled to address biases and inequalities in land ownership. Especially the lack of official recognition of traditionally owned lands is a contested issue with important

implications for DRM. As the example of indigenous groups in Bangladesh shows inability to prove ownership, and subsequently obtain proof of residence, prevented them from accessing relief services (World Bank 2021a, 23).

○ **Sri Lanka:** The experience of the 2004 Indian Ocean tsunami in Sri Lanka showed the implications of unequal access to property and land titles for women, particularly widows: many encountered difficulties in accessing reconstruction assistance because they lacked proof of land ownership (ibid., 22).

b) *Representation and decision-making:* **Participation in community affairs, including in DRM processes, is widely seen as a fundamental element of disaster resilience (Arnold et al. 2014; Arnold and de Cosmo 2015; IIED 2020; World Bank 2020a; GFDRR 2020c).** Participation involves voice and influence and is always about addressing intricate power dynamics within a certain context or setting. It implies being able to speak out, to be capable and confident to advocate for issues, and to stand in front of relevant institutions to claim your rights and be heard. However, long-standing and intricate patterns of exclusion are undermining the voice and agency of certain groups that are marginalized for many reasons. Being able to participate in decision-making and effect change also determines peoples' sense of agency which is a significant factor of resilience.

Equal representation and involvement in decision making require inclusive institutions and governance mechanisms at the community, regional, and national levels. However, participation is also affected by barriers related to physical, financial, informational, and attitudinal constraints, as was discussed in the previous chapters. For instance, domestic roles, stereotypes, stigma, paternalizing behavior, social isolation, or even persecution can limit opportunities for marginalized groups, such as women, girls, and people with disabilities, to participate in and contribute to public affairs in the community. Deep rooted exclusion from decision making is underpinned by social norms and starts at the household level. Exclusion from decision-making also means that valuable skills and knowledge are not tapped that could otherwise improve the effectiveness and inclusivity of DRM activities.

Some examples to illustrate these types of constraints include the following:

○ **Albania:** Evidence from Albania shows that during the floods of February 2015, women appeared to benefit less from public support measures, which is partly explained by the fact that they had less access to local representatives and decision-makers (World Bank 2021b, 8). People with disabilities are usually not consulted about their needs in disaster contexts, as the 2013 UN Survey on Living with Disabilities and Disasters confirmed (UNISDR 2014). Both awareness of national risk reduction plans and direct participation in DRM processes were found to be staggeringly low (ibid.). This explains why over half of respondents in the survey indicated that they would find it difficult to evacuate in the event of a sudden disaster.

○ **Tajikistan:** The 2017 data suggest that half of all married women aged 15 to 49 indicated that "they did not make decisions alone or jointly on their health care, household purchases, and visits to family and friends" (World Bank 2021b, 8).

○ **India:** Attendance of women in capacity-building DRM programs was limited due to mobility constraints and domestic commitments (team meetings usually took place in the evenings when women were busy with household chores) (World Bank 2021a, 67).

- **Albania:** Women were more sensitive to the needs of older persons, people with disabilities, and children in the context of evacuation procedures (World Bank 2021b, 8).

- **DRM planning processes:** Lack of representation in DRM-related planning processes means that women-specific risks and needs are not sufficiently considered. This also applies to persons with disabilities who are often found to be absent from vulnerability and capacity assessments (GFDRR 2017a, 32). Consultations and community meetings for DRM planning will not benefit from the contributions of persons with disabilities if their specific accessibility needs for the discussions and associated materials are not considered (GFDRR 2017a, 20). New information and communications technologies and online tools have the potential to improve the engagement of marginalized groups and overcome existing barriers related to universal access or household commitments. For instance, they can be used to connect people with disabilities with service providers and offer additional mechanisms for communication and accountability (Twigg et al. 2018, 4). However, they are by no means panacea and require careful consideration of other potential barriers, such as inequalities in internet access and ICT literacy.

c) *Public services:* **The availability and access to basic public services – most importantly health, education, social services – is a fundamental building block of a functioning and resilient community (World Bank 2010; World Bank 2013a; Arnold and de Cosmo 2015; EEA 2017, 97f.).** These services are particularly relevant for sub-sections of the population that are potentially vulnerable due to specific needs or barriers they are facing. Children, people with disabilities or health conditions, and households without financial means and supportive social networks depend on the provision of reliable and high-quality health, education, and social services – both before, during, and after disasters.

Limited access to essential services among marginalized groups amplifies underlying vulnerabilities in the longer term as it results in poor health and educational outcomes, which, in turn, reinforce poverty. Access to services can be undermined due to multiple reasons related to poverty, informality, discrimination, inadequacy of available services, and entrenched mistrust between communities and service providers. For example, a lack of government documentation, such as residence permits, can hamper access to public benefits and social services, as was indicated earlier in this section. The importance of access to health services during and after disasters is often cited in the literature as a key aspect of vulnerability. Low quality, inadequate or inaccessible health-care services during disasters increase the vulnerability of people with elevated health risks or special health care needs, such as older people, those with underlying health conditions, pregnant women, or persons with disabilities.

Education is instrumental for disaster resilience and disruptions in education can have long-term negative repercussions. The education system can be an important channel to raise awareness on disaster risks and to convey knowledge regarding risk-reducing behaviors (see chapter 2.3). On the other hand, interruption to education due to disasters can have numerous negative long-term effects, including lower educational achievements that translate into fewer opportunities in later life, increased child labor and trafficking, and other child protection issues (Lafreniere and Walbaun 2017, 91; World Bank 2021a, 10). Children and youth are particularly vulnerable to shocks and disruptions of their everyday lives, with potential long-term repercussions (World Bank 2010, 44). Moreover, low education levels are a marker for other aspects of vulnerability.

Persons with disabilities may have limited access to bank accounts or financial services and, therefore, depend on others to receive and manage cash benefits for them.

Some examples to illustrate these types of constraints include:

- **COVID-19**: The context of the current Covid-19 pandemic highlights that certain groups of people are more vulnerable to even temporary inaccessibility of necessary medication and health care (UNDRR 2020b, 2). Emergency situations and lockdowns may limit access to routine health care and social services, putting vulnerable groups further at risk. Up-to-date social registries and the ability of local authorities to locate and contact people who require special assistance during times of a disaster can be key to ensure their timely evacuation.

- **India:** A study of the post-tsunami period in India found that people with disabilities whose caregivers were deceased (or missing) fell through the cracks of rehabilitation support programs (World Bank 2021a, 68). Avoiding disruptions of critical health and social services, such as care for persons living with disabilities or ante-natal care, during times of emergency is an indispensable part of inclusive DRM.

- **Nepal:** An assessment of DRM practices in Nepal found that women's low levels of literacy and lack of prior experience with public institutions made it challenging for them to request support during the recovery phase and independently fill in the required paperwork (World Bank 2021a, 81). Hence, they had to rely on the goodwill of others in the community, such as neighbors or shopkeepers (ibid.).

8. Alignment with GFDRR's Strategy 2021-2025 (Expanding and Mainstreaming Resilience in a World of Compound Risk)

GFDRR is committed to ensuring marginalized groups, especially women, girls, and persons with disabilities, have a voice in DRM programs. Related to post-disaster reconstruction, the World Bank has committed to ensuring that all financed public facilities are disability-inclusive by 2020. GFDRR has supported this agenda and has provided technical assistance to World Bank financed post-disaster reconstruction operations. In addition, in 2015, GFDRR created its Inclusive Community Resilience Program (later called the Social Resilience Program) and developed action plans for gender (GFDRR 2016b), disability inclusion (GFDRR 2018a), and citizen engagement (GFDRR 2018b) to advance social inclusion across its DRM activities.

The World Bank's Gender Strategy, the Directive on "Addressing Risks and Impacts on Disadvantaged or Vulnerable Individuals or Groups", and related notes establish directions for Bank staff in respect of project-affected disadvantaged or vulnerable individuals or groups, including those at risk as a result of unequal gender norms and power relations. These documents are relevant for the fulfilling requirements related to inclusion of gender and other disadvantaged groups throughout the project cycle, including scoping, assessment, implementation, and stakeholder engagement. More specifically, these documents serve as the instruments that establish directions for Bank staff regarding due diligence obligations on gender in relation to vulnerable groups. Since 2009, GFDRR has increasingly underscored in its strategic documents the importance of integrating gender dimensions into its activities as a core operating principle (ibid.). Furthermore, through its Inclusive Community Resilience Initiative, GFDRR expressed its commitments to leverage country investment programs that work directly with poor communities, support civil society and broader citizen engagement in DRM, and continue to use its role as convener to support community level innovations and promote voice of vulnerable communities in national and global DRM policy dialogue (GFDRR 2014).

GFDRR supports governments' efforts to manage disaster risks in more inclusive ways. In doing so, GFDRR also contributes to mainstreaming inclusive DRM. A review of portfolio data shows that a significant portion of GFDRR's portfolio has addressed, in some way or another, elements of inclusion. Over FY16-20, the GFDRR portfolio included 751 grants, for total funding of US$408 million.[33] Out of these, 496 grants, almost two-thirds, included elements related to gender, disability, community resilience, and/or citizen engagement. With an amount of US$260 million, they accounted for approximately 64 percent of the total GFDRR funding. GFDRR grants with a focus on citizen engagement had the largest share (54 percent) in total GFDRR funding, followed by gender (49 percent), community resilience (41 percent), and disability inclusion (15 percent).[34] The support provided by GFDRR not only includes investments in structural mitigation measures, but also technical and financial assistance to help governments improve preparedness actions, institutional arrangements, and safety nets that reduce disaster risk vulnerabilities, particularly among the poor and marginalized. GFDRR grants were linked to a range of World Bank instruments. About 90 percent were used in the context of Analytical and Advisory Services (ASA)[35] (54 percent of all grants) and Investment Policy Lending (IPF) (36 percent of all grants) alone.[36]

Over the period of FY16-19, there was an upwards trend both in the number of grants and in funding amounts related to inclusion. However, in FY20, there was a reduction in the number of grants, as well as in the amount of funding. This is in line with the reduction in the overall size of the GFDRR portfolio driven by the closing of GFDRR's largest funds in FY20-21.[37] The Africa Region (AFR) received both the highest number of grants and the highest total grant amount in FY16-20 (157 grants totaling 108.7 million).[38] The same can be said about grants with elements of social inclusion (100 grants totaling 60.7 million). In relative terms, however, the Middle East and North Africa (MNA) portfolio had the highest share of inclusion-related grant numbers (78 percent), and the East Asia and the Pacific (EAP) portfolio had the highest share of inclusion-related funding (91 percent).

A portfolio review showed that a significant portion of GFDRR grants included, in some way or another, elements of inclusion. From FY16-20, almost two-thirds of the GFDRR portfolio (496 activities) included elements related to gender, disability, community resilience and/or citizen engagement. The support that GFDRR provided to teams included technical and financial assistance to help governments improve preparedness actions, institutional arrangements, and safety nets that reduced disaster risk vulnerabilities, particularly among the poor and marginalized. Overall, there has been an increasing trend of integrating various aspects of inclusion across the GFDRR portfolio with a focus on citizen engagement, gender, community resilience, and disability inclusion.

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[33] If not stated otherwise, all amounts in the following are in US Dollars.

[34] Most of the grants included more than one element of inclusion. Approximately 18 percent of the grants had all four areas of inclusion and 63 percent of the grants included both gender related activities and citizen engagement as indicated by task teams leads.

[35] These grants were under the P-code of an ASA. Examples of ASA outputs include capacity building, analytical reports, policy notes, nonlending technical assistance, hands-on advice, and knowledge-sharing workshops or training programs (GFDRR 2020b, 5).

[36] These grants that were under the P-code of an IPF. DPFs and PforRs did not have significant representation with 5 percent and 2 percent, respectively. Other non-lending instruments included Knowledge Management Products and Just-In-Time support to task teams.

[37] There was a reduction from US$95.6 million in FY19 to US$85.3 million in FY20.

[38] This excludes global grants.

Figure 6 GFDRR Grants with Activities Related to Gender, Disability, Community Resilience and Citizen Engagement (FY16-20)
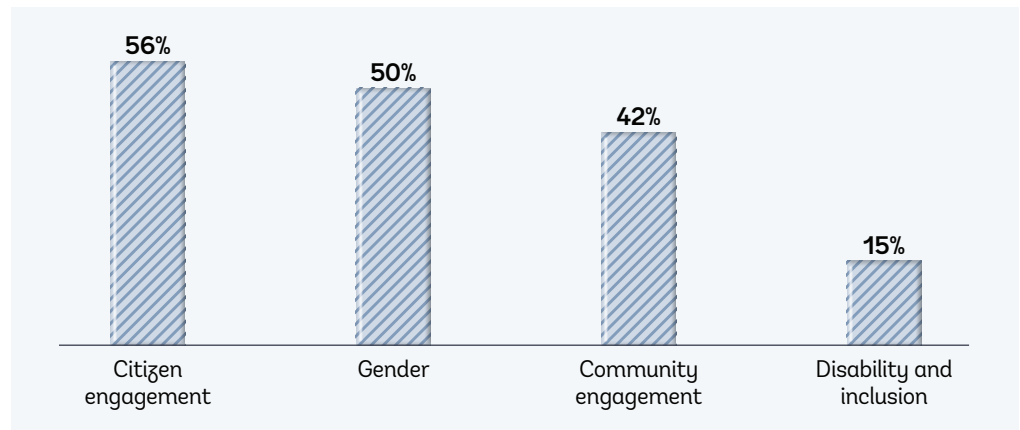
Source: Original figure for this publication.

Moreover, during this period (FY16-20) the number of grants with gender related activities increased, showing a positive trend in terms of gender mainstreaming across GFDRR's portfolio, thus potentially increasing the impact across the regions. Aligned with GFDRR's FY16-20 Gender Action Plan, GFDRR has closely monitored whether the grants undertook or drew upon existing gender analysis; included specific gender actions; and/or monitored gender impacts.

Figure 7 GFDRR Grants Including Gender Considerations (FY16-20)
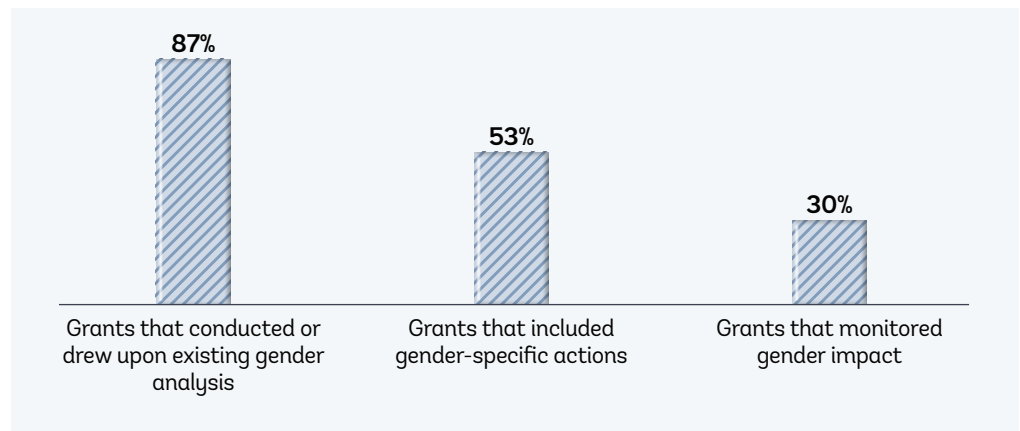
Source: Original figure for this publication.

Despite this progress, GFDRR is striving to expand its focus on social inclusion going forward. As part of its new Strategy, as outlined below, GFDRR strives for a results-based management approach. This extends to the implementation of cross-cutting themes of social inclusion, gender equity, and fragility, conflict, and violence, as well as has a potential to leverage additional financing. It will also monitor and evaluate the implementation of this strategy to improve portfolio performance, increase learning and knowledge exchange, strengthen accountability, and inform decision making at the country and regional levels.

In this section, we explore existing approaches and opportunities for improvement in GFDRR's portfolio to expand its support for inclusion elements across all interventions, in line with the priority areas laid out in the GFDRR Strategy 2021-2025. A series of lessons learned per each priority area is included in the Annex.

Having access to robust scientific data and information is indispensable to understand how risk is distributed within a given population. A proper understanding of risk and vulnerability is the foundation on which DRM actions and resilience are built. However, promoting access to information, sharing knowledge, and raising awareness about risk inequities is not only relevant for policymakers. Risk information and knowledge are public goods that all citizens should have the best possible access to (for risk communication also see chapter 8.4). Consequently, the objective of risk-informed decision-making is closely tied to the citizen engagement mandate. From an inclusion angle, this requires not only the promotion of platforms and mechanisms for engagement that are formally inclusive and accessible, but, importantly, targeted efforts to address a range of existing participation barriers among marginalized groups (as explored in the previous chapters).

8.1. Priority Area 1: Risk-Informed Decision Making

One of the key challenges encountered in the context of inclusion-sensitive DRM activities is the dearth of relevant disaggregated data – by sex, disability status, age, caste, and ethnicity, among other variables. The collection of disaggregated data on marginalized groups not only sheds light on the diversity and complexity in community needs, but is also often a precondition for developing effective and relevant DRM strategies. While national-level data has improved significantly over the years, at the sub-national levels, the data resolution is often insufficient to allow assessments of group-specific vulnerabilities. In DRM programs, a high spatial resolution of data is crucial: meaningful vulnerability assessments require a combination of geo-spatial risk data with socioeconomic and demographic variables. Given existing data limitations, many DRM activities have relied on qualitative data to get a more nuanced picture of potential inclusion barriers. While both qualitative and quantitative research have their merits, they can hardly replace one another. Existing initiatives that aim to improve the availability of data and tools to better capture the needs of vulnerable groups show that this also requires inclusive processes in data collection and analysis (see the example in **Box 1** that addresses barriers of women to take part in digital participatory mapping).

DRM practitioners and available publications point to a lack of relevant sex-disaggregated data which makes it difficult to appropriately assess the differential impacts of disasters on men and women. Insufficient data on the gender-differentiated impacts has been particularly acute in the ECA Region (World Bank 2021b, 7). Bank-internal consultations in the ECA Region revealed challenges in including gender considerations in DRM-related programs and projects. In addition to data limitations, DRM staff noted that more operational guidance was needed, specifically on "how to capture, create, and disseminate effective gender-sensitive and gender-inclusive approaches" (World Bank 2021b, 8). The publication of the gender guidelines for Post-Disaster Needs Assessment (PDNA)[39] in 2014 contributed to an increase in PDNAs that identify gender-differentiated impacts of disasters (GFDRR 2020a, 4). **Box 2** provides an example of good practices.

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[39] The PDNA is an internationally accepted methodology for determining the physical damages, economic losses, and costs of meeting recovery needs after a natural disaster through a government-led process. The methodology was elaborated by the EU, the United Nations Development Programme (UNDP), and the World Bank (Jeggle and Boggero 2018).

Box 1 Addressing the Gender Divide in Digital Technologies and Mapping

Photo: Open Cities Africa, Ghana team

GFDRR Labs focus on delivering solution-driven research and development in DRM to address identified gaps and obstacles. In 2020, one of the challenges GFDRR Labs examined was the gender divide in digital technologies and mapping. The lack of women engaged in digital projects has tangible consequences and can run the risk of worsening inequalities. Labs sought to better understand why it is difficult for women to take part in digital participatory mapping projects through the Open Cities Africa project and pursued ways to address the obstacles in the program design.

Firstly, the Open Cities teams provided comprehensive training to every participant in the program. A team in Ngaoundéré in Cameroon met with local heads of households to introduce the project and explain the benefits of involving women and girls in this work. To accommodate responsibilities at home, data collectors in several cities were allowed flexible schedules, which let women select times to work when they were available. In Antananarivo, Madagascar, teams traveled through communities in pairs to ensure the security of female members. In Accra, Ghana; Kinshasa, the Democratic Republic of Congo; and Pointe-Noire, the Republic of Congo, women led community outreach efforts, serving as role models to women interested in data collection and mapping.

Efforts taken to promote women's participation have produced tangible benefits. Among these is an emerging cohort of female Open Cities Africa alumni with digital skills who are now serving as role models for other women in their communities. Actions taken to address barriers to women's participation can begin to close the digital gender gap in cities across the region and promote the creation of maps and mapmakers that represent the needs of all community members.

Source: GFDRR 2020a, 40.

Box 2 Lao PDR – Just-in-Time Support to Assess Disaster Impacts on the Most Vulnerable

Photo: Ministry of Information, Culture and Tourism, Lao PDR

In 2018, Lao PDR suffered its most damaging and costly floods in a decade. Heavy rains from two tropical cyclones resulted in the collapse of a saddle dam in Attapeu province, which caused flash floods. Overall, 64 people lost their lives and more than 600,000 people across the country were affected. The destruction of farms and microenterprises, along with the disruption to social services, affected income sources and increased debt levels for 70 percent of households already in debt. Vulnerable communities were particularly affected, especially with the displacement caused by the destruction of almost 1,700 houses.

GFDRR provided a Just-in-Time grant of $100,000 to help identify priority needs following the floods, together with technical support for a government-led PDNA. With support from the Facility, teams from the World Bank, the UN, and EU, worked with civil society organizations to assist the government with the assessment.

With close cooperation between the partners, an assessment was completed in less than a month. The PDNA report estimated total damages of $371.5 million, equivalent to 2.1 percent of the country's projected 2018 GDP, and 10.2 percent of Lao PDR's annual budget in 2018. Recovery needs were estimated at $520 million, with the highest impacts identified in the transport, agriculture, and waterways sectors.

The PDNA highlighted actions for improving gender equality and child protection in the recovery process. The exercise included the analyses of disaster impacts on employment and livelihoods, with particular attention to gender, disability, and child protection aspects. The PDNA helped mobilize more than $54 million in recovery and reconstruction funds and informed the design of a recovery strategy to support the most vulnerable. It also helped advance policy reforms and strengthen financial preparedness.

Source: GFDRR 2020f, 24, 53.

Priority area 2 focuses on activities that aim to reduce risk by strengthening infrastructure, urban and rural resilience, and mainstreaming DRM across sectors, such as urban, energy, transport, water, health, and education. GFDRR is promoting the integration of DRM principles, technologies, and expertise in these sectors to ensure that critical infrastructure can cope with natural disasters and climate change. In doing so, teams are encouraged to place a special emphasis on access barriers for marginalized groups both in the built environment, as well as in relation to essential public and communal services, such as basic water and sanitation services. This involves, for instance, efforts to mainstream accessibility standards and universal design principles into infrastructure investments making sure they are both safe and inclusive. This way the benefits of risk mitigation measures will extend to all members of society. Empirical evidence shows that incorporating universal accessibility features into the design process from the beginning is more cost efficient than retrofitting existing buildings (GFDRR 2020d, 5). To support the mainstreaming of universal design, GFDRR funded the preparation of a manual on universal design standards as part of the World Bank's engagement in Indonesia.[40] The manual aims to assist practitioners to incorporate accessibility standards into the design of buildings in the Province of Central Sulawesi (see **Box 3**).

8.2 Priority Area 2: Reducing Risk and Mainstreaming Disaster Risk Management

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Box 3 Guidelines to Support the Mainstreaming of Universal Design in Indonesia

Some disadvantages that vulnerable groups suffer from are caused by physical barriers. For example, poorly-designed post-disaster emergency tents could hamper people with mobility issues from receiving the supplies and services needed for recovery. Similarly, women and children could feel unsafe in and around water, sanitation, and hygiene (WASH) facilities, public areas, and other public facilities – particularly in post-disaster situations, during which risks of gender-based violence (GBV) can be amplified. To address these barriers, universal design is a concept that could create safe and accessible environments for all, enhancing access and service delivery critical for swift and inclusive recovery. Persons with disabilities, women, children, and the elderly are not a homogenous group as they may experience common barriers in different ways. However, this does not mean that vastly different approaches and designs are needed for each different type of impairment. Nor does it mean that exclusive provisions should be made for vulnerable groups. One of the primary purposes of universal design is to enable people of all ages, genders, and abilities to engage with other people inclusively. Universal design achieves this objective by identifying common needs of multiple beneficiary groups. For example, limited mobility is a condition that is shared among people with physical disabilities, temporary disabilities, and the elderly. Similarly, children, the elderly, and wheelchair users may all have limited physical reach, compared to other adults without any disabilities. A universally designed building and environment accounts for these common needs, and in doing so, facilitates its use to the widest range of users possible.

Given the importance of universal design in enabling access to housing and basic services, such as health and education facilities, it is imperative that universal design principles are implemented early on in a post-disaster rehabilitation and reconstruction process of buildings, and the urban environment in general. As part of the World Bank's support to the Government of Indonesia on inclusive development, GFDRR funded the preparation of a manual on universal design standards to better assist government officials, planners, architects, engineers, contractors, other practitioners in the built environment to incorporate accessibility standards into the design of buildings and the overall built environment in Central Sulawesi. The manual builds on relevant national and international good practices and makes specific references to compliance with Indonesian regulations and standards. Given the importance of consistency and continuity in applying universal design interventions, the manual includes general guidelines on universal design interventions at the neighborhood, street, and site level, most of which are applicable to the overall building design and construction of all built form. It then outlines more detailed building and typology-based universal design principles to encourage seamless continuity of universal design across different scales and areas of urban development.

Source: GFDRR 2020d, 5.

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[40] These projects include the following: Central Sulawesi Rehabilitation and Reconstruction Project (P169403); Strengthening multi-hazard disaster resilience in Indonesia (P175925).

Activities include efforts to extend access to financial mechanisms, such as savings accounts and micro credits, and social safety nets, particularly, for women and persons with disabilities.

Adaption to disaster risks may involve wide ranging changes in the physical and social environment, particularly among marginalized groups. As an example, resettlement programs tend to have far-reaching consequences for the affected population and are often met with significant resistance. They can be particularly hard and stressful for marginalized groups. For instance, empirical evidence suggests that the elderly and persons with disabilities find it more challenging to relocate (World Bank 2021a, 44). Here, the key take-away from past resettlement efforts is that a focus on physical structures alone fails to recognize the vital role of emotional and psychological needs of individuals. Rather, successful resettlement programs have tried to address this gap by engaging counselors (e.g., from nearby public health facilities) to support the mental health needs of the affected population (ibid.). Moreover, responsible authorities should consider additional financial and in-kind support for vulnerable households (ibid.).

Therefore, it is crucial to enable local communities to take an active role in the design, construction, and maintenance of protection infrastructure and other DRM-related investments. Prevailing negative perceptions and attitudes within the community can hamper successful collaboration with authorities, governmental, and/or non-governmental stakeholders. Hence, opportunities to voice concerns (such as platforms for debates or grievance redress mechanisms), as well as various forms of participation in planning, implementation, and monitoring are crucial elements of inclusive DRM. One approach adopted in a World Bank project in Sri Lanka was to establish a citizen monitoring committee as an interface between communities and authorities (World Bank 2021a, 42). In the ongoing project, the World Bank is supporting the Government of Sri Lanka to improve its flood risk mitigation measures. The citizen monitoring committee was incorporated into the project design and again emphasized in subsequent assessments to develop an Inclusive Resilience Action Plan. It is expected to enhance local ownership of the entire infrastructure development process (ibid.).

Part of GFDRR's work is building awareness and capacity for financial preparedness, including improvements in financial and fiscal planning and management, as well as the development/reform of specific disaster risk-financing solutions. These contribute to ensuring inclusivity in DRM in various ways: (a) by minimizing the disaster impact on the delivery of critical public services; (b) by incentivizing disaster risk reduction measures that protect particularly vulnerable communities; (c) by improving efficiency and transparency in post-disaster public finance, thereby strengthening equity and accountability (hence avoiding elite capture); and (d) by protecting the livelihoods of the poor and marginalized through social protection mechanisms. These activities include efforts to extend access to financial mechanisms, such as savings accounts and micro credits, and social safety nets, particularly, for women and persons with disabilities.

8.3. Priority Area 3: Financial Preparedness to Manage Disaster and Climate Shocks

Box 4 Natural Disasters and Social Protection in Japan

Kashiwagaki, Japan: residents in refuge centre. Photo: jeremy sutton-hibbert / Alamy Stock Photo

Japan has long suffered from intermittent, but devastating natural disasters. Over the years, the country has created an elaborate system to provide social and economic assistance to disaster victims, including the most vulnerable. Today, Japan is a model of how the DRM and Adaptive Social Protection (ASP) systems can function in the context of rapid onset disasters, which, though infrequent, often have severe consequences. Policymakers elsewhere may find the following recommendations and features of Japan's system to be particularly noteworthy:

1. Preparedness: Strengthen the ASP system with a comprehensive DRM framework and enhance the capacity of institutions prior to a disaster.

2. Flexibility: Prepare for ad-hoc adaptation (design tweak and new design) of the system responding to the unique needs of each disaster.

3. Effective and efficient outreach: Provide multiple options for ASP programs, clarify criteria for eligibility, and identify needs through citizen interfaces.

4. Leadership and collaboration: Ensure strong government leadership, develop well-designed collaboration mechanisms, and optimize collaboration networks.

5. Continuous learning and improvement: Forge a culture of learning through experience and make continuous improvements in policies, mechanisms, interventions, and technologies.

Source: GFDRR 2019b.

Adaptive social protection (ASP) systems play a key role in financial preparedness for disasters. The social protection system can be made more responsive to a disaster by scaling a pre-existing safety net program or by creating a dedicated emergency program. Scaling up (vertical expansion) involves providing more assistance (in terms of the amount and/ or duration of assistance) to existing beneficiary households in a given safety net program (GFDRR 2019c, 15). While relatively easy to implement, this approach may not reflect the needs on the ground during a disaster. Among the affected households in need of assistance, there may be some (and this is likely) that are not included in the existing social protection program. Hence, this pragmatic approach may create equity concerns. On the other hand, a program that scales out (horizontal expansion) is more responsive to post-disaster needs as it expands eligibility to households not already enrolled but affected by the disaster (e.g., using damage

to the household as a proxy for eligibility) (ibid., 18).[41] Instead of scaling up or scaling out, some countries set up dedicated emergency programs (also referred to as "piggybacking") which may have similar characteristics as regular safety nets — including cash transfer, in-kind benefits, and cash-for-work programs (ibid., 14). Both piggybacking and horizontal expansions allow for changes in the eligibility criteria and therefore offer greater flexibility.

While the preferred design features of ASP are highly context-dependent, there are a few common building blocks that are fundamental for making social protection programs more adapted and responsive to disaster risks. For instance, whether existing institutional and governance arrangements have the capability to scale (e.g., capacity of delivery processes, reliability of information systems, currency of social registry, among other characteristics). A GFDRR guidance note on ASP highlights five core building blocks for investments into improved disaster responsiveness (GFDRR 2019c, 34): (1) government leadership; (2) institutional arrangements; (3) data and information; (4) programs and delivery systems; and (5) finance. To ensure that marginalized groups in need of assistance are included in the program, they need to be identified and registered. If existing registries and information system do not allow for accurate needs assessments, this may lead to an exclusion of vulnerable groups. The common gaps of social registries are obvious when it comes to including all people with disabilities (and their respective needs). Another key bottleneck for marginalized groups is that they often do not self-enroll, even when eligible, due to a lack of awareness or other hurdles in the registration process. Consequently, one vital element of ASP is reaching out to marginalized groups to ensure that they are identified and included and that support services reach people when they need them (GFDRR 2019c, 23). Japan's example shows that citizen interfaces can be effective ways to clarify eligibility criteria and identify special needs, thereby contributing to improved inclusivity (GFDRR 2019b).

While providing useful insights, the example of Japan's social protection system (Box 4) shows that ASP principles need to be adapted to a country's respective unique context and disaster situation. For example, high rates of informal workers make it more challenging to mobilize tax revenues to a similar extent. Also, in other contexts, ethnic tensions may create difficulties for the decentralization of government responsibilities, as happened in Japan. Moreover, despite its remarkable opportunities, the use of new technologies also poses risk, such as data privacy and security, or new access barriers, given inequalities in ICT skills and devices. For instance, if social protection benefits are tied to online accounts or electronic identification cards (IDs), this will likely exclude marginalized groups who tend to have lower skills and awareness of new technologies, and may face a range of additional bureaucratic, financial, and other barriers.

Under priority area 4, GFDRR is supporting efforts to improve community and government preparedness by strengthening hydrometeorological services and early warning systems, increasing emergency response capacity and supporting resilient recovery. This includes improvements in legal and institutional frameworks; facilities, equipment, and information technology; and human capital investments. Inclusive approaches in this area emphasize the participation of marginalized groups in assessment and planning processes to ensure that their needs are recognized and addressed throughout the DRM continuum– from emergency preparedness and response to recovery. This includes gender- and disability-sensitive early warning systems, evacuation, and shelter plans, as well as post-disaster assessments and recovery planning frameworks.

8.4. Priority Area 4: Disaster Preparedness and Resilient Recovery

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[41] Programs capable of scaling out are typically also able to scale up.

Risk communication

Risk communication should be designed to reach everyone – recognizing the diverse accessibility and communication needs within a population. High risk awareness and positive attitudes towards DRM within the community are key to community preparedness. To design inclusive risk communication, it is important to understand the audience and then consider the method/medium of dissemination, the messenger, and the message, first and foremost. Creating inclusive early warning communication approaches requires a good understanding of the target audience, as well as mapping out various aspects of vulnerability explored in this report, which can also be used for preparedness campaigns and activities before and after disaster events.

The application of accessibility standards and universal design to risk communication dissemination tools creates a broader reach to convey the preparedness information or early warning alerts. Good practices use a wide range of communication formats and channels.[42] By selecting a messenger who is trusted by the audience — trust, as addressed above, is different among groups who have been marginalized — means that the message is more likely to be believed and acted upon by the audience.

Designing a message that is simple and inclusive — e.g., in multiple languages, in picture format — enables both persons with disabilities, ethnic minorities, and a much broader segment of the population to be able to understand the information. Whether this approach is for early warning alerts or for preparedness campaigns, it is important to consider the above to make messages more inclusive. Within the context of early warning alerts, the message should entail both (i) communication related to the nature and impact[43] of the hazard and (ii) information on preparedness actions to be taken, targeting the audience by geography and needs, among other factors. For instance, a study of the effectiveness of cyclone early warning services among coastal communities in Bangladesh found that "impacts-based" forecasting with a best-case and a worst-case scenario is more effective than standard weather forecasts (Ahsan et al. 2020, 9). The example underlines the importance of adequate translation of technical knowledge into locally relevant information and actionable messages.

Box 5 **The Common Alerting Protocol (CAP) for Early Warning Systems**

For early warning systems, the CAP has been established to better coordinate alerts through various early warning platforms and systems. One of the benefits of CAP for persons with disabilities is that it can provide custom messaging. As noted above, implementing CAP has benefits far beyond those with disabilities: CAP can make multilingual alerts easier, provide clarity on the location of the warning using polygons, and disseminate the alert on multiple platforms. The Climate Resilience Multi-Phase Programmatic Approach (P160005) in Sri Lanka is integrating CAP within the country's early warning system.

Source: GFDRR forthcoming, 16.

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[42] E.g., such communication channels can include town hall meetings, door-to-door information campaigns, letter-box drops, cell broadcasting, bulk SMS, visual and audio, web services, etc.

[43] Audiences are rarely able to effectively understand and take actions when it comes to probability information with early warning systems, and instead impact is a more effective way of communicating early warning messages.

Efforts to disseminate DRM-related information, including early warning, preparedness, communications, and relief/response communications, ultimately, have the goal of changing behavior so that it is adapted to a given risk context. Often the assumption is that improved risk awareness automatically leads to better individual decisions and risk adaption. However, this is not always the case, particularly for marginalized groups who may face several constraints in adapting their behavior. Risk information must be *received, understood,* and *acted upon.* Hence, if a message (e.g., an evacuation order) is received and understood, but the affected population is not able to act upon (e.g., follow the instructions), the risk will not have been reduced. The same applies to preparedness and relief communications. For instance, for persons with disabilities certain mobility challenges may prevent them from following the guidance, regardless of their willingness. Therefore, an important element of inclusive risk/ DRM communication is the identification of barriers marginalized groups may have when preparing for and responding to a disaster. Consultations with affected communities to identify potential barriers are indispensable in this regard, including with persons with disabilities of all types, their caregivers, women, and girls, and other (potentially) marginalized groups. Finally, communication between both governments and civil society also plays an important role in combating stigma and discrimination in the context of disasters.

Box 6 Customized and Locally Relevant Agromet Services in Bangladesh

Rice mill in Munshiganj district, Bangladesh, Dhaka. Photo: Farid_Ahmed

The World Bank's Bangladesh Weather and Climate Services Regional Project (BWCSRP), which is still under implementation, aims to improve agrometeorological information for farmers in Bangladesh. The project's activities include installing automatic rain gauges and agrometeorological (agromet) display boards at union parishad (union or rural council) locations; posting information at kiosks; developing mobile apps; and organizing roving seminars — all the while gathering feedback from farmers on how these advisories can better help them protect their lives and livelihoods.

Before the BWCSRP, there was no nationwide agromet service for farmers. Most farmers obtained general weather information from television, radio, and community sources. One aim of the project is to support awareness building and dissemination of agromet advisories and products among farming communities. A variety of customized agromet products and tools will be developed to help farmers in their planning processes to adapt to the adverse impacts of climate change and disasters. The BWCSRP is making the agromet information area-specific (that is, village- or ward-specific), and the relevant stakeholders, including farmer groups, have confirmed that this is of interest.

The Inclusive Resilience Action Plan that was developed as part of the project identifies entry points for improved outcomes for marginalized groups. This includes recommendations to review, analyze, and revise communication channels, message content, and the timing of warnings (such as alternative communication channels to address barriers for groups with low levels of literacy and cellphone ownership). Additionally, the action plan recommends placing a greater emphasis on strengthening capacity-building programs and enhancing "disaster literacy" among excluded groups. Lastly, it suggests activities to establish a more inclusive process for gathering feedback.

Source: World Bank 2021a, 49.

Emergency preparedness and response

While disasters tend to amplify existing barriers for marginalized groups, appropriate preparation can help make the needs of the most vulnerable more visible. For instance, disability-inclusive emergency preparedness and response would require contingency plans that ensure stockpiling of locally-appropriate assistive devices and power provision for persons with disabilities as part of the relief activities. An up-to-date social registry of vulnerable people with special needs (e.g., people with disabilities, pregnant women, older persons, families with small children, and people requiring specialized medical attention) has proven to be a vital tool to allocate and prioritize assistance during an emergency.[44] In order to make sure that persons with disabilities do not exclude themselves from mainstream relief, emergency settlements and shelters need to be designed and located in such a way as to maximize accessibility. For example, following the Haiti earthquake, some persons with hearing disabilities demanded segregated camps to ensure smooth communication, secure information on and access to relief goods, and to reduce stress and anxiety (GFDRR 2017a, 40). Additionally, to ensure the safety and well-being of women and girls, gender-sensitive planning is critical (such as segregated sleeping arrangements and bathroom facilities).

However, active involvement of women, people with disabilities, ethnic minorities, the elderly, and other potentially vulnerable groups in emergency preparedness and response activities is critical to inclusive resilience. An important element of inclusive DRM is the recognition of vulnerable groups for their capacities to overcome stereotypes that portray them solely as disaster victims. This includes, for instance, promoting the engagement of women in relief coordination, search and rescue, and other aspects of the humanitarian response cycle. To achieve this, communication and capacity building are crucial, as well as supporting preparedness campaigns with communication tools and strategies that are inclusive and address the unique situations of different target groups and their preparedness behaviors. Additionally, gender-sensitive and disability-inclusive training and capacity building are instrumental in this process. DRM drills and training are important to ensure that individuals are, in fact, prepared and capable of acting in the event of a disaster. Persons with disabilities can only benefit from these trainings when training materials and activities are designed in a way that addresses their diverse needs. Likewise, women may only be able to participate if adequate transport arrangements are made, and meetings are scheduled in a way that accommodates their domestic responsibilities.

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[44] The registry would include people's location, contact information, and specific needs. Hence, appropriate confidentiality and data privacy arrangement need to be ensured.

Box 7: Highlighting "Benefits for All" to Create Entry Points

Portrait of local family in Boneoge, Sulawesi, Indonesia. Photo: © Fabio Lamanna | Dreamstime.com

Beyond including persons with disabilities in the design of DRM programs to support sensitization, highlighting how disability-inclusive DRM development can create "benefits for all" is an important entry point utilized by TTLs. Framing disability-inclusive DRM development as positively impacting individuals and groups beyond persons with disabilities can emphasize the value of mainstreaming inclusive activities. The Universal Design concept illustrates how disability-inclusive DRM development improves the lives of many other segments of the population. Several world Bank's DRM projects have incorporated Universal Design standards into their activities, including one in Central Sulawesi, Indonesia (P169403) that commissioned a report for reconstruction and recovery guidelines.[45] Evacuation shelter projects that meet certain Universal Design standards[46] have benefitted pregnant women and older persons, by creating easier-to-access entries. Furthermore, a World Bank project in India (P154990) made schools more accessible by constructing clear pathways to traverse, and shelves and other furniture were positioned at appropriate height for children. This benefitted school children but also many others when the school was used as an evacuation shelter.

Source: GFDRR forthcoming, 8.

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[45] The Universal Accessibility Guidelines developed by the task team of the Central Sulawesi Rehabilitation and Reconstruction Project (P169403) is forthcoming.

[46] World Bank's project examples include: Multipurpose Disaster Shelter Project (P146464) and Emergency Multi-sector Rohingya Crisis Response Project (P167762) in Bangladesh; and Andhra Pradesh Disaster Recovery Project (P154847) in India.

Recovery

During the recovery and reconstruction phase, DRM activities focus on the restoration of public services (such as education and health services, including mental health), livelihoods support, and the reconstruction of housing and critical infrastructure. Recovery starts with the identification of damages and losses among different population groups as discussed in chapter 8.1. Ideally, recovery efforts are leveraged to improve, rather than restore, access to services, infrastructure, and economic opportunities for marginalized groups. This could include better physical accessibility of services, better public transportation, or the establishment of community-based services that are more responsive to inclusion needs. Overcoming access barriers for marginalized groups usually requires targeted support. For housing reconstruction, inequalities regarding land tenure and ownership arrangements should be considered as these can be a source of conflict and/or reproduce existing inequalities (e.g., ensuring that names of spouses are both included in contracts). Further, promoting economic resilience during recovery requires diversified and sustainable livelihoods. For instance, this may require tailored financial services to help women restart livelihood activities. While the promotion of self-employment and labor market access is key to recovery, it cannot replace adequate social protection to meet recovery needs and leave no one behind (see chapter 8.3). If successful, investments to secure and broaden livelihood opportunities can offer a high return for governments.

Moreover, decision-makers should prioritize the protection of citizens and marginalized groups, from physical and psychosocial harm – both in the immediate aftermath of a disaster and during recovery. Additional actions to prevent violence and conflict (including GBV, human trafficking, forced and early marriages, among others) are needed to protect women, men, children, and people with disabilities, and other vulnerable groups (World Bank 2020a, 10). This aspect illustrates how early relief is tied to the longer-term recovery: failure to provide protection can lead to long-term repercussion that undermines social, economic, and psychological recovery. For instance, after large-scale disasters, both women and men, boys and girls have a need for counseling to process their disaster memories and develop positive coping strategies (World Bank 2020a, 11). Yet, a lack of available services in this area is not the only barrier addressing mental health needs. Social stigma and distrust can prevent people from seeking counseling. The potential long-term negative impacts are particularly pronounced for groups that face social exclusion or have lost or been separated from their social networks. Moreover, a lack of psychosocial support for men can elevate the risk for violence and abusive treatment of women (ibid.). Both formal justice systems, as well as social support structures, play a crucial role in protecting vulnerable groups, including women and girls, from violence in the aftermath of disasters (World Bank 2020a, 10).

Box 8 Post-Earthquake Housing Reconstruction in Nepal

Nepali workers building house. Photo: © Radim Štrobl | Dreamstime.com

On April 25, 2015, a 7.8 magnitude earthquake struck Nepal. Following a second strong earthquake on May 12 (7.3 magnitude), and a sequence of aftershocks, the government of Nepal reported a death toll of 8,790 people, while those injured reached 22,300. A June 2015 Post-Disaster Needs Assessment (PDNA) found that total damages and losses amounted to about US$7 billion, with reconstruction needs of about US$6.7 billion. The sequence of earthquakes destroyed 490,000 houses, mostly those owned by the rural poor and built using traditional materials (stone, mud, mortar, or brick masonry), and rendered another 265,000 houses at least temporarily uninhabitable.

In light of these needs, the World Bank funded the Earthquake Housing Reconstruction Project to restore houses in the most-affected districts of the country. Implemented through Nepal's National Reconstruction Authority, the project followed an owner-driven approach: owners of affected houses received cash grants in three installments (adding up to NPR 300,000 or US$3,000) as a conditional cash transfer that requires owner to comply with predetermined technical standards, verified by designated engineers at various stages of reconstruction. Moreover, an additional top-up grant of NPR 50,000 (approximately US$500) was provided to families that met the government's "vulnerability" criteria, which included people with disabilities with red and blue cards, single women more than 65 years old, men more than 70 years old who live alone, and orphans under the age of 16 years.

The program's objectives were to improve the resilience of communities and build a culture of safer, more sustainable housing and settlements. To those ends, the project established a program of social, environmental, and technical support mechanisms for beneficiary households; trained owners in the use of earthquake-safe building techniques and materials; instituted a system for supervision and certification of compliance with multi-hazard-resistant standards; established a grievance redress mechanism; and implemented an extensive communications and outreach program.

As part of the Inclusive Resilience Action Plan, social inclusion experts made recommendations to improve participation in and outcomes of the project for marginalized groups. Firstly, the project would benefit from broadening the eligibility criteria for deploying special assistance packages, including socioeconomic criteria, such as poverty level. Secondly, the project would benefit from additional efforts to provide targeted reconstruction support for vulnerable groups. This will help incomplete homes receive special attention and address construction bottlenecks, such as lack of skills, bureaucratic hurdles, and logistical or financial constraints. Thirdly, the World Bank team suggests capacity building activities for government officials to increase their sensitivity to the needs of vulnerable groups. Lastly, it was considered important to provide livelihood support, alongside housing reconstruction, to strengthen economic recovery of vulnerable groups.

Source: World Bank 2021a, 78.

Box 9 Gender Inclusion During Recovery in Central Sulawesi, Indonesia

Medical assistance in Bantul, Indonesia. Photo: Erik de Graaf

The 2018 Central Sulawesi disasters impacted people in the region tremendously. Studies found that given some of the pre-existing structured gender inequalities in society, among the most severely impacted people were women and children, as well as people with disabilities and the elderly. The knowledge sharing and awareness-building workshop on "Gender Inclusion in Post-Disaster Rehabilitation and Reconstruction in Central Sulawesi" was held on December 5 to 6, 2019, and was facilitated by the Ministry of Public Works and Housing (PUPR – *Pekerjaan Umum dan Perumahan Rakyat*) and the World Bank, with financial support from GFDRR.[47] The workshop brought together stakeholders from national ministries, local government agencies, international partners, community facilitators, representatives of nongovernmental organizations (NGO), and women's groups, to exchange information on the current state of affairs on gender inclusion during the reconstruction and rehabilitation process in Central Sulawesi.

Recovery processes in a post-disaster situation can either be an opportunity to improve gender equality or exacerbate pre-existing gender inequalities. Indonesia's experience in advancing gender equality in post-disaster situations, however, be it in Aceh (2004 and 2005), Java (2006), or Mount Merapi (2010), have shown that empowering women in these situations led to improvements in the design and sustainability of local infrastructure projects, as well as faster economic and livelihood recovery, among other positive outcomes. Such experiences were important insights for Central Sulawesi reconstruction. PUPR and the World Bank acknowledges the importance of such gender inclusion as failing to improve gender equality in post-disaster situations could lead to prolonged gender inequality, increased GBV risks, and forfeiting the potential benefits that could have come from involving all genders in post-disaster recovery efforts.

So far, the integration of gender equality principles has been achieved through the incorporation of universal accessibility design standards in detailed engineering designs. PUPR has also established a Gender Mainstreaming working group to provide advice on inclusive infrastructure planning and design. The establishment of the Gender Mainstreaming working group helps PUPR address prevailing gender inequality issues for the communities impacted by the disaster in September 2018.

One of the key objectives of the "Gender Inclusion in Post-Disaster Rehabilitation and Reconstruction in Central Sulawesi" workshop was to identify the needs, possible intervention channels, and strategies that can improve gender equality, while also mitigate GBV risks in the post-disaster rehabilitation and reconstruction efforts of Central Sulawesi. The workshop was the first in a series of capacity building and knowledge sharing activities as part of the World Bank's technical cooperation program with PUPR to enhance project outcomes under World Bank-financed recovery activities in Central Sulawesi. It contributed to raising awareness and improving the understanding of gender inclusion and GBV issues. A concrete output was the development of inputs for a Gender Action Plan to further mainstream gender inclusion efforts into rehabilitation and reconstruction processes.

Source: GFDRR 2019e.

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[47] These activities were a part of the Central Sulawesi Rehabilitation and Reconstruction Project (P169403).

Citizen Engagement and Community Resilience

Collaborative and participatory approaches are widely acknowledged as a crucial part of effective and sustainable disaster risk management. Most governments around the world have incorporated some degree of public participation mechanisms in their DRM strategies (GFDRR 2017a, 34). However, the implementation of these strategies, as well as the depth, scope, and frequency of citizen engagement, vary widely. Given the fact that DRM touches upon many different sectors and domains (as illustrated in this report), there is a lot of potential for public participation and involvement of a variety of stakeholders (public agencies, different levels of government, citizens, and their representatives, and NGOs). The ability of different stakeholders to work together across sectors and scales is considered as instrumental to create sustainable and effective DRM solutions. However, participatory elements are all too often limited to consultations that merely aim to fulfill formal requirements and/or secure acceptance of project implementation. This may be specific to the experience of discrimination among marginalized groups or, alternatively, indicative of a general weakness in the public dialogue and culture of participation in the country. In any case, giving visibility to the voices of marginalized groups is only possible through comprehensive engagement of communities at the local level. DRM interventions that only engage with national-level stakeholders are more likely to neglect important inclusion aspects related to their program.

Various community-based approaches have been developed by international organizations, governments, and NGOs. For instance, the World Bank's community-driven development (CDD) approach offers a useful framework and ample experience in this regard. It is about transferring "control over resources and decision-making from central agencies to communities" (World Bank 2008, 6). The Bank's Strategic Framework for Citizen Engagement (Word Bank 2014) identifies four levels of citizen engagement that describe different degrees of scope and depth: (1) informing, (2) consulting, (3) collaborating, and (4) empowering citizens. As highlighted in GFDRR's Citizen Engagement Action Plan, meaningful citizen engagement requires a two-way interaction to close the feedback loop (GFDRR 2018b).

In the DRM context the concept of community-based disaster risk management (CBDRM) has evolved to foster community-level engagement, ownership, and responsibility in DRM interventions (World Bank 2021a, 20). It is a holistic bottom-up approach that comprises elements of self-help, mutual-help, and public-help in preparing for, responding to, and coping with disasters. CBDRM recognizes that community-organized DRM activities (including project planning, design, and implementation) better accommodate the community's needs and vulnerabilities. CBDRM mechanisms empower communities to mobilize resources and skills to improve their resilience in the context of disasters. Moreover, genuine community engagement will not only foster bottom-up support and ownership of the agenda, but critically, is a precondition for trust-building activities that overcome frictions between different stakeholders, such as between local communities and service providers. The decentralization of DRM through CBDRM is expected to improve resilience outcomes and sustainability.

Yet, existing inequalities and exclusion within a community often undermine the equal participation of all community members in CBDRM. The case study from Pakistan illustrates the challenges of including the voices of women in CBDRM, given their restricted mobility considering entrenched patriarchal norms (World Bank 2021a, 20). Therefore, community engagement activities in DRM must proactively reach out to marginalized groups and seek to enable them to participate. The experience from past engagement around social inclusion shows that meaningful community engagement with marginalized groups requires measures

that also address demand-side participation barriers.[48] Simply providing a platform for engagement without identifying and addressing those barriers will be insufficient to include all voices. When working with marginalized groups, effective involvement in decision-making can be challenged by negative attitudes, stereotypes, stigmatization, social fragmentation, low education levels, and economic hardship, among other factors. Inclusive DRM does not only provide opportunities for engagement, but also promotes the ability, and dignity of marginalized groups in participation processes (the three dimensions of access according to the Inclusion Matters framework (World Bank 2013a)).

Hence, the mobilization of marginalized groups, such as women and persons with disabilities, not only requires actions from within the community, but also a change in the way the other national and local stakeholders see those groups. For instance, the persistent perception of persons with disabilities as passive recipients of aid limits the awareness and willingness of local authorities to make public meetings and services universally accessible (GFDRR 2017a, 34). Moreover, technical agencies may be reluctant to incorporate participatory mechanisms into the project design due to time, resource, or capacity constraints, or because there is no clear mandate for this type of activity. Unfortunately, targeted efforts to ensure the inclusion and empowerment of people with disabilities to participate in CBDRM are difficult to find. A positive example is the involvement of people with disabilities in recovery efforts in New Zealand after the Christchurch earthquake of 2011 (GFDRR 2020c, 15). The establishment of the Earthquake Disability Leadership Group, the inclusion of persons with disabilities in a community forum, and a standing Disability Advisory Group in the Christchurch City Council – all led to improvements in the integration of disability-inclusive perspectives during recovery (ibid.).

Effective involvement of marginalized groups in DRM activities requires flexible and localized approaches rather than out-of-the-box solutions. Local expertise is critical to define more specifically how citizen engagement activities will foster participation and contribute to building trust on the ground. TTL consultations conducted as part of this review revealed that many task teams find it difficult to effectively engage marginalized groups. Targeted citizen engagement activities are commonly limited to consultations with NGOs at the national level and the descriptions of citizen engagement activities in project preparation documents (such as Project Appraisal Documents (PADs)) are often too vague and generic. Moreover, the new reality of the COVID-19 pandemic requires additional efforts and innovative tools to ensure that marginalized groups are reached. Due to COVID-19 restrictions, task teams and counterparts faced additional challenges to implement meaningful stakeholder engagement. A recent review of COVID-19 Fast Track Facility projects found significant shortcomings related to stakeholder engagement and the identification and inclusion of marginalized groups (Bergman 2021).[49] Taking these shortcomings into account, TTLs voiced increased interest in developing innovative and effective digital tools to improve citizen engagement and specifically outreach to traditionally marginalized groups.

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[48] For instance, this was one of the findings in a recently conducted portfolio review in Romania in the context of the Program Learning Review (PLR) [internal manuscript].

[49] For instance, accessible disclosure of project information was insufficient in many cases; there were shortcomings with regard to grievance redress mechanisms equipped to handle complaints related to GBV and sexual exploitation, abuse, and harassment; and specific budget allocations to implement stakeholder engagement activities were lacking in many cases (Bergman 2021).

█████ GFDRR's current monitoring and evaluation (M&E) system, which was established in 2017, tracks progress on relevant indicators related to citizen engagement and inclusion. The revised Logical Framework was endorsed at the November 2017 Consultative Group meeting. Subsequently, a new monitoring and evaluation platform was developed, with a strengthened M&E system that better tracks results related to inclusive DRM. The new system collects quantitative and qualitative data at the output and outcome levels, and aggregates grant-level data for trust fund and portfolio-level reporting. It was developed by members of the Technical Advisory Group (TAG) for M&E in consultation with World Bank TTLs and donor representatives. Additionally, for each grant, GFDRR tracks supplemental indicators on gender, resilience to climate change, and citizen engagement, as well as general grant information. This information is systematically collected and aggregated by the GFDRR secretariat.[50] Moreover, GFDRR's action plans for gender, disability inclusion, and citizen engagement[51] recognize the need for disaggregated inclusion indicators to monitor progress against the objectives of the Sendai Framework, the Sustainable Development Goals, and related frameworks. GFDRR's overall results framework builds on these action plans as reflected in the theory of change.

Gender-specific outputs and outcomes are an integral part of the M&E framework, but the level of specificity and data quality can be improved. Available M&E data shows that some important results have been achieved in terms of promoting gender equality in the context of DRM (for instance, see chapter 8). In the results framework, indicators 2.2. (on socially differentiated risks) and 4.4. (on gender-sensitive needs in preparedness and recovery) provide gender-differentiated M&E data (Table 1). Additionally, the M&E system tracks whether approved grants (i) draw upon existing gender analysis; (ii) include specific gender actions; and (iii) monitor gender impacts (Table 2). The Gender Action Plan contains a complete results framework for gender-sensitive M&E; the corresponding results indicators are tracked by the GFDRR Secretariat. While these indicators provide a good overview of gender-informed grants and interventions, they do not capture the scope and depth of activities. A review conducted by GFDRR found that within grant activities, gender equality was often addressed superficially (GFDRR 2020b, 4). Specifically, stated intentions to address gender aspects have not always been implemented or translated into concrete activities (ibid.). This has been particularly the case when teams were lacking respective expertise, i.e., social development specialists were not involved in grant design or implementation. The reporting on gender indicators has also varied among grants and data gaps remain. In addition, the overarching GFDRR results framework could be strengthened to include specific indicators to monitor gender actions and track results, include sex-disaggregated indicators as applicable.

Citizen engagement is systematically monitored throughout GFDRR's portfolio. The Citizen Engagement Action Plan includes indicators for different types of citizen engagement activities. In the results framework, reporting on citizen engagement activities is determined for various citizen engagement levels and aspects, covering indicators on capacity building of civil society organizations (CSOs)/community groups, as well as on their active involvement in preparedness or recovery planning activities (Table 1). Additionally, the M&E platform includes indicators that capture varying degrees in the citizen engagement spectrum – from consultations to citizen control over resources and planning decisions (Table 2). GFDRR also monitors which stakeholders benefit from its grants. The beneficiary indicator tracks different

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[50] However, a few indicators have been adopted given challenges related to data quality. For instance, some indicators that reported a specific number of activities were changed to just providing yes/no answers.
[51] Gender Action Plan FY16-21 (GFDRR. 2016b); Disability Inclusion Action Plan 2018–2023 (GFDRR 2018a); and Draft Citizen Engagement Action Plan 2019–2023 (GFDRR 2018b). A list of results indicators from the respective action plans for citizen engagement, gender, and disability inclusion is included in the Annex.

types of beneficiaries, including government, non-government organization, private sector, academia, CSOs, and the community. The identification of (co-)beneficiaries provides a better understanding of the grant context, and to what extent grant activities are, in fact, linked to community needs. However, from an inclusion angle, one of the shortcomings in the existing M&E system is that it does not track the involvement of different population/beneficiary groups in citizen engagement activities. Hence, the M&E data does not capture to what extent marginalized groups are engaged, and if any targeted outreach efforts and/or inclusive design principles have been incorporated into the citizen engagement mechanisms.

Shortcomings exist regarding the monitoring and evaluation of disability inclusion in GFDRR's portfolio. The respective action plan was not fully implemented. Hence, key results indicators for disability inclusion are missing in the current M&E system. Neither the World Bank nor GFDRR has a disability tag or standard reporting requirement specifically on disability-inclusive DRM activities. GFDRR has funded successful activities to promote disability inclusion in DRM, as different attempts to assess inclusive approaches in DRM have shown (GFDRR 2017a,b; 2016a; also see chapter 6.2). While GFDRR has funded guidance notes for disability-inclusive DRM, which include M&E frameworks and standards (GFDRR 2020c), up to now there has not been a systematic approach to monitor the disability agenda. A GFDRR portfolio review found many missed opportunities to incorporate disability-inclusion aspects into grant activities (GFDRR 2020b, 4). As a starting point, the inclusion of the Washington Group Questions in M&E frameworks is widely recommended by disability stakeholders (GFDRR 2020c, 21). Yet, the Washington Group Questions do not set standards to measure inclusion and accessibility barriers (apart from the Inclusive Education Module). Hence, additional efforts are needed to collect data on disability-informed outputs and outcomes (see the suggested list of indicators in the Disability Inclusion Action Plan 2018–2023; GFDRR 2018a, 7). Data on both participation rates by persons with disabilities and on general improvements in accessibility (by removing physical, financial, informational, attitudinal, and institutional barriers) are needed to fully monitor and evaluate disability inclusion in DRM (ibid.; GFDRR 2020c, 21).

While M&E of inclusive DRM has improved, some gaps remain. In terms of socially differentiated risks and results, gender-specific indicators are most developed and consistently incorporated into the M&E framework. Other marginalized groups seem to be insufficiently captured, particularly in the outcomes space. The GFDRR's M&E framework mandates some level of disaggregation and identification of inclusion-sensitive activities, however, TTLs are not always able to provide accurate and sufficient information when reporting on these indicators. A key challenge encountered by Task Teams has been the general lack of disaggregated data from public sources, as well as practical challenges to collect robust and relevant data on inclusion outcomes for marginalized groups. This is one of the recurring themes in social inclusion research. Data demands for meaningful M&E of inclusive DRM can be high, given the various facets of social inclusion. Marginalized groups face access barriers which can be related to limited opportunity, ability, and/or dignity (see World Bank 2013a for a detailed explanation). Ideally, these three dimensions should be reflected in the M&E system to inform the continuous improvement of inclusive DRM approaches.

Table 1 Selected Outcome Indicators Related to Vulnerable Groups from the GFDRR Results Framework

2.2 Understanding and/or responsiveness to gender and socially differentiated risks increased.	# policy and planning documents developed that include the specific needs of individuals based on gender, ethnicity, disability, and socio-economic status
	# of government officials with improved understanding of citizen engagement, gender and social inclusion gained through GFDRR-funded training
2.4 Civil society and communities, including vulnerable groups, engaged in policy formulation.[52]	# of civil society and/or community groups engaged in policy formulation as a direct result of a GFDRR grant
2.6 Vulnerable groups empowered to manage disaster and climate change risks.[53]	# CSOs and/or community groups capacity strengthened for community-based DRM
4.2 Vulnerable individuals covered by social protection systems in the event of disaster.	# World Bank's social protection operations risk informed (through GFDRR support)
	# of people with access to adaptive social protection
4.4 Understanding and/or responsiveness to gender-sensitive needs in preparedness planning and/or resilient recovery increased.	# of government officials with increased gender knowledge gained through GFDRR funded training
4.5 Civil society and communities engaged in preparedness planning and/or resilient recovery.	# of civil society and community organizations actively engaged in preparedness activities or resilient recovery planning activities

Source: GFDRR 2021b

Table 2 Additional Indicators that Systematically Track Gender and Citizen Engagement[54]

GENDER	
Indicators	# approved GFDRR grants that have undertaken or draw upon existing gender analysis
	# approved GFDRR grants that include specific gender actions
	# approved GFDRR grants that monitor gender impacts
CIVIL SOCIETY AND CITIZEN ENGAGEMENT	
Indicators	# approved GFDRR grants that include citizen engagement in the design
	# approved GFDRR grants that have included consultations with citizens
	# approved GFDRR grants that engage citizens in planning and decision-making
	# approved GFDRR grants support citizen control over planning decisions and investment of resources

Source: GFDRR 2021b.

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[52] Vulnerable groups are those that experience diminished capacity to anticipate, cope with, resist, and recover from the impact of a natural or man-made hazard. The concept of vulnerability is dynamic and relative. People's vulnerability to natural and man-made hazards and climate change is determined by social, economic, political, and environmental factors. They may be disproportionately impacted by the hazard event itself, and/or by inequities in relief and recovery processes.

[53] Empowerment refers to the expansion of the capacity of an individual or group to make and act upon decisions and transform those decisions into desired outcomes, affecting all aspects of their lives. It entails overcoming socioeconomic and other power inequalities in a context where this ability was previously denied (adapted from JHPIEGO 2015).

[54] The following general information will be collected for each GFDRR grant.

III CONCLUSIONS AND RECOMMENDATIONS

Inclusion in DRM is about promoting the expansion of *opportunities*, *abilities*, and *dignity* among marginalized groups and in all aspects and stages of the DRM continuum.

Inclusion in DRM is about promoting the expansion of *opportunities, abilities,* and *dignity* among marginalized groups and in all aspects and stages of the DRM continuum.[55] While not being unique to the disaster risk management sector, the mechanisms of exclusion tend to exacerbate existing inequalities during times of disasters. Therefore, inclusive DRM is a critical component of the social inclusion agenda more broadly. Moreover, DRM actions will not be effective in reducing disaster risks for everyone if the needs of populations groups in vulnerable situations are not addressed. While difficult to assess and quantify, failure to address the underlying patterns driving disaster vulnerability is likely to bear enormous social and economic costs. Yet, inclusive DRM approaches are not just about supporting disadvantaged groups who suffer disproportionately from the effects of disasters. Critically, it is about empowering people who are marginalized to better contribute to strengthening the resilience of their communities.

Effective mainstreaming of social inclusion in DRM requires a thorough understanding of the various societal barriers that marginalized groups face when interacting with their social and physical environments. In this report, the adopted approach was to explore the factors or drivers of vulnerability by looking at five distinct constraints – physical, financial, information, attitudinal, and institutional. These constraints may prevent people from accessing critical markets, services, and spaces with dignity. By shifting the attention to shortcomings in the social system, rather than focusing on people's abilities, this perspective acknowledges marginalized groups as agents of change, emphasizing that the adverse effects of disasters for these groups are, in fact, avoidable.

Despite ongoing efforts to promote gender- and disability-sensitive DRM, many gaps remain in doing justice to the great diversity of people's circumstances and needs. Through its grants, GFDRR has supported World Bank task teams and government counterparts in their efforts to develop and implement more inclusive approaches in DRM. While achieving important results, more remains to be done to ensure that persons with disabilities, women and girls, and other disadvantaged and marginalized groups are genuinely empowered to participate in DRM processes and, as a result, can increase their resilience. This stocktaking exercise identified several areas where continued and concerted efforts by governments and their international development partners are needed. Further, the findings of this review point to a set of implications for GFDRR which are presented below. These are broad recommendations for mainstreaming inclusive DRM, which may serve as a basis for developing more specific actionable implications. Hence, this report is expected to inform the subsequent development of an inclusive DRM action plan led by the GFDRR core team in collaboration with its donors and partners.

One of the review's key findings relates to the fact that an integrated approach to inclusive DRM should be developed taking into account various root causes and new risk drivers associated with a systemic risk and complex vulnerabilities. An essential part of this process is ensuring citizen engagement and community participation, which are necessary to provide accountability of all related activities and guarantee the absence of human rights violations. This review highlights that inclusive sustainable development requires adequate mechanisms to mitigate all factors contributing to the construction of a systemic risk, including its drivers in the political and economic systems, such as increased socioeconomic disparities, the digital divide, migratory flows and displacement of people due

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[55] The three dimensions of social inclusion – opportunity, ability, and dignity – are explained in the *Inclusion Matters* framework (World Bank 2013a).

to conflict and wars, and other factors that reinforce the intersectional disparities related to gender, gender identity, ethnic, sexual orientation, and age-based discrimination accompanied by other forms of exclusion practices. The implementation of inclusive DRM policies also requires coordination and cooperation of various stakeholders engaged in the integration of the related responsibilities, objectives, and indicators into national development programs. The key objective of these coordinated efforts is to develop public policies, instruments, resources, evaluation mechanisms, and accountability tools that help stakeholders in the process of addressing the root causes and new risk drivers related to various hazards.

To facilitate this process, the review distinguishes the following key recommendations for GFDRR to enhance its inclusion approach in DRM policies and programs going forward:

Recommendation 1

Increase efforts to integrate various agendas and approaches "to promote inclusive DRM and gender equality.

○ There is a high potential to harmonize and integrate GFDRR's frameworks and approaches subsumed under the umbrella of inclusive DRM and gender equality. A key principle of this approach is that mainstreaming inclusion generates community benefits beyond the initial target group. The report identifies common patterns, gaps, and opportunities across the agendas of gender equality, disability inclusion, and citizen engagement in the context of DRM. The specific objective of these efforts is to develop and implement a more systematic and results-focused approach to the analysis, design, and monitoring and evaluation of inclusive DRM policies, programs, projects, analytics, and advisory services. This objective will be achieved through a number of targeted interventions focused on knowledge, learning, and innovation, and programming, analytics, and advisory services. Since at the country level, constraints affecting people's ability to anticipate, cope with, respond to, and recover from disasters represent a unique combination of psychical, financial, informational, attitudinal, and institutional constraints, a special focus will be made on tailoring inclusive DRM policies, programs, projects, and tools to the needs of diverse groups in vulnerable situations in various country-specific contexts, cultural settings, and institutional environments. The results of these efforts will also be used to support policy dialogue about how to effectively and efficiently tackle various constraints, including discriminatory social norms in patriarchal societies and institutional discrimination at the country and regional levels. This will help raise awareness about the importance of this topic among various stakeholders at different levels of the political and economic systems and society as a whole.

Recommendation 2

Promote collaboration between DRM, social inclusion experts, and external stakeholders.

○ Successful mainstreaming of inclusive DRM requires continued technical and financial support for DRM task teams, in engaging communities. A key challenge is to translate global knowledge into project-specific inputs. GFDRR may seek opportunities to promote collaboration between DRM, gender, and social inclusion experts to integrate these agendas and mobilize the required expertise in the context of DRM operations. Additional guidance and funding opportunities are needed to move from community engagement as a standard reporting requirement to real participatory approaches. Knowledge exchange

and guidance for DRM task teams are also needed to leverage entry points and government buy-in. This includes diagnostics and specific tools to reiterate why inclusion matters in the DRM context. Furthermore, approaches to inclusive DRM need to consider the costs and consequences of both addressing and not addressing vulnerabilities of marginalized and disadvantaged groups and individuals. In addition to internal actors, GFDRR may support activities that enhance collaboration between DRM, gender, and social inclusion actors. who represent nongovernmental entities, social society organizations, and other external stakeholders who could contribute to identifying country-specific recommendations, for example, organizations of persons with disabilities (OPDs), women's associations, and indigenous peoples' organizations, among many other actors.

Recommendation 3

Continue to support governments' capacity to collect, analyze, and manage relevant data.

○ Data collection and analysis are vital building blocks of inclusive DRM. The evidence base must be improved so that vulnerable groups can be identified, and the diversity of needs and capabilities can be captured. One of the most cited obstacles to designing, implementing, and monitoring inclusive DRM is general lack of reliable, sufficiently disaggregated data. Qualitative diagnostics to provide the required nuance should be used to complement wider efforts to improve the collection of high-resolution quantitative geo-coded data. In addition to supporting efforts to address data gaps, GFDRR may also promote a wider, more strategic use of available data and diagnostics. There is also an opportunity to support the design and development of adequate data collection methods to overtime build governmental capacity to collect and use sex, age and disability disaggregated for better decision making.

Recommendation 4

Improve GFDRR's monitoring and evaluation framework with a focus on results and operational leverage.

○ There is an opportunity to revamp the GFDRR's monitoring and evaluation framework to better track inclusion outputs and outcomes in line with the new GFDRR strategy.. This consists of reviewing the indicators and reporting methodology to incorporate the inclusion angle better, and there is also a need to support teams in developing strong results frameworks with clear, measurable, realistic inclusion targets in World Bank–financed projects. Teams would benefit from specific guidance on inclusion targets and outcome indicators to integrate approaches to inclusive DRM during the preparation phase of grants. In addition, the indicators and reporting methodology need to reflect how the inclusion aspects of GFDRR-financed activities inform other operations. Finally, the GFDRR results framework could be updated to better reflect inclusive DRM and gender equality more broadly, including the use of sex-disaggregated indicators to the extent possible.

ANNEX: KEY LESSONS FOR INCLUSIVE DRM

Priority Area 1: Risk-Informed Decision Making
○ The dearth of relevant disaggregated quantitative data is one of the key challenges for task teams and counterparts working on inclusion-sensitive DRM.
○ Qualitative data can provide necessary nuances and depth to understand social inclusion issues. However, qualitative research should not replace efforts to improve the availability of sufficiently disaggregated, quantitative, geo-coded data.
○ Efforts to improve the availability of data and tools that better capture the needs of vulnerable groups show that this also requires inclusive processes in data collection and analysis, i.e., the participation of marginalized groups.
Priority Area 2: Reducing Risk and Mainstreaming Disaster Risk Management
○ The consistent integration of universal design and accessibility standards and principles into infrastructure construction projects will go a long way in reducing physical access barriers for marginalized groups.
○ In addition, infrastructure projects have potential adverse effects for marginalized groups that need to be addressed to ensure community ownership and inclusive outcomes. Most importantly, in terms of necessary resettlements, the experience has shown that gender- and disability-sensitive resettlement plans and the related support programs offer an opportunity to improve the resilience of marginalized groups (for instance, by addressing existing inequities in land ownership and livelihoods, rather than simply restoring the pre-disaster status quo).
○ Successful collaboration between local communities, governmental, and/or non-governmental stakeholders has proven to be a key component of successful disaster risk reduction (DRR) investments. Engaging communities to be part of the design, construction, and maintenance of risk mitigation infrastructure has been critical to achieve this objective.
Priority Area 3: Financial Preparedness to Manage Disaster and Climate Shocks
○ ASP can play a critical role in DRM, yet its design is highly dependent on a country's unique context and disaster situation. Government efforts to adapt existing ASP programs to potential needs during disasters can only be effective if the program design is based on realistic assumptions regarding institutional capacity, governance arrangements, political economy, and finance.
○ In most cases, setting up or reforming specific ASP programs requires prior investments in the ASP core building blocks, particularly institutional capacity and data collection and analysis (such as reforming and improving social registries).[56] Bottlenecks in one or several of these areas will prevent governments from making the ASP system more disaster responsive.
○ While promising, new technologies for ASP management and service delivery can create additional access barriers for marginalized groups. Accessibility and universal design principles provide useful guidance to reach marginalized groups, which are likely among the most vulnerable.
○ Additionally, previous experience has shown that outreach activities targeting marginalized groups are a vital element of ASP to ensure that they are included and receive support when they need it.

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[56] Core building blocks for ASP: (1) government leadership; (2) institutional arrangements; (3) data and information; (4) programs and delivery systems; and (5) finance (GFDRR 2019c, 34).

Priority Area 4: Disaster Preparedness and Resilient Recovery
o In the context of risk/DRM communication, the use of diverse technologies and means of communication to deliver relevant, customized, and actionable messages can significantly improve outreach to marginalized groups.
o Within communities a lack of trust or capacity may prevent people from understanding and/or using DRM-related communication, such as early warning information. And even where messages are understood and trusted, marginalized groups may not be able to act accordingly. Hence, addressing barriers to behavioral change should be part of risk/DRM communication efforts.
o Responding to the specific needs of marginalized groups when a disaster hits requires reliable information to locate them and provide tailored support. An up-to-date social registry of vulnerable people with special needs (e.g., people with disabilities, pregnant women, older persons, families with small children, and people requiring specialized medical attention) has proven to be a vital tool to allocate and prioritize assistance during and after an emergency.[57]
o Given the potential barriers faced by marginalized groups, shelter design and planning is a complex exercise that requires careful consideration of the voices and needs of marginalized groups to ensure that shelters are safe and accessible for everyone.
o A common theme that cuts across emergency response and relief coordination activities is participation in decision-making. Inclusive DRM approaches highlight the importance of promoting the involvement of marginalized groups in respective planning and management committees.
o Training and drills are an integral part of disaster preparedness on the ground. Yet, the previous experience shows that marginalized groups tend to be underrepresented in capacity building activities. The latter are often planned and delivered in ways that exclude certain groups, such as women and people with disabilities.
o Limited capacity or awareness among government officials on how to serve socially excluded groups can be an important bottleneck for inclusive DRM.
o GBV came up as a key issue for gender-sensitive DRM. Effective measures to address GBV include specific safety standards in shelters (such as adequate lighting and provisions for privacy) and mechanisms and standards for reporting GBV.
o The timely restoration of essential public services is emphasized as a key element of inclusive DRM. Prioritizing access of vulnerable groups to critical services, such as mobile health services,[58] is instrumental for the prospects of recovery among these groups.
o Additionally, the need for psychosocial support during emergencies is often underestimated. Counseling can play a key role in making recovery more inclusive and, therefore, should be made widely available to affected populations (including both men and women, children, and adults).

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[57] The registry would include people's location, contact information, and specific needs. Hence, appropriate confidentiality and data privacy arrangement need to be ensured.

[58] These services include a full range of reproductive and family planning health services.

Cross-cutting Areas: Citizen and Community Engagement
○ Giving visibility to the voices of marginalized groups is only possible through comprehensive engagement of communities at the local level. DRM interventions that only engage national-level stakeholders are more likely to neglect important inclusion aspects related to their program.
○ Moreover, genuine community engagement will not only foster bottom-up support and ownership of the agenda, but, critically, is a precondition for trust-building activities that overcome frictions between different stakeholders, such as between local communities and service providers.
○ Various community-based approaches have been developed by international organizations, governments, and NGOs. Yet, examples of comprehensive and inclusive citizen engagement are difficult to find. There seems to be a gap between stated commitments and implementation on the ground.
○ Existing inequalities and exclusion within a community often undermine the equal participation of all community members in DRM. Thus, effective involvement of marginalized groups in DRM activities requires flexible and localized approaches, rather than out-of-the-box solutions.
○ The previous engagement experience related to social inclusion shows that meaningful community engagement with marginalized groups requires measures that also address demand-side participation barriers. Simply providing a platform for engagement without identifying and addressing those barriers will be insufficient to include all voices.
○ The mobilization of marginalized groups, such as women and persons with disabilities, not only requires actions from within the community, but also a change in the way the other national and local stakeholders see those groups.

REFERENCES

Arnold, Margaret, et al. 2014. *Climate and Disaster Resilience: The Role for Community-Driven Development.* Washington, D.C.: The World Bank. http://hdl.handle.net/10986/17553 59

Arnold, Margaret, and de Cosmo, Sergio. 2015. *Building Social Resilience: Protecting and Empowering Those Most at Risk.* GFDRR. Washington, D.C.: The World Bank. https://www.gfdrr.org/en/publication/building-social-resilience-protecting-and-empowering-those-most-risk

Australian Journal of Emergency Management. 2018. *Diversity in Disaster.* Monograph No. 3. Melbourne: Australian Journal of Emergency Management. https://knowledge.aidr.org.au/media/6031/diversity-in-disaster-monograph.pdf

Bates, John (ed.). 2018. Diversity in Disaster. *Australian Journal of Emergency Management,* Monograph No. 3. https://knowledge.aidr.org.au/media/6031/diversity-in-disaster-monograph.pdf

Behlert, Benedikt et al. 2020. *World Risk Report 2020. Focus: Forced Displacement and Migration.* Bündnis Entwicklung Hilft and Ruhr University Bochum – Institute for International Law of Peace and Armed Conflict (IFHV). https://reliefweb.int/sites/reliefweb.int/files/resources/WorldRiskReport-2020.pdf

Bergman, Rachel. 2021. *Help or Harm in Times of Emergency?* Bank Information Center. https://bankinformationcenter.cdn.prismic.io/bankinformationcenter/32ce6c34-d167-40ba-ba80-78c28bdcfd78_SEP+Analysis+Report.pdf

Birkmann, Jörn (ed.). 2013. *Measuring Vulnerability to Natural Hazards: Towards Disaster Resilient Societies.* Second Edition. Tokyo, New York, Paris: United Nations University Press.

Blaikie, Piers, Cannon, Terry, Davis, Ian, & Wisner, Ben. 2005. At Risk: Natural Hazards, People's Vulnerability and Disasters (1st edition). Routledge.

Blanchard, Kevin et al. 2017. "Consideration of Marginalized and Minority Groups in a National Disaster Risk Assessment." In: UNISDR. 2017. *Words into Action Guidelines: National Disaster Risk Assessment.* United Nations Office for Disaster Risk Reduction. https://www.preventionweb.net/files/52828_nationaldisasterriskassessmentwiagu.pdf

Bowen, Thomas et al. 2020. *Adaptive Social Protection: Building Resilience to Shocks. International Development in Focus.* Washington, D.C.: The World Bank. https://openknowledge.worldbank.org/handle/10986/33785

Cardona, O.D. et al. 2012. "Determinants of Risk: Exposure and Vulnerability." In: IPCC. *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change.* Cambridge, New York: Cambridge University Press, pp. 65-108. https://www.ipcc.ch/report/managing-the-risks-of-extreme-events-and-disasters-to-advance-climate-change-adaptation/

Contreras, Diana, and Kienberger, Stefan (ed.). 2011. *Handbook of Vulnerability Assessment in Europe. Methods for the Improvement of Vulnerability Assessment in Europe (MOVE),* Deliverable No. D.4.2. Brussels: European Commission, DG Environment. http://www.rupprecht-consult.eu/uploads/tx_rupprecht/MOVE_Handbook.pdf

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[59] All Uniform Resource Locators (URLs) have been retrieved and were accessible in June 2021.

EEA. 2017. *Climate Change Adaptation and Disaster Risk Reduction in Europe. Enhancing Coherence of the Knowledge Base, Policies and Practice.* EEA Report No 15/2017. Luxembourg: Publications Office of the European Union. https://circabc.europa.eu/sd/a/0d6aee10-ecac-4153-af99-f753745385c5/Climate%20change%20adaptation%20and%20disaster%20risk%20reduction%20in%20Europe.pdf

Erman, Alvina et al. 2021. *Gender Dimensions of Disaster Risk and Resilience. Existing Evidence.* Washington, D.C.: The World Bank. https://openknowledge.worldbank.org/handle/10986/35202

GFDRR. Forthcoming. *Background Paper on Disability Inclusion in DRM Operations: An Exploration of Good Practices.* [internal draft]. Washington, D.C.: The World Bank.

GFDRR. 2016. *Inclusive Community Resilience Progress Report, FY15-16.* https://www.gfdrr.org/sites/default/files/gfdrr-inclusive-community-resilience-progress-report.pdf

GFDRR. 2017a. *Disability Inclusion in Disaster Risk Management. Promising Practices and Opportunities for Enhanced Engagement.* https://www.preventionweb.net/publications/view/55964

GFDRR. 2017b. *Inclusive Community Resilience: A Program Review.* Washington, D.C.: The World Bank. https://reliefweb.int/report/world/inclusive-community-resilience-program-review

GFDRR. 2019b. *Adaptive Social Protection and Disaster Risk Management. A Case Study of Japan.* Washington, D.C.: The World Bank. https://openknowledge.worldbank.org/handle/10986/34577

GFDRR. 2019c. *Social Protection and Disaster Recovery.* Disaster Recovery Guidance Series. Washington, D.C.: The World Bank. https://openknowledge.worldbank.org/handle/10986/34578

GFDRR. 2019d. *Communication during Disaster Recovery.* Disaster Recovery Guidance Series. Washington, D.C.: The World Bank. https://www.gfdrr.org/en/publication/communication-during-disaster-recovery

GFDRR. 2019e. *Gender Inclusion in the post-disaster rehabilitation and reconstruction of Central Sulawesi.* [internal manuscript]. Washington, D.C.: The World Bank.

GFDRR. 2020a. *Annual Report '20.* Washington, D.C.: The World Bank. https://reliefweb.int/sites/reliefweb.int/files/resources/gfdrr_arfy20.pdf

GFDRR. 2020b. *Review of Closed Grants Related to Social Resilience: Briefing Note on Phase One Observations.* [Internal manuscript]. Washington, D.C.: The World Bank.

GFDRR. 2020c. *Disability-Inclusive Disaster Recovery. Disaster Recovery Guidance Series.* Washington, D.C.: The GFDRR. https://www.gfdrr.org/en/publication/disaster-recovery-guidance-series-disability-inclusive-disaster-recovery

GFDRR. 2020d. *Universal Design Guideline: Supporting Rehabilitation and Reconstruction Activities in Central Sulawesi.* [internal manuscript]. Washington, D.C.: The World Bank.

GFDRR. 2020e. *Disaster Recovery Framework Guide.* Revised version, March 2020. https://www.gfdrr.org/sites/default/files/publication/DRF%20Guide.pdf

GFDRR. 2020f. *Annual Report '19.* Washington, D.C.: The World Bank. https://www.gfdrr.org/sites/default/files/publication/GFDRR%20AR%202019_lowres.pdf

Government of the Commonwealth of Dominica. 2017. Post-Disaster Needs Assessment Hurricane Maria. https://reliefweb.int/sites/reliefweb.int/files/resources/dominica-pdna-maria.pdf

Hallegatte, Stephane, Bangalore, Mook, and Vogt-Schilb, Adrien. 2016. *Socioeconomic Resilience: Multi-Hazard Estimates in 117 Countries.* Policy Research Working Paper, No. 7886. Washington, DC: World Bank. https://openknowledge.worldbank.org/handle/10986/25688

Hallegatte, Stephane, Vogt-Schilb, Adrien, Bangalore, Mook, and Rozenberg, Julie. 2017. Unbreakable: Building the Resilience of the Poor in the Face of Natural Disasters. Climate Change and Development Series. Washington, D.C.: World Bank. https://documents1.worldbank.org/curated/en/512241480487839624/pdf/110618-PUB-Box396333B-PUBLIC-PUBDATE-11-24-16-UNIT-ITSKI.pdf

IIED. 2020. *Every Voice Counts in a Changing Climate: How an Inclusive Planning Tool can Support Equal, Resilient Livelihoods.* London: IIED. https://pubs.iied.org/sites/default/files/pdfs/migrate/17748IIED.pdf

IIED. 2021. *Principles for locally led adaptation: A call to action.* Issue Paper. London: IIED. https://pubs.iied.org/sites/default/files/pdfs/2021-01/10211IIED.pdf

ILO. 2018. *Care Work and Care Jobs: For the Future of Decent Work.* Geneva: ILO. https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_633135.pdf

IPCC. 2012. *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change.* Cambridge, New York: Cambridge University Press. https://www.ipcc.ch/report/managing-the-risks-of-extreme-events-and-disasters-to-advance-climate-change-adaptation/

Jeggle, Terry, and Boggero, Marco. 2018. *Post-Disaster Needs Assessment. Lessons from a Decade of Experience.* European Commission, GFDRR, UNDP, and the World Bank. https://openknowledge.worldbank.org/handle/10986/30945

Katic, Krunoslav. 2017. *Social Vulnerability Assessment Tools for Climate Change and DRR Programming. A Guide to Practitioners.* United Nations Development Programme. https://www.adaptation-undp.org/sites/default/files/resources/social_vulnerability05102017_0.pdf

Korunovska, Neda, and Jovanovic, Zeljko. 2020. *Roma in the Covid-19 Crisis.* Open Society Foundations. https://reliefweb.int/sites/reliefweb.int/files/resources/Roma%20in%20the%20COVID-19%20crisis%20-%20An%20early%20warning%20from%20six%20EU%20Member%20States.pdf

Kuran, Christian H. A. et al. 2020. Vulnerability and Vulnerable Groups from an Intersectionality Perspective. *International Journal of Disaster Risk Reduction,* 50. https://doi.org/10.1016/j.ijdrr.2020.101826

Lafreniere, Annie, and Walbaun, Véronique. 2017. *Inclusive Disaster Risk Reduction.* Lyon: Handicap International. https://www.preventionweb.net/publications/view/54324

Lovell, Emma, and le Masson, Virginie. 2014. *Equity and Inclusion in Disaster Risk Reduction: Building Resilience for All.* Overseas Development Institute (ODI) and Climate and Development Knowledge Network (CDKN). https://cdkn.org/wp-content/uploads/2014/11/CDKN-Equity-and-inclusion-in-disaster-risk-reduction-building-resilience-for-all1.pdf

Ming Lee, Tien, et al. 2015. Predictors of Public Climate Change Awareness and Risk Perception around the World. *Nature Climate Change.* doi:10.1038/nclimate2728

Natural Hazards Center. 2020. *Risk Communication Involving Vulnerable Populations: An Annotated Bibliography.* Boulder, CO: Natural Hazards Center, University of Colorado Boulder. https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll11/id/4737

Oxford Dictionary. n.d. *Community.* https://www.lexico.com

PACT Foundation. 2018. Informal Housing in Romania. Research Report. http://locuireinformala.ro/wp-content/uploads/2018/04/OSI_Research-report_Informal-Housing-in-Romania_EN.pdf

Poljanšek, K. et al. 2019. *Recommendations for National Risk Assessment for Disaster Risk Management in EU.* EUR 29557 EN. Luxembourg: Publications Office of the European Union. https://doi:10.2760/084707

Prior, Tim et al. 2017. *Mapping Social Vulnerability in Switzerland: A Pilot Study on Flooding in Zürich.* Risk and Resilience Report, Center for Security Studies (CSS), ETH Zurich. https://www.preventionweb.net/files/52280_rrreports2016socialvulnerability.pdf

Queensland Government. 2016. *People with Vulnerabilities in Disasters. A Framework for an Effective Local Response.* https://www.qld.gov.au/__data/assets/pdf_file/0022/55327/supporting-people-with-vulnerabilities-framework.pdf

Rufat, Samuel et al. 2015. Social Vulnerability to Floods: Review of Case Studies and Implications for Measurement. *International Journal of Disaster Risk Reduction,* 14(4), 470-486. https://doi.org/10.1016/j.ijdrr.2015.09.013

Twigg, John, Kett, Maria, and Lovell, Emma. 2018. *Disability Inclusion and Disaster Risk Reduction. Overcoming Barriers to Progress.* Briefing note. London: Overseas Development Institute. https://covid19.alnap.org/system/files/content/resource/files/main/12324.pdf

UN. 2006. *Convention on the Rights of Persons with Disabilities (CRPD).* https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html

UNDRR. n.d. *Terminology.* https://www.undrr.org/terminology

UNDRR. 2020a. *Disaster Responsive Social Protection.* Geneva: UNDRR. https://www.undrr.org/publication/undrr-asia-pacific-covid-19-brief-disaster-responsive-social-protection

UNDRR 2020b. *Leave No One Behind in COVID-19 Prevention, Response and Recovery.* Geneva: UNDRR. https://www.undrr.org/publication/undrr-asia-pacific-covid-19-brief-leave-no-one-behind-covid-19-prevention-response-and

UNDRR. 2021. *Regional Assessment Report on Disaster Risk in Latin America and the Caribbean (RAR 2021).* https://www.undrr.org/publication/undrr-roamc-regional-assessment-report-disaster-risk-latin-america-and-caribbean-rar

UN-ESCAP. 2015. *Disability Inclusive Disaster Risk Reduction.* United Nations Economic and Social Commission for Asia and the Pacific. https://www.unescap.org/sites/default/files/pre-ods/E_CDR(4)_INF4.pdf

UNISDR. 2014. *Living with Disability and Disasters: UNISDR 2013 Survey on Living with Disabilities and Disasters – Key Findings.* Geneva: UNISDR. https://www.unisdr.org/2014/iddr/documents/2013DisabilitySurveyReport_030714.pdf

UNISDR. 2018. *Words into Action Guidelines. Implementation Guide for Addressing Water-Related Disasters and Transboundary Cooperation. Integrating Disaster Risk Management with Water Management and Climate Change Adaptation.* New York and Geneva: United Nations.

Washington Group on Disability Statistics. n.d. *WG Short Set on Functioning (WG-SS).* https://www.washingtongroup-disability.com/question-sets/wg-short-set-on-functioning-wg-ss/

World Bank. 2008. *Building Resilient Communities: Risk Management and Response to Natural Disasters Through Social Funds and Community-Driven Development Operations.* Washington, D.C.: World Bank. http://documents1.worldbank.org/curated/en/844751468148503609/pdf/487230WP0Box331Communities1Complete.pdf

World Bank 2010. *Natural Hazards, Unnatural Disasters: The Economics of Effective Prevention.* Washington, D.C.: The World Bank. https://documents1.worldbank.org/curated/en/620631468181478543/pdf/578600PUB0epi2101public10BOX353782B.pdf

World Bank. 2013a. *Inclusion Matters: The Foundation for Shared Prosperity.* New Frontiers of Social Policy. Washington, D.C.: The World Bank. https://openknowledge.worldbank.org/handle/10986/16195

World Bank. 2014. *Managing Disaster Risks for Resilient Development.* https://www.worldbank.org/en/results/2013/04/12/managing-disaster-risks-resilient-development

World Bank. 2013b. *World Development Report 2014: Risk and Opportunity—Managing Risk for Development.* Washington, D.C.: The World Bank. https://openknowledge.worldbank.org/handle/10986/16092

World Bank. 2020a. *Gender Equality and Women's Empowerment in Disaster Recovery.* Disaster Recovery Guidance Series. Washington, D.C.: The World Bank. https://openknowledge.worldbank.org/handle/10986/33684

World Bank. 2020b. *Communication During Disaster Recovery.* Disaster Recovery Guidance Series. Washington, D.C.: The World Bank. https://openknowledge.worldbank.org/handle/10986/33685

World Bank. 2020c. *Handbook for Gender-Inclusive Urban Planning and Design.* Washington, D.C.: The World Bank. https://www.worldbank.org/en/topic/urbandevelopment/publication/handbook-for-gender-inclusive-urban-planning-and-design

World Bank. 2021a. *Inclusive Resilience. Inclusion Matters for Resilience in South Asia.* Washington, D.C.: The World Bank.

World Bank. 2021b. *Mainstreaming Gender Considerations into Disaster Risk Management in Europe and Central Asia. Guidance Note for World Bank Task Teams.* Washington, D.C.: World Bank.

World Bank. 2021c. *Gender-Responsive Disaster Preparedness and Recovery in the Caribbean: Desk Review.* https://openknowledge.worldbank.org/handle/10986/11866

World Bank. 2021d. *The Natural Resource Degradation and Vulnerability Nexus: An Evaluation of the World Bank's Support for Sustainable and Inclusive Natural Resource Management (2009–19).* Independent Evaluation Group. Washington, D.C.: World Bank. https://openknowledge.worldbank.org/handle/10986/35480

World Bank. 2021e. *Marginalized Communities Housing and Living Condition Diagnostic: Northwestern Bulgaria.* Washington, D.C.: World Bank. [not yet published]

World Bank. 2021f. *Citizen-Centric Public Administrative Services in Moldova.* ECA Citizen Engagement Learning Note, No. 17.

Operational Frameworks and Guidelines

GFDRR. 2014. *Inclusive Community Resilience. A Strategy for Civil Society Engagement, Community Resilience, and Gender. 2015-2017.* https://www.gfdrr.org/en/publication/inclusive-community-resilience-2015-2017

GFDRR. 2015. *Managing Disaster Risks for a Resilient Future. A Work Plan for the Global Facility for Disaster Reduction and Recovery 2016 – 2018.* https://documents1.worldbank.org/curated/en/107401493013497546/pdf/114480-WP-PUBLIC-work-plan-2016-to-2018.pdf

GFDRR. 2016b. *Gender Action Plan FY16-21.* https://www.gfdrr.org/en/publication/gender-action-plan-2016-2021

GFDRR. 2018a. *Draft Disability Inclusion Action Plan 2018–2023.* https://www.gfdrr.org/sites/default/files/Draft%20Disability%20Inclusion%20Action%20Plan.pdf

GFDRR. 2018b. *Draft Citizen Engagement Action Plan 2019–2023.* https://www.gfdrr.org/sites/default/files/Draft%20Citizen%20Engagement%20Action%20Plan.pdf

GFDRR. 2018c. *Strategy 2018–2021. Bringing Resilience to Scale.* https://reliefweb.int/sites/reliefweb.int/files/resources/gfdrr-strategy-2018%E2%80%932021.pdf

GFDRR. 2021a. *Strategy 2021–2025. Scaling up and mainstreaming resilience in a world of compound risks.*

GFDRR. 2021b. *Strengthening GFDRR's M&E: Updated General Data Collection & Results Indicators for Monitoring and Reporting.* [internal manuscript]. Washington, D.C.: The World Bank Group

GFDRR. 2019a. *Inclusive Community Resilience Program. Draft Citizen Engagement Action Plan 2019–2023.* https://www.gfdrr.org/sites/default/files/Draft%20Citizen%20Engagement%20Action%20Plan.pdf

UNISDR. 2015. *Sendai Framework for Disaster Risk Reduction 2015–2030.* Geneva: United Nations International Strategy for Disaster Reduction. http://www.unisdr.org/we/inform/publications/43291

World Bank. n.d. *The Social Inclusion Assessment Tool.* https://pubdocs.worldbank.org/en/478071540591164260/SiAT-Logo-web.pdf

World Bank. 2014. *Strategic Framework for Mainstreaming Citizen Engagement in World Bank Group Operations.* Working Paper, 92957. Washington, D.C.: The World Bank Group. https://documents.worldbank.org/en/publication/documents-reports/documentdetail/266371468124780089/strategic-framework-for-mainstreaming-citizen-engagement-in-world-bank-group-operations-engaging-with-citizens-for-improved-results

World Bank Group. 2015. *World Bank Group Gender Strategy (FY16-23): Gender Equality, Poverty Reduction and Inclusive Growth.* Washington, D.C.: The World Bank. https://openknowledge.worldbank.org/handle/10986

World Bank. 2018. *Disability Inclusion and Accountability Framework.* Washington, D.C.: The World Bank. http://documents.worldbank.org/curated/en/437451528442789278/Disability-inclusion-and-accountability-framework

World Bank. 2019. *Good Practice Note: Environmental & Social Framework for IPF Operations.* Non-Discrimination: Sexual Orientation and Gender Identity (SOGI). Washington, D.C.: The World Bank.

World Bank. 2021. *Green Resilient and Inclusive Development.* Washington, D.C.: The World Bank. https://openknowledge.worldbank.org/bitstream/handle/10986/36322/Green-Resilient-and-Inclusive-Development.pdf?sequence=1&isAllowed=y

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