Building Resilience During COVID-19: Lessons Learned from Disaster Risk Reduction Programming

A mid-pandemic survey of practices among United Nations major groups and other stakeholders on the intersection of disaster risk reduction programming and COVID-19 prevention, preparedness, response and recovery

Stakeholder Engagement Mechanism
SENDAI FRAMEWORK
FOR DISASTER RISK REDUCTION 2015-2030

Dedication

In memory of Dr. Kathryn Adams, whose commitment to deepening our common knowledge on resilience drove the development of this report. Kathryn's passion and continued engagement in multi-stakeholder cooperation was outstanding. She will be dearly missed.

This report has been prepared by the Stakeholder Engagement Mechanism of the United Nations Office for Disaster Risk Reduction.

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Hands washing under running water with the tap to protect against bacteria and viral diseases

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Group of people at a community meeting in a village

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Executive Summary

The COVID-19 pandemic is a stark demonstration that, in a connected and globalized world, risk is more systemic than ever: what was initially a health disaster quickly became a socioeconomic one with long-term impact, highlighting the urgent need for a whole-of-society approach towards prevention and risk-informed recovery and development. This report presents the results of a 2020 survey and literature review conducted by the Stakeholder Engagement Mechanism of the United Nations Office for Disaster Risk Reduction (UNDRR). It features lessons learned and insights on how disaster risk reduction stakeholders around the world have leveraged existing disaster risk reduction programmes and initiated new ones to better prevent, prepare, respond to and recover from COVID-19 and future pandemics. The survey was rolled out mid-pandemic and, therefore, most examples focused on how disaster risk reduction helped immediate pandemic response, preparedness and recovery, rather than long-term prevention and mitigation.

Key Insights

The survey and literature review revealed a breadth of insights in relation to the implementation of existing and new disaster risk reduction programmes, the nature of partnerships and collaboration, key gaps and challenges, and recommendations for enhancing disaster risk reduction
programming. Four key insights in particular emerged from this report. These are summarized below.

Insight 1:
Insufficient focus on pandemic prevention and preparedness

There was insufficient focus by Governments, the United Nations system, civil society organizations and the private sector on the prevention of and preparedness for pandemic risk. Of the 39 disaster risk reduction case examples observed through the Stakeholder Engagement Mechanism global survey, only two addressed pandemic hazard prevention.
No examples of existing pandemic preparedness programmes were received.

The desk review of other surveys and literature echoed this overall lack of attention to pandemic prevention and preparedness. For instance, the Global Network of Civil Society Organizations for Disaster Reduction concluded that: "The impacts of this pandemic could have been prevented if lessons learnt from prior disease outbreaks, as well as scientific and community-led research, had been taken into account in health services, global supply chains, transport systems, curriculum, and the tourism sector" [1].
(GNDR 2021) A similar message was conveyed by the International Organization for Migration in noting that, given best practices learned during previous Ebola, severe acute respiratory syndrome (SARS), Middle East respiratory syndrome (MERS) and influenza A (H1N1) outbreaks, "too little has been done to mitigate biological hazards in disaster risk reduction strategies pursued by governments." [2] (IOM 2020)

Insight 2:
Civil society organizations adapted swiftly during the pandemic by leveraging existing local disaster risk reduction networks and programmes

The Stakeholder Engagement Mechanism survey results and desk review showed that many organizations were able to swiftly adapt existing disaster risk reduction programmes designed for other hazards and quickly initiate new ones, which contributed to reducing exposure and vulnerability and to building adaptive capacity in the context of the COVID-19 pandemic. Key elements of success were local presence, partnerships and existing networks of trusted relationships with vulnerable groups. These actions were seen across all facets of disaster risk reduction in the immediate wake of the COVID-19 pandemic, including:

1 https://gndr.org/news/item/2022-what-covid-19-tells-us-about-risk-–-and-how-we-reduce-it.html
2 https://weblog.iom.int/how-tackling-covid-19-and-reducing-disaster-risk-go-hand-hand

- Hazard reduction (i.e., reducing the COVID-19 hazard by raising awareness of the potential for zoonotic spillover due to community expansion, deforestation and consumption and trade of wild meat)

- Exposure reduction (i.e., through provision of personal protective equipment and WASH – water, sanitation and hygiene – facilities and practices)

- Vulnerability reduction (i.e., through provision of food, water, housing and mental health support)

- Building capacity to anticipate future risk (i.e., through ongoing assessment of local government readiness and business continuity planning).

Insight 3:
Significant challenges need to be overcome for enhanced disaster risk reduction and resilience

The Stakeholder Engagement Mechanism survey revealed a range of challenges that need to be overcome to enhance disaster risk reduction and resilience programming. There was commonality with the results of the broader desk review, showing that policy coherence is a key challenge (i.e., horizontal across agencies and vertical among levels of government, including with the local level), as is the need to strengthen food security and the resilience of small and medium-sized enterprises to disasters, including for supply chain logistics.

Other challenges related to misinformation, weak or non-existent social protection systems, competition among partners for resources and lack of information and communications technology infrastructure. These all point to more systemic issues that need to be addressed in future to enhance disaster risk reduction programming. This finding was also reflected in the survey results pertaining to the top recommendations made by organizations, including calls for improved policy coherence; localization of programmes to better address ground-based issues; the strengthening of key systems (i.e., food security, access to water, health care, social protection and supply chains); attention to vulnerable groups and leaving no one behind; and better collaboration with government partners.

Insight 4:
Systemic risk requires systemic solutions

The challenges highlighted above are symptoms of siloed approaches to development: many of the recommendations made by Stakeholder Engagement Mechanism survey respondents converged on the need for systems approaches. The desk review of other surveys echoes these recommendations, as evidenced by calls for a One Health approach for the prevention of zoonotic diseases, use of multi-hazard approaches for disaster risk reduction and strengthening of key systems. The main message was that, for organizations to be resilient and to promote resilience in communities to systemic risks, a systems approach is necessary.
A systems approach for disaster risk reduction would necessarily begin with a focus on all facets of risk reduction, including preventing hazards, reducing exposure and vulnerability and building adaptive capacity.

Systemic risk requires systemic solutions. National Governments and the United Nations system should lead the way in pandemic and multi-hazard prevention and preparedness in this new era of pandemics, with Stakeholder Engagement Mechanism members and other stakeholder organizations advocating actively for such leadership and participating in the co-creation of systemic solutions.

Next steps

The survey and desk review provided valuable insights on the importance of disaster risk reduction for effective prevention, preparedness and response to new hazards. The results show that effective disaster risk reduction programmes, designed in collaboration with all stakeholders, with meaningful engagement of community groups and which ensure coherence across sectors and levels, provide mechanisms and structures that help to address emerging hazards, such as the COVID-19.
Insights from this report will inform the development of a forthcoming Stakeholder Engagement Mechanism report focused on providing practical advice for operationalizing an all-of-society approach to disaster risk reduction, including in the context of medium and long-term COVID-19 recovery and accelerating progress toward the Sustainable Development Goals and building resilient societies in the face of a growing and intensifying global risk landscape.

Introduction

Context

The Sendai Framework for Disaster Risk Reduction 2015–2030 highlights that resilient sustainable development will only be possible through a broader and a more people-centred preventive approach to disaster risk, where disaster risk reduction practices are multi-hazard and multisectoral, inclusive and accessible in order to be efficient and effective (see box 1).

The Stakeholder Engagement Mechanism was established by the United Nations Office for Disaster Risk Reduction (UNDRR) in 2018 as a way to operationalize an all-of-society approach to the development and implementation of disaster risk reduction strategies. The mechanism[3] aims to leverage the convening, advocacy and implementing power of stakeholders in support of resilience building across, within, and through the Sendai Framework, the Paris Agreement on climate change and 2030 Agenda for Sustainable Development. The mechanism brings together representatives from all 16 United Nations major groups and other stakeholders [4] as well as UNDRR partner groups, such as the UNDRR private sector network ARISE.

One priority of the Stakeholder Engagement Mechanism is to bring local voices and stories about effective disaster risk reduction to global policy processes and decision makers. In support of this, the Mechanism gathered case studies to understand how the implementation of existing disaster risk reduction programmes influenced the ability of communities to effectively address the COVID-19 pandemic. A global survey was rolled out in summer 2020 seeking examples of work undertaken by stakeholders that illustrate this intersection.

3 The Stakeholder Engagement Mechanism offers representational space for all non-state stakeholders as set out in paragraphs 36 and 48 of the Sendai Framework. Its key functions are to enable an inclusive and broad movement for the Sendai Framework, influence policy design and implementation, strengthen citizen-led and social accountability mechanisms and promote coordination and harmonization between different stakeholder groups. Stakeholders can join the mechanism by signing up to their respective major group or other stakeholder group (MGoS). Elected focal points of each of the MGoS and a small number of other groups constitute the Stakeholder Advisory Group, which is an integral part of the mechanism and acts as the main interlocutor between stakeholders and UNDRR.
4 https://sustainabledevelopment.un.org/mgos

The timing of the survey, in the middle of the pandemic, meant that examples and insights submitted about existing disaster risk reduction programming were inherently contextualized primarily in relation to contributions to pandemic preparedness and responding to immediate needs. Importantly, however, many of the actions taken in response to immediate needs also contributed to overall disaster risk reduction.

Box 1
The Sendai Framework for Disaster Risk Reduction 2015–2030

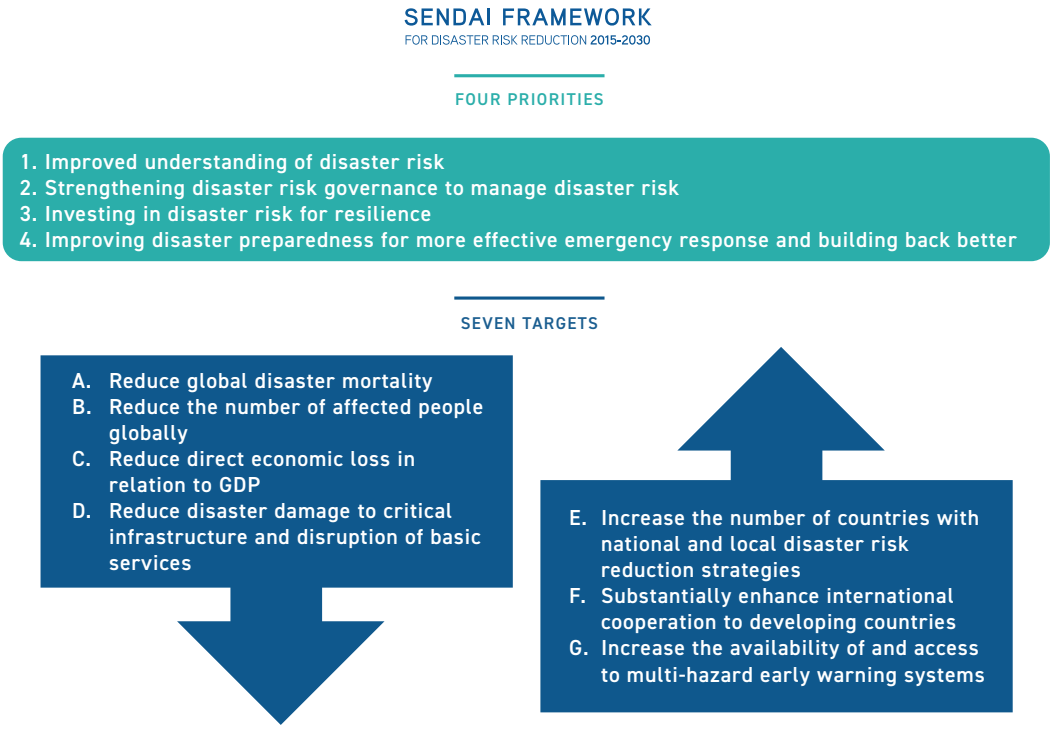
The Sendai Framework for Disaster Risk Reduction[5] (see figure 1) was signed by 196 Member States of the United Nations in 2015. Its goal, as set out in its paragraph 17, is to: "Prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, 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, and thus strengthen resilience."

The imperative for the Sendai Framework, including its attention to multiple hazard types (natural and human-made) and systemic risk, grew out of the stark reality of the rapidly changing risk landscape that faced all nations and citizens in the decade preceding its endorsement, a reality that is now more urgent than ever. In the period from 2000 to 2019, there were 7,348 major recorded disaster events, claiming 1.23 million lives and affecting 4.2 billion people (many on more than one occasion) resulting in approximately $2.97 trillion in global economic losses (UNDRR-CRED2020[6]).

Searching in the aftermath of a disaster

5 https://undocs.org/A/RES/69/283
6 https://www.undrr.org/sites/default/files/inline-files/Human%20Cost%20of%20Disasters%202000-2019%20FINAL.pdf

Figure 1
Sendai Framework for Disaster Risk Reduction 2015–2030: priorities and targets



UNDRR - United Nations Office for Disaster Risk Reduction

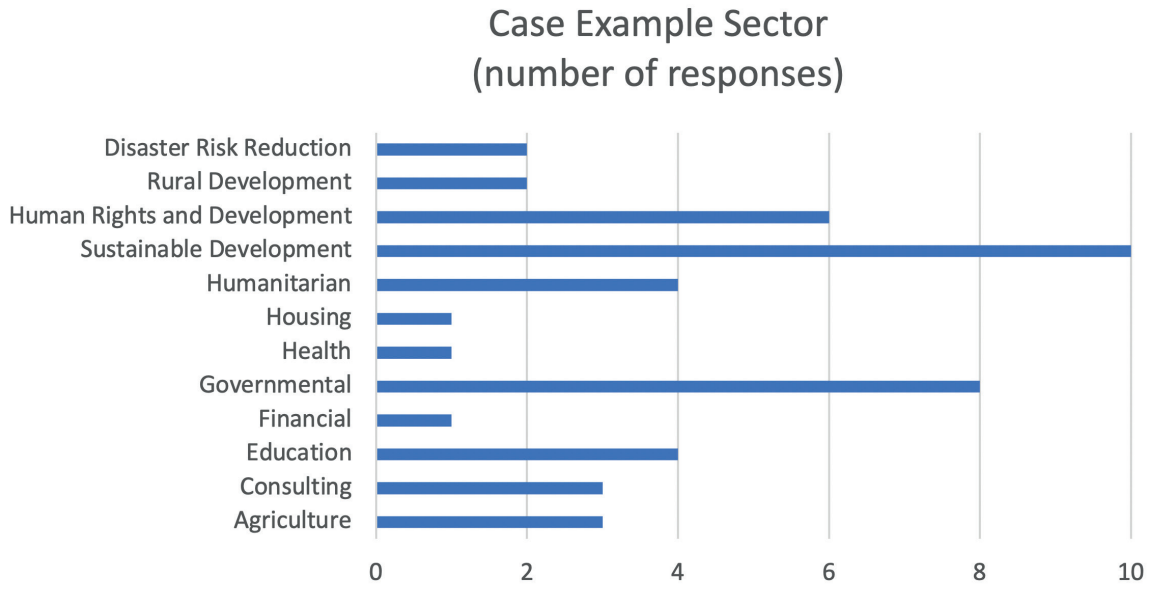
Report purpose and methodology

The purpose of the Stakeholder Engagement Mechanism survey and literature review was to better understand how effective disaster risk reduction actions implemented at the community and grass-root levels positively affected people's resilience to the COVID-19 pandemic and also helped in COVID-19 prevention or mitigation. These actions may have already taken place before the pandemic but still aided disaster and pandemic preparedness, recovery and reduction of future risk, or they may have been initiated and/or implemented during the pandemic. The survey also sought to demonstrate the role that stakeholders play in enhancing global action on disaster risk reduction and as enablers of disaster prevention and resilience building. Importantly, the case studies aim to showcase the advantages of local community approaches for achieving disaster risk reduction.

For definitions of terminology used throughout this report related to disaster risk reduction, readers are invited to refer to the report of the open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction.[7]

The survey received responses from 45 organizations participating in the Stakeholder Engagement Mechanism: 18 from Asia, 16 from Africa, 7 from the Americas, 1 from Europe, 1 from the Middle East, 1 from Oceania, and 1 from a global organization. The sectors represented in the survey were: agriculture, consulting, disaster risk reduction, education, financial, governmental , health, housing, humanitarian, human rights and development, rural development and actors working on sustainable development.
The corresponding number of case examples by sector are set out in figure 2.

Figure 2
Number of case examples by sector



The literature review focused on other similar surveys conducted in the wake of the COVID-19 pandemic. Additional case examples were compiled in order to compare and contrast their key messages with those gleaned from the Stakeholder Engagement Mechanism global survey. The literature review also analysed key messages from experts related to improved disaster risk reduction programming with a focus on prevention and preparedness.

7 Document A/71/644, https://undocs.org/A/71/644

Road map to this report

This report is divided into three parts and a supporting annexes:

• **Part A: Stakeholder Engagement Mechanism survey results and insights**. This part outlines the four sections of the survey: (i) case examples; (ii) partnerships and collaboration; (iii) challenges and gaps; and (iv) lessons learned and respondent recommendations.

• **Part B: Review of other surveys and literature**. This part examines the results of other similar surveys and literature published during 2020–2021, mirroring the four sections of the survey covered in Part A.

• **Part C: Discussion and conclusions**. This part brings together the results of the survey and desk review to take stock of key insights for improved disaster risk reduction programming in future.

• **Supporting annexes**. The annexes provide detailed analysis and synthesis of the survey results.

Farm workers in medical masks harvesting zucchini

Part A: Stakeholder Engagement Mechanism survey results and insights

Case examples of disaster risk reduction programming in the context of COVID-19

The first section of the survey conducted by the Stakeholder Engagement Mechanism aimed to find examples of work undertaken by stakeholders that illustrate the intersection between disaster risk reduction and COVID-19 prevention or mitigation; that is, the programmes or projects already being implemented before the pandemic that had a positive impact on the preparedness for, response to and recovery from the COVID-19 pandemic, as well as preventing the occurrence of future pandemics.
In total, 45 organizations responded with 39 different case examples, 17 of which were existing disaster risk reduction programmes and projects, with the remaining 22 specifically initiated in response to the pandemic.
However, as the survey was rolled out mid-pandemic, most examples focused on how disaster risk reduction had helped immediate pandemic response, preparedness and recovery, rather than long-term prevention and mitigation.

Leveraging existing disaster risk reduction programmes and projects to address COVID-19

An overview of the existing disaster risk reduction programmes and projects that were submitted by survey respondents is provided in Annex A to this report. These initiatives were classified as contributing to one or more of the
following categories: hazard reduction (preventing or reducing the potential for the hazard – in this case, COVID-19 – to occur); exposure reduction (preventing or reducing exposure to a hazard); vulnerability reduction (reducing vulnerability or increasing adaptive capacity); and capacity strengthening for disaster risk reduction (risk analysis, contingency planning, monitoring and early warning).

Hazard reduction. Two examples from Africa highlighted how existing disaster risk reduction programmes contributed to the reduction of the COVID-19 hazard.

The Community at the Centre of Resilience programme, implemented by the non-governmental organization (NGO) AICED (Appui aux Initiatives Communautaire de Conservation de l'Environnement et de Développement Durable), raises awareness about the potential for spillover of zoonotic diseases from community expansion into forest edge zones and also from wild meat consumption (see box 2). In another example, COVID-19 limited the ability of the Union for Promotion, Protection, Human Rights Defense and the Environment to implement its forest conservation programmes that would have had a co-benefit for future zoonotic spillover.

Among these examples, the aspects reported as having contributed the most to successful disaster risk reduction while also improving COVID-19 preparedness, response and recovery included deployment of:

- shared management and leadership committees among stakeholders and across hazard types
- shared activities implemented by Governments and other partners
- awareness-raising efforts (single and multi-hazard)
- leveraging and building social capital and solidarity.

Box 2
Community at the Centre of Resilience programme

Contributing to awareness for the prevention of zoonotic diseases

The organization "Appui aux Initiatives Communautaire de Conservation de l'Environnement et de Developpement Durable" (AICED) is working with the Hehu hill community in the Democratic Republic of the Congo to implement an initiative called "The community at the centre of resilience to the consequences of climate change". This involves the creation of community-led disaster prevention committees, with the aim of coordinating resilience-building actions.
The committees provide a channel through which to raise awareness among community members about various risks (including zoonotic risk caused by environmental degradation of the Virunga National Park, climate-induced community expansion into forest areas and consumption of wild bushmeat). The initiative was undertaken pre COVID-19 and proved essential during the pandemic as a locally led structure for awareness-raising and information-sharing that leveraged existing social structures. Moreover, the initiative is taking forward lessons learned from Ebola outbreaks to raise awareness of the risks related to unsafe contact with wild animals.

Additionally, AICED disaster risk reduction activities also benefited from the local social connections that had already been built through its women's solidarity groups, which focus on strengthening capacity for income-generating activities such as sewing.

Sources:
https://archive.pfbc-cbfp.org/actualites/items/AICED-SOS.html
https://reliefweb.int/report/democratic-republic-congo/rd-congo-glissement-de-terrain-dans-le-village-de-kibiriga-zone-de
https://pfbc-cbfp.org/actualites/items/AICED-Rapport-2019.html

Exposure reduction. Eight examples from across Asia, Africa and the Americas (listed below) illustrated how existing disaster risk reduction programmes helped to reduce exposure to COVID-19. The programmes maximized the provision of personal protective equipment and hand sanitizers to the public. For example, the Mexican Red Cross, in collaboration with the Zurich Flood Resilience Alliance, used its existing municipal presence in the Mexican state of Tabasco to deliver community COVID-19 sensitization programmes. Additionally, several organizations were able to quickly adapt their internal health and safety protocols and information communication technologies to protect their employees during the pandemic, including through business continuity planning as in the case of PwC in the Philippines.

- **Gram Bharati Samiti (India)**: continued support for migrant people, slum dwellers and daily wage earners through the provision of washable masks
- **HOPE Worldwide (Pakistan)**: ongoing adaptation of safety measures for employees and provision of food, personal protective equipment and health supplies through programming
- **PwC (Philippines)**: continued work facilitated through business continuity planning and provision of technology for remote work
- **UDYAMA (India)**: continued delivery of food system, water, sanitation and hygiene (WASH) system and education programmes during the pandemic
- **LIDÈ Foundation (Haiti)**: door-to-door visits for COVID-19 prevention awareness and programmes for local skills development (see box 3)
- **Women's Climate Centers International (Africa)**: keeping disaster -displaced persons safe from COVID-19 spread (see box 4)
- **Mexican Red Cross (Mexico)**: initiated, through its flood resilience programme, a strategy of community sensitization called "COVID-19: from physical distancing to community outreach"
- **Virgin Islands Territorial Emergency Management Agency (United States Virgin Islands)**: expanded shelter space capacity to meet social distancing requirements.

Box 3

Adapting existing programmes to support disaster risk reduction in the context of COVID-19 in the Americas

The LIDÈ Foundation is an NGO based in Haiti providing academic support and arts programmes to strengthen the resiliency of adolescent girls and differently abled youth who have not had equal access to education. LIDÈ observed that its community-based and locally led programmes enhanced the organization's resilience during the COVID-19 pandemic and allowed it to continue its daily operations and work. At the same time, the new challenges presented by COVID-19 forced LIDÈ to develop innovative alternative ways to achieve its programme objectives while reducing disaster risks caused by the pandemic. Two initiatives in particular exemplify these co-benefits of existing programmes and disaster risk reduction.

Mental health resilience training: building on its locally driven model for mental health resilience training and psychosocial and educational support, the LIDÈ Foundation was able to engage already trained local leadership staff to deploy door-to-door COVID-19 prevention and mental health training. It also worked with women's groups to produce personal protective equipment with existing materials available within the villages.

Hurricane preparedness through nursing student network: another partnership initiative that was in place before COVID-19 focused on connecting nursing students with schools and NGOs in preparation for hurricane season. When the pandemic hit, LIDÈ faced the challenge of having to cope with a hurricane while at the same time preventing the spread of COVID-19. As this necessitated an expansion of the programme, the organization issued a call to its partners in the NGO community to include local nurses finishing their schooling in their hurricane response teams, as well as local volunteers who could be trained as health agents. A similar call was extended to partners in the education sectors to ensure that each school had a health agent assigned to it.

Thanks to connections with other disaster resilience networks, this initiative has spread beyond Haiti to other islands in the Caribbean at risk of being completely cut off from external help when disasters hit. While this programme was initially created to address disaster risk related to hurricanes, its close connection with the nursing sector enabled it to expand quickly to meet the additional challenges posed by the COVID-19 pandemic and to reduce exposure and vulnerability.

Box 4
Keeping disaster displaced persons safe

The Women's Climate Centers International highlighted the importance of keeping people displaced by disasters safe from the spread of diseases such as COVID-19. In disasters such as floods and landslides, people are often forced to flee their homes to safer ground and various organizations are tasked with assisting people to evacuate, often having to move people in large crowds to densely populated shelters where they can seek refuge. In this environment, the spread of diseases such as COVID-19 can be an additional risk for displaced people, since maintaining physical distance becomes very challenging.
In addressing these important needs, mobility and travel restrictions during the pandemic made it more difficult for the Women's Climate Centers International to import essential goods and emergency items, to deploy staff to remote locations and to move populations in need to safer areas.

The unique needs of displaced persons must be catered for in the immediate aftermath of emergencies, as well as in the response to the long-term impacts of the pandemic. It is society's responsibility to ensure they are not left behind as we chart the way forward.

Health worker testing a lady' temperature.

Vulnerability reduction. Eight examples of existing disaster risk reduction initiatives were reported which sought to contribute to the reduction of vulnerability during the COVID-19 pandemic (as listed below). While primarily supporting food security through the supply of food and water, these case examples also provided housing and mental health support. In Asia, for example, the Participatory Development Action Program was already working with people living in poverty in urban and rural areas and then expanded its efforts during the pandemic to also provide food and hygiene support for poor families in urban slums.

- **Ntengwe for Community Development (Zimbabwe)**: its schools feeding programme was impeded by COVID-19 lockdown restrictions
- **Gram Bharati Samiti (India)**: maintained support for migrant people, slum dwellers and daily wage earners through the supply of cooked food.
- **Participatory Development Action Program (Bangladesh)**: provided food and hygiene support for 500 families living in poverty
- **SEEDS India (Asia)**: provided online training programmes on disaster risk reduction.
- **Adobe Home Aid (Mexico)**: community development including provision of living space.
- **LIDÈ Foundation (Haiti)**: provided training for organizations on the impacts of trauma on mental and physical well-being and on coping and self-care strategies.
- **Virgin Islands Territorial Emergency Management Agency (United States Virgin Islands)**: expanded shelter space capacity to meet social distancing requirements.
- **Arab Network for Environment and Development (Middle East)**: conducted a survey to highlight the views of the most vulnerable and marginalized individuals on the targets of the Sendai Framework.

The examples relating to exposure and vulnerability reduction reveal a series of success factors as well as obstacles that led to organizations creating synergies between their existing activities and COVID-19 response. When organizations had certain particular factors in place, they were able to quickly adapt their activities to prepare for, respond to and recover from the pandemic. The key success factors identified in the survey responses included:

- shared activities among disaster risk reduction programmes.
- local partnerships and presence.
- inclusion and community participation in all steps of project design and delivery.
- established structures and networks for quick provision of resources (such as food, water, housing, transportation, personal protective equipment, capacity, monitoring, sanitation, hygiene).
- information and communications technology.
- multi-hazard awareness (natural disasters and COVID-19).
- multidisciplinary approaches and teamwork.
- flexibility, adaptiveness and creativity in the design and delivery of solutions.
- long-term vision while addressing short-term issues.
- trusted and respectful partnerships and valuing of partners and communities.

Capacity strengthening for disaster risk reduction. One case example demonstrated how an existing programme contributed to preparedness for the COVID-19 pandemic. The National Resilience Council), a governmental organization in the Philippines, created the Resilient Local Government Systems Scorecard as a guide for local government units, specifically cities, to determine the preparedness, adaptation and transformation of their local government systems towards resilience (see box 5).

This initiative also highlighted the importance of local partnerships in leveraging existing initiatives for new types of disasters, along with the need for multisectoral, transdisciplinary approaches, such as the Council's Resilient Local Government Systems programme.

Box 5
Resilience and governance

The Resilient Local Government Systems Scorecard, implemented by the Philippines National Resilience Council, assesses key local systems that support resilience, many of which were directly relevant to the COVID-19 pandemic, including in the following areas:

- health, education and social protection for human development.
- livelihoods, micro-, small and medium-sized enterprises and large businesses for local economies.
- settlements, buildings and lifelines for infrastructure.
- management and rehabilitation of ecosystems, protection of socio-ecological systems and pollution management &and resource use.

The scorecard is divided into different pillars, each looking at a particular area listed above. The health sub-pillar is aligned with the disaster risk reduction and management in health objectives of the Philippine Department of Health, which are: i) prevention of mortality and morbidity; ii) continued public health services; and iii) prevention of outbreaks.

A critical feature of the scorecard is that it localizes indicators, minimum requirements, means of verification and references so that they are in accordance with local government systems. As such, they are based on national instruments as well as respective department orders, memoranda, manuals and protocols of key government agencies.

In the face of the COVID-19 pandemic, the National Resilience Council reviewed the scorecard to factor in new and emerging risks such as those from biological hazards. Critical references of its ongoing review are the updated guidelines and early lessons learned, as documented by the United Nations agencies, along with those of the Philippine Government and the Council's local government unit partners.

Disaster risk reduction programmes reported in the survey were also analysed against the four priority areas of the Sendai Framework. The results illustrate that the majority of disaster risk reduction programmes are aligned with Sendai priority areas 1, 2 and 4 on improved understanding of disaster risks, strengthening disaster risk reduction governance and improved disaster preparedness, respectively (see the table below).

Sendai Framework priority area	Example programmes
1. Improved understanding of disaster risks	• **Community at the Centre of Resilience** (AICED, Democratic Republic of Congo): awareness-raising of spillover of zoonotic diseases from community expansion into forest zones and consumption of wild animal products. • **General human rights and disaster risk reduction programming** (UPDDHE/GL, Democratic Republic of the Congo): COVID-19 limited the organization's ability to implement forest programmes that would have contributed to preventing future zoonotic spillover. • **Disaster risk reduction training** (SEEDS, India): using online platforms for training related to humanitarian response, building back better and reducing risk. • **General programming** (LIDÈ Foundation, Haiti): training for organizations on the impacts of trauma on mental and physical well-being, and coping/self-care strategies.
2. Strengthening disaster risk governance to manage disaster risk	• **Resilient Local Government Systems** **Scorecard for "Prepare, Adapt and Transform"** (National Resilience Council, Philippines). • **General consulting** (PwC, Philippines): continued work facilitated through business continuity planning and availability of technology. • **Disaster risk reduction training** (SEEDS, India): reaching out to various stakeholders online on humanitarian response, building back better and reducing risk. • **Views from the Frontline** (Arab Network for Environment and Development, Middle East): programme to highlight the views of the most vulnerable and marginalized individuals on the targets of the Hyogo Framework for Action.

Sendai Framework priority area	Example programmes
3. Investing in disaster risk for resilience	• **Community development**: (Adobe Home Aid, Mexico): provision of habitat and housing.
4. Improving disaster preparedness for more effective emergency response and building back better	• **Schools feeding programme** (Ntengwe for Community Development, Zimbabwe): food security programming. • **General programming** (Gram Bharati Samiti, India): continued support of migrant people, slum dwellers and daily wage earners. • **Humanitarian programming – Management of Village** Fund (CARE, Indonesia): for disaster management, emergency response and urgent situation. • **Internal protocols for humanitarian programming** (HOPE Worldwide, Pakistan): ongoing adaptation of COVID-19 safety measures. • **Support for 500 families living in poverty** (Participatory Development Action Program, Bangladesh): food security and hygiene support. • **Food system, WASH system and education programmes** (UDYAMA, India): programme delivery for food security and WASH. • **Disaster-displaced persons programming** (Women's Climate Centers International, Africa): keeping disaster displaced persons safe from COVID-19 spread. • **General programming** (LIDÈ Foundation, Haiti): door-to-door awareness-raising and building on local skills for reducing exposure to COVID-19. • **Disaster risk reduction training** (SEEDS, India): reaching out to stakeholders online related to humanitarian response, building back better and reducing risk.

New COVID-19 response and recovery activities that support disaster risk reduction

An overview of newly created programmes and projects reported by representatives of major groups and other stakeholders to support the COVID-19 response and recovery is provided in table 2 of Annex A to this report. While no new initiatives reported in the survey focused directly on reducing pandemic hazards, a number of new initiatives supported efforts to reduce exposure and vulnerability and to build broader disaster risk reduction capacity.

- **Agri South Africa (South Africa)**: leveraged existing relationships with various government departments and the National Disaster Management Centre to advocate for all agriculture supply chain sectors to be declared as essential services to enable continued operation during lockdown and to avoid food shortages that would increase vulnerability.
- **Asian Institute of Management (Philippines)**: created a student-led COVID-19 Situation Room to provide forecasting and situation reports to inform about food, financial and physical security during the pandemic (see box 6), among other initiatives.
- **National Campaign on Dalit Human Rights (India)**: administered survey of COVID-19 relief schemes to assess the extent of reach in marginalized communities and thereby help to enable their long-term social protection and risk reduction and preparedness in the event of disasters.
- **UNDRR ARISE India (Asia)**: dissemination of preventive advisories; reopening measures; micro-, small and medium-sized cash flow packages; facilitating movement of migrants; compulsory insurance for informal sector; information webinars.
- **LIDÈ Foundation (Haiti)**: implemented a free tutoring project to support physical and mental health, an initiative that will become permanent and extended for other disasters caused by natural hazards, such as hurricanes
- **Global Fire Monitoring Center (Global)**: managed an online repository of experiences regarding personal safety and the role that additional stresses, such as smoke pollution, might have on vulnerability to COVID-19.
- **Cairns Regional Council (Australia)**: established a local COVID-19 hotline to help residents and tourists to manage their circumstances during the pandemic.

Box 6
Anticipating systemic risk

The Asian Institute of Management established a student-led laboratory – the AIM COVID-19 Situation Room – that focused on physical, food and financial security. The Situation Room raised awareness about COVID-19 through social media, preparing forecasts to help different sectors in their decision-making, and writing situation reports and briefs. The Situation Room functioned as a listening post and communications centre, where students collected information and intelligence from a wide range of sources, including contacts, networks and online sources, and prepared news reports.

One of the concerns identified was the phenomenon of a "double whammy" of the compound effects of a natural hazard such as a typhoon occurring during the ongoing COVID-19 response management. the Institute organized two town hall meetings to help parents, teachers and school administrations collectively understand the impact of the pandemic, identify the main problems that people were experiencing and share solutions and best practices.

The Institute also introduced business continuity planning sessions and exercises in order to strengthen pandemic preparedness among the heads of university departments.

Source:
https://aimleader.aim.edu/aim-news/aims-covid-19-situation-room-student-leaders-collect-curate-and-communicate-vital-information-on-the-ongoing-crisis/

The key programme characteristics reported by survey respondents which made the activities successful fell into three main categories: local circumstances; substantive programming; and programme design and implementation. Key characteristics at the local level included: local engagement and partnerships; leveraging local knowledge for the creation of solutions and use of existing networks; and inclusion and meaningful participation of community members in project activities. Programming-focused characteristics touched on areas including: social protection schemes linked with disaster response; training (supply chain and business continuity); and provision of resources (hospitals). In the context of programme design and implementation, the characteristics that contributed to vulnerability reduction as highlighted by respondents included: of flexibility and adaptiveness in project planning; long-term thinking; creativity and multi-disciplinary approaches; and reinforcing mutual respect and trust, teamwork and communication.

Capacity strengthening for disaster risk reduction. Three examples of new disaster risk reduction initiatives were reported, which contributed to enhancing capacity for disaster risk reduction. In Honduras, the role of corporate social responsibility programming in supporting COVID-19 related disaster risk reduction was explored (see box 7). In Asia, a web-based geospatial risk database for COVID-19 provided an example of a disaster risk reduction programme that built capacity for anticipating pandemic-related risks. In Kenya, a disaster risk reduction programme on COVID-19 response, adaptation and resilience building helped to mitigate the impact of the pandemic on farmers' livelihoods and quality of life.

Box 7
Disaster risk reduction and corporate social responsibility

FUNDAHRSE, the Honduran Foundation for Corporate Social Responsibility, developed a series of activities to support the work of its member companies during the COVID-19 pandemic. The increased capacity and knowledge resulting from that work has not only improved the response to urgent needs during the pandemic, but helped companies and communities to better prepare for future pandemics. Its initiatives included:

- **weekly special reports on COVID-19:** reporting on actions of member companies.
- **weekly webinar programme:** focusing on COVID-19-related topics, including how to face the emergency through corporate social responsibility and sustainability; post-pandemic effects; and business continuity.
- **emergency committee on COVID-19:** responding to urgent pandemic needs identified in coordination with national and local authorities, civil society organizations and FUNDAHRSE member companies.
- **publication on the role of corporate social responsibility:** raising awareness of the importance of responsible business decisions and of human rights during the crisis.

Partnerships and collaboration

The Stakeholder Engagement Mechanism global survey asked respondents to indicate whether any of the existing or new programmes that they had implemented to support disaster risk reduction and COVID-19 response had benefited from any government partnership and, if so, what role the Government had played. The survey results showed that government partnerships had played an important role in 87% of cases, particularly in relation to partners' ability to quickly adapt and implement existing and new disaster risk reduction programmes and projects. The nature of these partnerships included government collaboration in organizations' projects and vice versa, provision of resources by the Government, sharing of information and Governments listening to local advice (see box 8).

Box 8
The nature of partnerships

• **Collaborating in local projects.** In Zimbabwe, the organization Ntengwe for Community Development partnered with the Government to provide communities with COVID-19 and health-related information from WHO and the Ministry of Health. The initiative benefited from government agencies accompanying enumerators into communities, which increased its legitimacy.

• **Government-led programmes.** ARISE India, a network of private sector entities led by UNDRR, supported the Government in addressing the COVID-19 pandemic, as the Government recognized that a disaster of such scale could not be overcome by the Government or by stakeholders alone. Support provided by ARISE India included dissemination of preventive advisories to industries during lockdowns; suggested measures for the reopening of economic activities; packages for micro-, small and medium-sized enterprises to ease their cash crunch; facilitating the movement of migrants to their parent states; and compulsory insurance for the informal sector.

• **Providing resources.** In Mexico, the organization Adobe Home Aid described how the Government provided the land necessary for relocating at-risk people during the pandemic. HOPE Worldwide in New Zealand was supported by the Government's Community Awareness and Preparedness Grant Fund to roll-out COVID-19 response activities in various communities. In Pakistan, the same organization used its local resources and fundraising strategies to take action on COVID-19.

• **Sharing information.** In Mexico, the Red Cross worked closely with the local government entity, the Institute of Civil Protection of the State of Tabasco. The Government shares information with the Mexican Red Cross about hazards and disasters at the state and municipality levels, such as fires and/or tropical cyclones, adapted to a language accessible for the communities.
During the COVID-19 emergency, this type of information-sharing was fundamental for effective communication with communities. The organization also shared materials with the Government on preventive health measures at the community level with the intent to expand their use to additional communities.

• **Listening to local advice.** In South Africa, the organization Agri South Africa lobbied the national Government to ensure the agricultural sector remained fully operational during the COVID-19 response. Consultations and negotiations were held with Directors-General on challenges experienced and reported by farmers. Also, Agri South Africa advocated for and provided support to ensure continued export and trade of agricultural commodities, including addressing congestion of crates at the national sea ports.

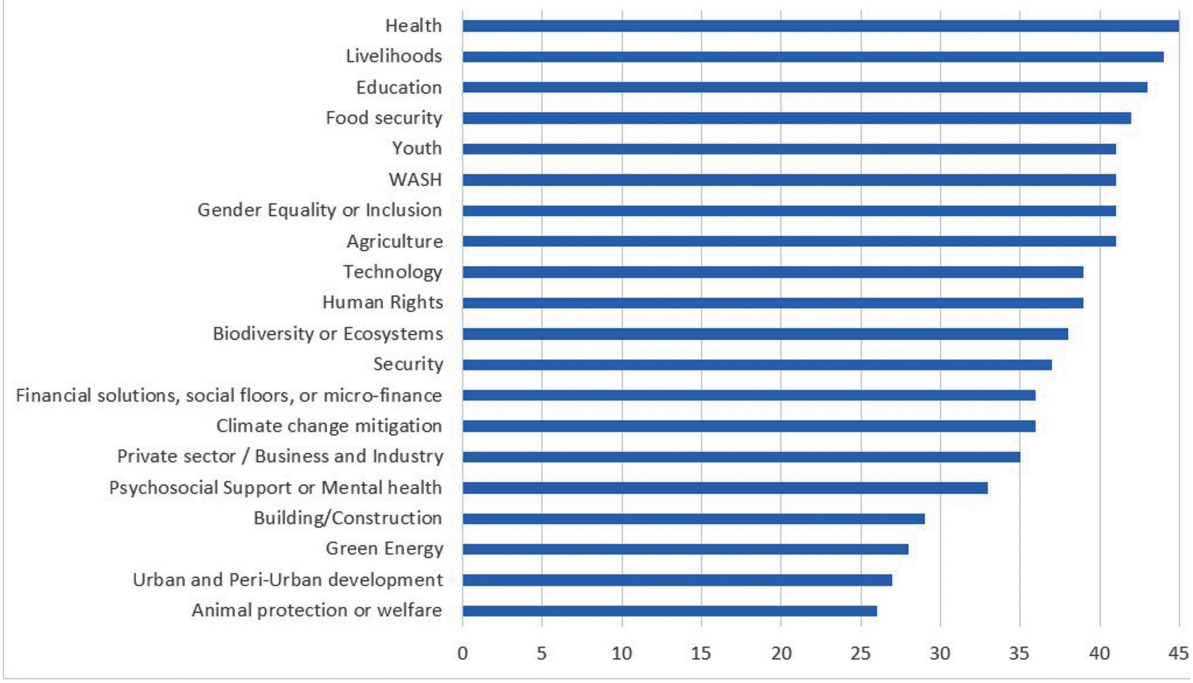
Survey respondents noted that partnerships can be leveraged to strengthen various aspects of resilience building, particularly in relation to biological hazards reduction and management. Respondents emphasized the particular importance of: **strengthening prevention of future hazards by addressing the root causes of the pandemic** (i.e., prevention of zoonotic spillover and related systemic risks); enhanced monitoring (i.e., disease surveillance systems and rapid information-sharing); **improved awareness and education** (i.e., translation of available information to all languages); **more localization** (i.e., partnering with NGOs on the ground); **more accountability** (i.e., listening to early warnings of WHO); sustainability (i.e., implementing green solutions that provide employment opportunities); leaving no one behind (i.e., communications for persons with disabilities and social protection measures for children, women and girls); Further, during the pandemic, **preparedness and response actions benefited from strong partnerships in the provision of facilities and equipment** (i.e., personal protective equipment), WASH and education facilities); **increased capacity** (i.e., in vaccine supply chains); **increased support** (i.e., social protection
measures); **better coordination** (i.e., disaster risk reduction and humanitarian efforts); and **development and enforcement of guidelines** (i.e., personal protective equipment and social distancing).

Stakeholder Engagement Mechanism organizations also reported which sectors played an important role, either through partnerships or integrated action, in the implementation of their disaster risk reduction and COVID-19 initiatives. The responses are summarized in figure 3. While the responses indicated that each of the 20 sectors considered played an important role, the five that were mentioned most frequently were health, livelihoods, education, food security and youth empowerment.

Persons stacking hands together

© Adobe Stock

Figure 3
Sectors playing an important role in disaster risk reduction and COVID-19 response initiatives of Stakeholder Engagement Mechanism organizations



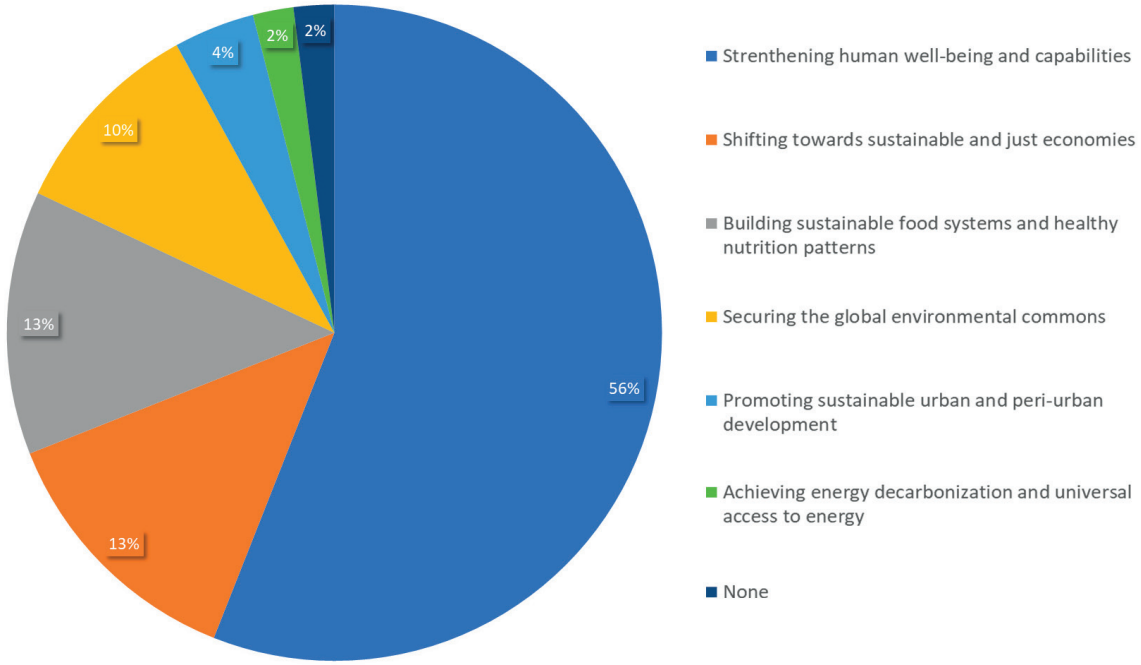
The 2020 Global Sustainable Development Report (Sachs, J and others, 2020) prepared by the United Nations Department of Economic and Social Affairs described six entry points for achieving sustainable development transformation which often overlap with disaster risk reduction. The survey asked which of these six transformative pathways best characterized the overlap between disaster risk reduction and sustainable development;

56% of respondents identified "Strengthening human well-being and capabilities" as having the most relevant connection with the programmes and projects that their organizations were implementing for disaster risk reduction and COVID-19 response. This result highlights the clear role that disaster risk reduction actions on the ground play not only in increasing people's ability to cope with hazards, but in strengthening communities' well-being more broadly and fostering sustainable development.

As illustrated in figure 4, the two next most mentioned entry points were "Shifting towards sustainable and just economies" and "Building sustainable food systems and healthy nutrition patterns", both of which further reinforce the fundamental role of disaster risk reduction for sustainable development.

Figure 4

Survey case examples: transformative pathways where disaster risk reduction and sustainable development overlap



Gaps, challenges and obstacles faced in disaster risk reduction and resilience work

The third section of the survey focused on the challenges, gaps or obstacles faced by Stakeholder Engagement Mechanism members in disaster risk reduction and resilience-building work at the community level and with regard to human resources, logistics, funding, partnerships and policies.

The challenges, gaps or obstacles faced in disaster risk reduction and resilience-building work in the particular context of the COVID-19 pandemic was another focus of the survey. An overview of all the challenges reported by organizations indicates that many systems were unprepared for a global pandemic and ill equipped for preventing future pandemics.
One respondent commented that "traditional human resources management focuses on normal times, with very few organizations versed in crisis scenarios" and emphasized that, when disaster risk reduction is not on the radar until after a crisis has occurred, there is little opportunity for critical thinking and innovative solutions.

A view of responses from stakeholders across a range of system categories yielded the following insights relating to gaps, challenges and obstacles (see Annex C to this report for detailed responses):

• **Community-level:** limited understanding of causes of vulnerability and effective risk reduction actions especially among more at-risk groups such as women and girls, youth, elderly, persons with disabilities, displaced individuals and indigenous peoples

• **Human resources:** loss of employees either due to need for lay-offs under lockdown or because they left voluntarily owing to lack of access to personal protective equipment

• **Logistics:** compromised supply chains due to inflation and delay in delivery

• **Funding:** revenue-side challenges (i.e., access to funding both pre and post disaster) and expense-side challenges (i.e., inflation)

• **Material resources:** lack of personal protective equipment, WASH facilities, medicines and educational materials

• **Partnerships:** difficulties connecting with partners owing to travel restrictions and competition between NGOs for donor funding

• **Policy:** national versus local tensions (i.e., lack of coordination between the national and local levels and centralized authorities lacking ability for local implementation) and design versus implementation tensions (i.e., lack of capacity for agile policy design or lack of coordination for effective implementation); other policy gaps, challenges and obstacles included a lack of mainstreaming, integration, harmonization, evidence-based data and adherence/compliance.

Box 9
Sampling of policy barriers as reported by Stakeholder Engagement Mechanism organizations across regions

Africa: A lack of localization policies makes it difficult for local organizations to directly access donor funds that could enable them to engage effectively in disaster reduction and resilience-building activities.

Americas: To reduce the risk of future pandemics, international standards and agreements on prevention are needed which Governments must abide by. These also need to be aligned with other disaster risk reduction policies. Where policy is merely a suggestion, countries where it may be financially or culturally challenging to initiate, let alone comply with, simply will not try.

Asia: There is a need to update national and local disaster risk reduction and disaster management policies in consideration of current and emerging risks such biological hazards like the pandemic; moreover, national labour and social protection policies need to be updated so as to recognize the invisible sector of urban communities, especially the homeless and informal workers living in the informal settlements of urban centres (Governments often do not have official statistical definitions or indicators for these groups). Science and technology-based, evidence-informed, whole-of-society (multisectoral and trans-disciplinary) policy formulation by national and local government should become the norm, especially to manage risks such as pandemics. This should involve representatives from all sectors.

Global/Oceania/Europe: There is uncertainty about how a disaster event, such as a pandemic, fits the usual policy criteria for disaster risk reduction, recovery and ongoing resilience development, as it is often not considered. There is also less focus on disaster risk reduction plans and policies at present because of the pandemic, creating a vicious circle.

A core challenge for development generally, and disaster risk reduction specifically, is operationalizing the underlying principle of the 2030 Agenda for Sustainable Development on “leaving no one behind”.

To provide an illustrative view of how Stakeholder Engagement Mechanism organizations were working to leave no one behind, the survey asked respondents to list actions taken to reduce risks to persons with disabilities. The survey captured 27 types of action that were clustered into the following categories (see supporting Annex C to this report for details):

- awareness-raising, education and advocacy (i.e., WASH facilities for persons with disabilities)
- gathering and analysing information (i.e., administering baseline surveys on persons with disabilities)
- provision of resources, equipment and work support (i.e., financial, food, personal protective equipment, home visits, reduction of workload for staff with vulnerable dependents)
- programming (i.e., targeted programmes for persons with disabilities)
- protocols (i.e., COVID-19 safety protocols).

These actions demonstrate that, to ensure that the principle of leaving no one behind can be effectively operationalized, projects and programmes must integrate a specific focus on the most vulnerable groups throughout all their activities. This will sometimes mean creating a complementary stream of work to cater for the specific needs of these groups.

Hand with pen over application form

© Adobe Stock

Reported lessons learned and recommendations

Section IV of the survey focused on disaster risk reduction solutions and recommendations based on experiences and lessons learned during the response to the COVID-19 pandemic. The questions posed to survey respondents also sought an understanding of the role of nature-based solutions in disaster risk reduction.

Nature-based solutions for pandemics and disaster risk reduction

Stakeholders were asked about the role of nature-based solutions in disaster risk reduction generally and in addressing pandemic risks specifically.
Respondents noted that nature-based solutions help to reduce the possibility of a "double whammy" of other natural hazards occurring during a pandemic by, for example, mitigating zoonotic hazards (i.e., reforestation) and reducing vulnerabilities (i.e., increased food security). Respondents also noted that the deployment of nature-based solutions for preparedness and disaster risk reduction could be strengthened by efforts such as community-level contingency funds, better facilitation of dialogue and co-creation of solutions. A detailed synthesis of survey responses related to nature-based solutions in given in supporting Annex D to this report.

Lessons learned from COVID-19 pandemic response for informing disaster risk reduction

Stakeholder Engagement Mechanism organizations reported a range of lessons learned from the COVID-19 pandemic response that could help to improve disaster risk reduction efforts.
These lessons fall into four broad categories: policy effectiveness and coherence; preparedness; collaboration; and evidence and information-sharing.

One respondent, for example, elaborated on lessons learned in the context of policy coherence and evidence-based responses, noting that disaster response must be contextualized and at the same time rely on evidence -based and standardized information from health professionals. Policies should not be developed by the Government alone but in collaboration with multiple stakeholders. Collaborative governance is essential in disaster response situations.

In relation to preparedness and evidence, one respondent noted that the pandemic has shown the importance of early warning systems and preparedness through, among other things, disease surveillance systems. They also highlighted the importance of information-sharing and global collective action to fight disasters without discrimination. Furthermore, respondents noted the broader nature of better preparedness and policy design for disaster
risk reduction, emphasizing that “challenge drives creativity and innovation if we are willing to adapt and to take a realistic look at the resources around us”. Innovation should be seen not as a synonym of technology, but as an approach where creativity and cross-disciplinary thinking are integrated into resilience building.

It was additionally noted that the COVID-19 pandemic has highlighted that disaster risk reduction should be part of our everyday thinking and policy framing. The effects of a disaster, including a pandemic, can be greatly reduced by making sure that public systems and services function well in normal times: “The entire machinery cannot be made to or expected to deliver swiftly in response to a disaster when on other occasions they stagger and falter, and remain out of reach of the masses, who depend solely or substantially on these public services.” Further details on lessons learned as reported by survey respondents is provided in supporting Annex D.

Woman wearing a face mask

Top Ten recommendations for improving disaster risk reduction in the context of the pandemic

The survey concluded with a focus on recommendations for improving disaster risk reduction programmes and activities based on the experiences of, and lessons learned by, Stakeholder Engagement Mechanism organizations during the pandemic. Overall, survey respondents identified that improvements in the following areas would lead to strengthened disaster risk reduction in the context of the COVID-19 pandemic:

1. **Regulatory frameworks** (i.e., to institutionalize government funds for disaster risk reduction).
2. **Policy coherence** (i.e., examining the links between climate change and pandemics and strengthening international and regional cooperation and partnerships).
3. **Strengthening systems to become more effective and resilient** (i.e., food, health, social protection, supply chain).
4. **Preparedness and pandemic protocols** (i.e., planning and management, finance, awareness-raising and a focus on humanitarian response for all groups, including those most at risk).
5. **Prevention of zoonotic spillover** (i.e., regulating consumption of wild meat and protecting wildlife habitat).
6. **All-of-society engagement, partnerships and collaboration** (i.e., for disaster risk reduction and recovery committees and strengthened public-private partnerships).
7. **Communication, information-sharing and early warning** (i.e., web-based geo-spatial mapping to inform disaster risk reduction governance, provision of mobile and free internet facilities).
8. **Enabling environments** (i.e., support to emergency responders and small and medium-sized enterprises).
9. **Capacity development** (i.e., for data collection).
10. **Localization and leaving no one behind** (i.e., respect community-led solutions and start with the most vulnerable and fragile groups, social accountability strategies such as participatory budgeting).

Supporting Annex D to this report provides a detailed synthesis of the recommendations made across these categories.

Part B: Review of other surveys and literature

This section presents a desk review of other surveys and literature on disaster risk reduction in the context of the COVID-19 pandemic, covering both pre-existing programmes and new ones initiated that helped to reduce pandemic hazards, exposure and vulnerability.

Case examples of disaster risk reduction programming in the context of the COVID-19 pandemic

The Carnegie Endowment for International Peace (CEIP) conducted a review of civil society activism around the world in the context of the COVID-19 pandemic. Overall, they observed that "civil society actors in many countries, democratic and nondemocratic alike, are rising to the pandemic challenge in myriad small and large ways" and that the pandemic[8]
"is catalyzing new forms of civic activism." In acknowledging this, the authors remark that international supporters of civil society "should step up their efforts to bolster these local responses." More specifically, they noted in their analysis that, while pandemic-related activism naturally varies widely across contexts, several common dimensions stood out.
These are discussed below.

New mutual aid initiatives. The CEIP review observed that citizens are coming together in new voluntary associations and mutual aid societies. For instance:

> "In Tunisia … more than 100,000 people joined a Facebook group bringing together volunteers to help fight the virus. The group now has 24 coordination centers across the country; its volunteers have raised money, collected medical supplies, disinfected public spaces, and worked with regional authorities to identify families with urgent financial needs."

8 https://carnegieendowment.org/2020/04/21/civil-society-and-coronavirus-dynamism-despite-disruption-pub-81592

Repurposing. The CEIP review also concluded that "many established civil society groups have shifted their work from longer-term projects to emergency relief" including partnering with government authorities to distribute aid to their local networks and stepping in to fill gaps left by the state. For example:

> "In Brazil, the community organization Coletivo Rapo Reto, which usually documents police abuses in Rio de Janeiro, is now using its platform to denounce fake news surrounding the crisis."

Fighting disinformation. Civil society actors were also observed supporting awareness efforts by challenging disinformation during the pandemic:

> "In Senegal, the youth movement Y'en a Marre (Fed Up) has switched gears from advocating for transparent and democratic governance to disseminating songs that promote social distancing."

New advocacy roles and tactics. Civil society organizations were observed by CIEP as leading efforts to hold Governments to account for "ineffective or undemocratic crisis responses", as noted in its review, when highlighting the plight of vulnerable groups:

> "In Singapore … NGOs have successfully put pressure on the government to improve living conditions in a migrant worker dormitory where foreign workers have been confined to contain the pandemic."

Similarly, early in the wake of the COVID-19 pandemic, Oxfam engaged over a dozen activists and governance practitioners across Nepal, Ethiopia, Kenya, Nigeria and Ghana to gain an understanding for how civil society organizations were adapting during the pandemic.[9] Featured below are a number of insights and examples gleaned from Oxfam's engagement.

Information, transparency and trust. The importance of transparency, as a bedrock of trust and accountability between citizens and Governments, was highlighted by Oxfam in its report, based on examples including the following:

> "Sharecast's work in Nepal reminds us that understanding citizen trust and satisfaction, based on accurate and timely information, is key to an effective response."

9 https://oxfamapps.org/fp2p/how-are-civil-society-organizations-adapting-in-the-pandemic/

Digital technology, media and mediated governance and advocacy. Oxfam's engagement revealed many examples about the "adaptable, creative, and innovative use of technology to drive access, provide information, make and maintain connections, deliver services, foster transparency, enable participation, and seek accountability." For instance:

> "In Mombasa County, where technology provides a virtual space for children's voices at decision-making tables, the media becomes an intermediary in governance and accountability relationships, bringing with it implications around power, responsibility, and the ability to limit (e.g., prohibitive costs) or enable (e.g., access to a wider audience of rights holders) participation and advocacy."

Gender dimensions and intersectional vulnerabilities. Oxfam also showed that, where Governments fail in providing an equitable response, many civil society groups try to address gaps through intersectional and gender-focused interventions. As an example of that:

> "In Ethiopia, high-risk groups (e.g., street children, commercial sex workers, people living with HIV/AIDS) have been disproportionately affected by the virus and have been placed at the center of LIAE's (Love in Action Ethiopia) community-based response."

In its report, *Reducing Risk and Building Resilience of SMEs to Disasters*[10], (UNDRR 2020a) UNDRR observed that certain types of actions by small and medium-size enterprises around the world implemented in the context of preparedness for and response to disasters also had the potential to mitigate disaster risk through reductions in exposure and vulnerability. Its observations were based on a global survey conducted prior to and during the very early stages of the COVID-19 pandemic and through a desk review of case examples. The UNDRR report cited a recent survey of 8,000 microfinance institutions around the world by Washington-based FINCA Impact Finance, where it was observed that "fintech options like mobile banking, e-wallets, or hyperlocal agent networks are keeping customers connected during the pandemic"[11] (FINCA Impact Finance 2020). However, this observation came with a word of caution: "in the rush to digitize, key vulnerable demographics – notably women – are often left out."

10 https://www.undrr.org/publication/resilience-smes
11 https://paymentexpert.com/2020/07/16/andree-simon-the-role-of-microfinance-fintech-in-covid-19-recovery/

Other examples cited in the UNDRR report showed how SMEs have adapted to help reduce exposure and vulnerability during the pandemic:

> "Kenya's M-PESA, a mobile-based banking network, waived its fees for SMEs, and China's Ant Financial, described as a tech company that provides financial services, launched a 'Contactless Loans' campaign to support the digital transformation of 10 million SMEs. Examples like this led the SME Finance Forum to conclude that this crisis could be a catalyst for transformation in SME finance, noting that some lenders have moved the entire credit journey online and have begun to think beyond loans and liquidity, to focusing on capacity building efforts."

Partnerships and collaboration

An analysis conducted by the Food and Agriculture Organization of the United Nations (FAO) in August 2020, on lessons learned for disaster risk reduction in the context of the COVID-19 pandemic (FAO 2020) highlighted the importance of partnerships and localization. Specifically, the FAO observed that the COVID-19 pandemic has "re-emphasized that nothing could and should be done without partnerships" and that future resilience-building efforts will require "close partnerships, including at the local level, with a wide range of actors and stakeholders".

The CEIP survey of civil society action highlighted that several questions relating to partnerships and collaboration would be crucial in determining whether the COVID-19 pandemic would result in undercutting or rejuvenating civil society in many countries over time. In recognizing the emerging local "civic dynamism" during the pandemic, for example, concern was expressed by the authors that local initiatives could prove "short-lived and brittle or too fragmented", giving rise to a potential scenario whereby civil society activism remains structured around "hierarchical and professionalized national and international organizations." The collaborative nature of this emerging local-level activism was also highlighted, with groups "joining together and, in some cases, working with local businesses and government authorities." However, this was not without its challenges, as some Governments, despite leveraging the local strength of civil society organizations, neglected to consult with those organizations. This led to concerns that, in future, Governments may not be "willing to work with and encourage local initiatives", but try to "maintain top-down control."

12 http://www.fao.org/3/cb0748en/CB0748EN.pdf

The key role that collaboration and public-private partnerships play in disaster risk reduction was also observed by UNDRR in Reducing Risk and Building Resilience of SMEs to Disasters. The case of the Fiji Business Disaster Resilience Council, created in 2016, was cited as an example (CBi 2016[13] , in UNDRR 2020):

> "The Fiji Business Disaster Resilience Council (FBDRC) … supports businesses – particularly small and medium enterprises – to strengthen their resilience by providing training, tools and guidelines … The FBDRC has joined the Fiji Disaster Management Committee, worked with other organizations to survey 1,200 village heads and connect businesses with villages, launched a BCP toolkit and acquired funding to prepare its BCP trainers in the country. The council serves as a coordination mechanism where businesses can manage their own risk, strengthen resilience training and have a voice on matters related to disaster risk reduction."

Gaps, challenges and obstacles faced in disaster risk reduction and resilience work

Horizontal coherence and coordination. Continuing the focus on collaboration
and partnerships from the previous section, UNDRR, in its *Status Report on Target E Implementation*[14] *(UNDRR 2020b)* (relating to increasing the number of countries with national and local disaster risk reduction strategies), reported that the COVID-19 crisis had shown how some Governments had developed pandemic response plans and strategies within Ministries of Health but without the involvement of other ministries (i.e., in isolation from their disaster risk reduction or management strategy). This had "significantly reduced opportunities to build coherence and integration between health and disaster risk management at national level" and represented a serious barrier to securing coherence between disaster risk reduction, sustainable development and climate change adaptation at the national level.

13 https://www.preventionweb.net/news/view/49828
14 https://www.undrr.org/publication/status-report-target-e-implementation-2020

Multiple challenges faced by small and medium-sized enterprises. From a private sector perspective, it was noted in Reducing Risk and Building Resilience of SMEs to Disasters that small and medium-sized enterprises are important catalysts for resilience, given their agility, entrepreneurship and role in providing livelihoods. However, they experience multiple challenges in relation to disaster risk reduction, which tend to cluster in the following areas: their relatively small size; access to financial resources and products; awareness of risks and risk creation (including multi-hazard); a tendency for business strategies to focus on response and recovery, rather than risk reduction and prevention; and operational challenges such as vulnerability within global value and supply chains.

Food security. FAO reported on lessons learned for disaster risk reduction in the context of the COVID-19 pandemic. Food security, for instance, was highlighted as a challenge during the early stages of the pandemic.
Policy coherence was another area of concern illuminated in the FAO study, specifically in connection to its recommendation that "we need to continue to strengthen countries' capacities in integrating disaster and climate risk considerations into governance and policy actions, including through supporting countries in the development/update of their multi-sectoral national/local DRR strategies that are well aligned to national climate change and biodiversity strategies and plans."

Slow progress on the Sustainable Development Goals affecting resilience. In the context of the impact of COVID-19 on the Goals as well as the potential opportunity to accelerate progress toward the Goals through COVID-19 response and recovery, the United Nations Department of Economic and Social Affairs outlined in June 2020 that initial assessments were already alerting the international community to the immense risks of failing to act swiftly and in a coordinated manner[15] (United Nations 2020). At the time, it was estimated that countries were getting set to trigger fiscal stimulus in the order of $9 trillion to respond to immediate challenges and build towards longer-term Sustainable Development Goal commitments.
Importantly, it was observed that the severity of impacts being experienced by countries were influenced by pre-pandemic progress on the Goals. There is clear congruence between those early insights reported by the Department of Economic and Social Affairs and the insights reported by major group and other stakeholder organizations in the Stakeholder Engagement Mechanism global survey:

15 https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/PB_78.pdf

- **Lack of progress towards good health and well-being** (Goal 3), such as insufficient health facilities and medical supplies, increased risk during COVID-19 response and recovery. This is consistent with the lessons learned, challenges and recommendations reported by major group and other stakeholder organizations on the need for improved health services and facilities, especially for marginalized and vulnerable groups.
- **Lack of clean water and sanitation** (Goal 6) increased risk during the pandemic. This observation was echoed in the Stakeholder Engagement Mechanism survey.
- **Limited access to internet infrastructure** (Goal 9) and related remote education and health services increased risk to the pandemic, a fact amplified in the survey responses from major group and other stakeholders.
- Cities with people living in **slum conditions and crowded housing and public transportation** (Goal 11) experienced increased risk during the pandemic. This was also noted by several major group and other stakeholder organizations throughout the survey.

Reported lessons learned and recommendations

Mainstreaming a prevention approach for biological hazards. The Global Network of Civil Society Organizations for Disaster Reduction (GNDR) reported on a number of lessons learned in the wake of the COVID-19 pandemic (GNDR 2021). One key observation was that "COVID-19 is a unique risk driver – but preventable." In this context, it was recognized that the "impacts of this pandemic could have been prevented if lessons learnt from prior disease outbreaks, as well as scientific and community-led research, had been taken into account in health services, global supply chains, transport systems, curriculum, and the tourism sector." Against this stark lesson, it was stressed that "risk-informed development is crucial right now", with the recommendation that "we must build back better and make sure the full range of threats that people face become the concern of everyone, not just disaster risk reduction practitioners."

Similarly, the International Organization for Migration (IOM) examined how tackling COVID-19 and reducing disaster risk in fact go hand in hand. Its analysis noted that, despite the Sendai Framework including the management of biological hazards, and drawing on best practices learned during Ebola, severe acute respiratory syndrome (SARS), Middle East respiratory syndrome (MERS) and influenza A H1N1 outbreaks, "too little has been done to mitigate biological hazards in disaster risk reduction strategies pursued by governments" (IOM 2020). It was further described that "every country carries the primary responsibility to prevent and reduce disaster risk by engaging with diverse stakeholders, planning for potential disasters far in advance and strengthening institutions tasked with responding to and preventing the devastating impacts of disaster.
Prior to this pandemic, however, few countries had made concrete commitments to include biological risks – such as risk management for pandemics – in their plans for disaster risk reduction." In order to mitigate risk and reduce as much suffering as possible, IOM recommended that Governments should embolden their national and local strategies for disaster risk reduction to account for challenges posed by biological hazards like COVID-19 and that local actors on the ground, who are often the first to respond, should become empowered to act quickly with more autonomy and adequate resources.

Threat-based resource allocation. From a systemic prevention and preparedness view, the Brookings Institution[16] 2021) analysed the early lessons from COVID-19 and outlined seven opportunities for improved readiness for future pandemics. Two recommendations in particular focused on the prevention aspect. First, the importance of threat-based resource allocation was highlighted. The example of aviation risk management was described, where a process exists for capturing "near misses". However, such a concept was suggested as lacking in pandemic risk reduction, and it was noted that "when it comes to emerging zoonotic risks, scientists have identified 200 zoonoses and seen six registered as a Public Health Emergency of International Concern under the WHO's emergency classification. Of these, three have been several coronaviruses, suggesting it was only a matter of time before one reached pandemic proportions."

16 https://www.brookings.edu/research/preparing-for-the-next-pandemic-early-lessons-from-covid-19/
17 https://www.gffa-berlin.de/wp-content/uploads/2021/01/GFFA_2021_AMC_Final-Communique_en.pdf

It was further noted that the United States Government had allocated upwards of $5.7 trillion in economic interventions to date in responding to the pandemic, but that "pre-investing in infectious disease prevention and meaningful ways of breaking the chain of transmission are clearly a better investment than ex-post efforts to deal with a novel zoonotic health crisis." The second recommendation, regarding pandemic prevention, was that early alert networks should be fortified, where science and data guide the decision-making. Singapore and South Korea were noted as having effective disease outbreak early alert systems. In future, infectious disease specialists should be forward-deployed as they "know the tell-tale signs that a novel virus is emerging and when to sound the alarm".

One Health approach for prevention. From an agriculture and governance perspective, Agriculture Ministers from 76 nations met virtually at the 2021 Global Forum on Food and Agriculture to discuss food security and climate change in the context of COVID-19 prevention and preparedness the outcomes of which were set down in the Forum's final communiqué (GFFA 2021). With regard to preventing future pandemics, ministers recognized "the risk of zoonoses to human health, sustainable development and economies" and went on to "encourage stakeholders at each stage of food systems to take actions for prevention and sustained financing." Ministers emphasized in particular their support for the "One Health" approach, including "the need for intensified, sustainable and long-term multi -sectoral and multi-disciplinary dialogue and solutions across the health, agricultural, veterinary, forestry and environmental sectors." Ministers outlined their aim to utilize a range of methods for strengthening animal health in order to "minimise the risk of the emergence and spread of zoonoses and other diseases", including activities on "risk mitigation in wildlife health management and trade and in emerging zoonotic and epizootic diseases that could cause epidemic and pandemic situations."
The Forum's communiqué also highlighted the need to "significantly strengthen cross-sectoral, multilateral cooperation and solidarity to minimise the impact of the current pandemic on food security … to prevent future pandemics and to mitigate and adapt to climate change."

Similarly, in a prescient report in 2017[18] on the risks, impacts and mitigation of zoonotic pandemics, Madhav et al. (2017) remarked that "at the core of pandemic prevention is the concept of One Health, an approach that considers human health, animal health, and the environment to be fundamentally interconnected" and highlighted that "activities that focus on understanding and controlling zoonotic pathogens may prevent spillover events and subsequent pandemics." This was described as including: surveillance of zoonotic pathogens of pandemic potential at the human-animal interface; modelling of evolutionary dynamics; risk assessments of zoonotic pathogens; and other methods of understanding the interplay between environmental changes and pathogen emergence. It was further recommended that countries should "focus their spark mitigation efforts on policies designed to control animal reservoirs; monitor high-risk populations" – such as those involved in animal husbandry and animal slaughter – "and maintain robust animal health infrastructure, biosecurity, and veterinary public health capacities."

Multi-hazard approach. The UNDRR Status Report on Target E Implementation noted that the COVID-19 crisis has triggered Governments' awareness of the critical importance of addressing disaster risk through a more systemic risk lens. More specifically, the urgency to accelerate efforts to develop multi-hazard national and local disaster risk reduction strategies that integrate biological hazards was emphasized, including the benefit from a multistakeholder and intersectoral approach to disaster risk reduction governance arrangements. Importantly, it was observed that the lessons learned from the COVID-19 pandemic revealed that those countries that had in place multi-hazard disaster risk management strategies, including health emergencies, "found themselves better prepared to respond to COVID-19."

Give power to local actors. Among other lessons observed by the GNDR was that "the pandemic is global, but risk is local" and, in the light of that, "structural changes are required to give power to local actors." The contextual backdrop is that millions of people living in poverty cannot access handwashing facilities nor achieve social distancing and that these challenges and gaps are being met by frontline workers, including civil society organizations. The GNDR went on to note that "COVID-19 responses that ignore local realities will exacerbate risk"; therefore, while national and local disaster risk reduction strategies must be government-owned, they must also be supported by local actors.

18 https://www.ncbi.nlm.nih.gov/books/NBK525302/

Flexible support to local actors. The review of civil society activism undertaken by CEIP in the wake of the COVID-19 pandemic informed several recommendations
in support of civil society organizations.
For instance, it was suggested that public and private actors who support civil society should prioritize flexible assistance to help organizations adapt. More specifically, it was recommended that funders should "make sure that their support allows civic groups to shift their objectives, form unexpected coalitions, and experiment with new initiatives" and should "push governments to incorporate civic actors as implementing partners, particularly in areas where there is limited state presence or low public trust in the authorities."

Empower women and girls for disaster risk reduction. Responding to a call to action on gender equality, peace and security in the context of the COVID-19 pandemic, 22 partner organizations in 10 countries collaborated on a multi-country participatory research project to assess the impacts of COVID-19 on peace, security and gender inequality[19] (ActionAid et al. 2021). The study engaged over 200 organizations in Afghanistan, Colombia, Iraq, Lebanon, Myanmar, Nigeria, Palestine, Somalia, Uganda and Ukraine to hear recommendations for local, national and international response to COVID-19 and future pandemics and crises.
The study set forth a number of recommendations for transformational change, noting that the prevention, protection and response to gender-based violence would be effective only if women and girls participated in the design of programmes and policies; similarly, women and girls would be able to participate in socioeconomic and political life only if they could live free from violence.

Strengthen key systems. In examining how responses to climate change and the COVID-19 pandemic are linked, The World Economic Forum (WEF) reported on a number of lessons learned based on a review of country e xperiences[20] (WEF 2020). A key first lesson was that "well-resourced, equitable health systems with a strong and supported health workforce are essential to protect us from health security threats, including climate change."
In support of this recommendation, the WEF report cited the case of Haiti, where citizens would have been much more adept at coping with and recovering from the lasting effects of Hurricane Matthew in 2016, if they had had a "resilient and well-resourced health system in place to support them."

19 https://actionaid.org/sites/default/files/publications/Now%20and%20the%20future_Pandemics%20and%20crisis.pdf
20 https://www.weforum.org/agenda/2020/04/climate-change-coronavirus-linked/

Furthermore, the International Science Council (ISC) together with the International Institute for Applied Systems Analysis (IIASA) assessed how science contributed to addressing the challenges posed by the COVID-19 pandemic and how, in turn, the challenges posed by the pandemic impacted on science). Their *synthesis report, entitled Transformations within reach: Pathways to a sustainable and resilient world*[21] (ISC-IIASA 2021) looked at understanding how science systems can be better prepared when an inevitable crisis hits again. Among their recommendations was that the concepts of "sustainable" and "resilient" must be the new mantra for development.
In forward. The COVID-19 pandemic pointed towards the need to broaden our understanding of human security to include systemic resilience. Therefore, risk management should be enhanced through policies and interventions focused on systemic resilience, including equitable investments in health and in physical and social infrastructure resilience. Additionally, in order to build social resilience, recovery packages should be designed to address inequalities, providing "an explicit focus on equity and justice in immediate recovery efforts and medium- and longer-term transition policies is essential to reduce growing disparities and inequities, increase the resilience of disadvantaged and vulnerable groups, and ensure that the latter have a voice in decisions that affect them, namely, in health, water, energy, and climate governance."

Reduce inequality for increased resilience and adaptive capacity. A further recommendation put forth by WEF in its report related to the strengthening of systems. It described, in particular, how the ongoing pandemic "illustrates how inequality is a major barrier in ensuring the health and wellbeing of people, and how social and economic inequality materializes in unequal access to healthcare systems." It suggested that "creating healthy environments for healthier populations and promoting Universal Health Coverage (UHC) are two of the most effective ways in which we can reduce the long-term health impacts from – and increase our resilience and adaptive capacity to – both the coronavirus pandemic and climate change."

Similarly, the ISC-IIASA report highlighted that growing inequity and extreme vulnerability will stymie future growth and development and that, to break this cycle, universal access to digital products and services must be prioritized. They further noted that continued inequality is leading to societal tipping points and must be urgently addressed.

21 https://council.science/wp-content/uploads/2020/06/Synthesis-7.pdf

Part C: Discussion and conclusions

The Stakeholder Engagement Mechanism survey of major group and other stakeholder organizations (see Part A) and the desk review of other surveys and reports conducted in the wake of the COVID-19 pandemic (see Part B) converge on four primary messages:

1. There was insufficient focus on the prevention of and preparedness for pandemic risk, globally, nationally and locally.

2. In the wake of the pandemic, civil society organizations swiftly adapted and repurposed existing disaster risk reduction programming and quickly launched new programmes by leveraging their local networks to help reduce the exposure and vulnerability of citizens to COVID-19.

3. Significant challenges and bottlenecks were experienced in the process of responding to and recovering from the COVID-19 pandemic, and these must be overcome going forward.

4. Systemic risk requires systemic solutions: national Governments and the United Nations system should lead the way in pandemic prevention and preparedness in the era of pandemics, with major groups and other stakeholders advocating actively for such leadership. Governments, civil society organizations and the private sector can each do their part of the puzzle, but working together is essential to co-create the systemic solutions needed for preventing and reducing multiple hazards and reducing exposure and vulnerability to hazards.

These key messages are elaborated in the sections below.

Insight 1:
Insufficient focus on pandemic prevention and preparedness

Of the 39 disaster risk reduction case examples observed through the Stakeholder Engagement Mechanism survey of major group and other stakeholder organizations globally, none related to existing pandemic prevention or preparedness programmes that contributed to risk reduction in the wake of the pandemic (i.e., reduction in hazard, exposure or vulnerability).
Instead, 17 case examples were existing disaster risk reduction programmes that had been adapted or repurposed and 22 were new programmes initiated either to raise awareness of the potential for zoonotic spillover or to reduce exposure of vulnerability to COVID-19. While this does not necessarily imply that no pandemic programmes existed, it does suggest that insufficient attention had been paid to pandemic preparedness and prevention in the lead up to the COVID-19 pandemic.

The suggestion of a lack of focus on pandemic prevention and preparedness was echoed in the desk review (Part B), where case examples dealt primarily with reducing exposure and vulnerability. Several other organizations came to this same conclusion as exemplified in the following observations by the Brookings Institution:

- "Scientists have identified 200 zoonoses and seen six registered as a Public Health Emergency of International Concern under the WHO's emergency classification. Of these, three have been coronaviruses, suggesting that it was only a matter of time before one reached pandemic proportions."

- "Pre-investing in infectious disease prevention and meaningful ways of breaking the chain of transmission are clearly a better investment than ex-post efforts to deal with a novel zoonotic health crisis."

The system-wide lack of prevention of and preparedness for a global pandemic of zoonotic origin points to a broader question about the role of national Governments and the United Nations system in leading global pandemic prevention and preparedness. This aspect is elaborated further under Insight 4 on the need for systemic solutions for addressing systemic risks.

Insight 2:
CSOs adapted by leveraging existing local disaster risk reduction networks and programmes

The case examples reported by the survey respondents documented in Part A of this report revealed that many major group and other stakeholder organizations were able to adapt existing disaster risk reduction programmes and projects (17 examples) and quickly initiate new ones which contributed to disaster risk reduction in the context of the COVID-19 pandemic (22 examples). Importantly, this was due to their local presence, partnerships and existing networks of trusted relationships with vulnerable groups.

These case examples also revealed that organizations around the world were able to influence all facets of disaster risk reduction in the context of the COVID-19 pandemic. This included hazard reduction, as evidenced by one case example showing how an organization in Africa raised awareness within its network of the potential for zoonotic spillover due to community expansion,
deforestation and consumption and trade of wild meat. It also included exposure reduction, as evidenced by 19 case examples of organizations repurposing to provide personal protective equipment and WASH facilities and practices. Finally, organizations adapted to reduce vulnerability of citizens (17 case examples) as seen through the provision of food, water, housing and mental health support and building capacity to anticipate future risk through ongoing assessment of local government readiness and business continuity planning.

The actions of undertaken by organizations also contributed to the four priority areas of the Sendai Framework, with nine examples – a majority – relating to Priority 4 on enhancing disaster preparedness for more effective emergency response and building back better. There were only a few instances of existing or new disaster risk reduction programmes contributing to the priority areas on strengthening risk governance and investing in disaster risk. This further reflects a general observation that most disaster risk reduction programming in the context of the COVID-19 pandemic was responsive rather than preventive.

The agility and adaptability of organizations in responding to the COVID-19 pandemic through existing programming was also observed in the desk review, with various organizations working to reduce exposure and vulnerability during the pandemic and improve disaster preparedness.

A survey conducted by CEIP observed, for example, that many civil society organizations undertook new mutual aid initiatives; repurposed existing programmes; took on new advocacy roles; collaborated and addressed a range of areas including fighting disinformation related to COVID-19; promoted information transparency and trust; leveraged digital technology; and sought to understand gender and intersectional vulnerabilities.

Insight 3:
Significant challenges need to be overcome for enhanced disaster risk reduction and resilience

The Stakeholder Engagement Mechanism survey revealed a range of challenges to be overcome to enhance disaster risk reduction and resilience programming. ON this, there was clear common ground with the results of the desk review, which showed that policy coherence is a key challenge, as is the need to strengthen food security and the resilience of small and medium-sized enterprises to disasters, including supply chain logistics.
Among other key insights from the Stakeholder Engagement Mechanism survey, the challenges related to misinformation, social protection systems, having to compete with partners and lack of information and communications technology infrastructure point to more systemic issues that must be addressed to enhance disaster risk reduction programming in future. This is also reflected in the Stakeholder Engagement Mechanism survey results on top recommendations made by major group and other stakeholder organizations, including calls for improved policy coherence, localization of programmes to better address ground-based issues, the strengthening of key systems (i.e., food security, access to water, health care, social protection and supply chains), attention to vulnerable groups and leaving no one behind, and better collaboration and co-creation with government partners. Importantly, the recommendations of some organizations also emphasized the need to focus on the prevention of zoonotic spillover in relation to protecting habitats and the consumption and trade of wild meat.
The desk review further amplifies the importance of these types of recommendations, particularly in the context of mainstreaming a prevention approach for biological hazards and threat-based resource allocation, giving power and flexible support to local actors, strengthening key systems and reducing inequality for increased resilience and adaptive capacity.

Insight 4:
Systemic risk requires a systems approach

All the challenges highlighted previously are symptoms of linear, siloed approaches to development. It is no coincidence then, that many of the recommendations made by major group and other stakeholder organizations also converged on the need for systems approaches, including calls for improved policy coherence, strengthening of critical systems and all-of-society engagement and collaborative approach. The desk review of other surveys echoes this, as evidenced by calls for a One Health approach for the prevention of zoonotic diseases, use of multi-hazard approaches for disaster risk reduction and strengthening of key systems. The overriding message is that for organizations to be resilient and to promote resilience in communities to systemic risks, a systems approach is necessary.

A systems approach for disaster risk reduction would necessarily begin with a focus on all facets of risk reduction, including preventing and reducing hazards and reducing exposure and vulnerability to hazards. From a hazard prevention perspective and in the context of COVID-19, the 2020 report by the Intergovernmental Panel on Biodiversity and Ecosystem Services (IPBES), *Escaping the Era of Pandemics*[22], (IPBES 2020) provides a crucial reminder:

> "Pandemics represent an existential threat to the health and welfare of people across our planet. The scientific evidence … demonstrates that pandemics are becoming more frequent, driven by a continued rise in the underlying emerging disease events that spark them. Without preventative strategies, pandemics will emerge more often, spread more rapidly, kill more people, and affect the global economy with more devastating impact than ever before."

In this context, IPBES recommended that escaping from what it terms the "pandemic era" requires policy options that foster transformative change towards preventing pandemics. This requires acknowledging the evidence base which informs us that: human ecological disruption and unsustainable consumption drive pandemic risk; reducing anthropogenic global environmental change may reduce pandemic risk; land-use change, agricultural expansion and urbanization cause more than 30% of emerging disease events; and the trade and consumption of wildlife is a globally important risk for future pandemics.

22 https://ipbes.net/sites/default/files/2020-12/IPBES%20Workshop%20on%20Biodiversity%20and%20Pandemics%20Report_0.pdf

In the wake of the COVID-19 pandemic, the Organisation for Economic Co-operation and Development recommended a systemic resilience approach to dealing with COVID-19 and future shocks, emphasizing that "systems thinking is the most powerful tool we have at our disposal to accomplish this task, if it is part of a trilogy completed by anticipation and resilience"[23]. (OECD 2020)

Altogether, the insights gleaned from the Stakeholder Engagement Mechanism survey and review of other literature illustrates that existing disaster risk reduction programmes, when designed in collaboration with stakeholders and through meaningful engagement of community groups and delivered to ensure coherence across sectors and levels of governance, can help to address emerging hazards, such as the COVID-19 pandemic.

Such agility and adaptability of existing disaster risk reduction programming, including the ability to leverage trusted partnerships and networks, will be crucial features enabling organizations and societies to thrive in the midst of an intensifying and multi-hazard global risk landscape.

Insights from this report will inform the development of a forthcoming Stakeholder Engagement Mechanism report focused on providing practical advice for operationalizing an all-of-society approach to disaster risk reduction in the context of medium- and long-term COVID-19 recovery, accelerating progress toward the Sustainable Development Goals and building resilient societies.

23 https://read.oecd-ilibrary.org/view/?ref=131_131917-kpfefrdfnx&title=A-Systemic-Resilience-Approach-to-dealing-with-Covid-19-and-future-shocks

Supporting Annex

The following Annexes are available under separate cover at:
https://www.undrr.org/publication/building-resilience-during-covid-19-lessons-learned-disaster-risk-reduction-programming

Annex A: Synthesis of case examples of disaster risk reduction programming in the context of COVID-19

Existing disaster risk reduction programming

Table 1
Overview of reported existing programmes and projects that contributed to disaster risk reduction in the context of COVID-19

Organization	Programme or project	Category, type of intervention and Sendai Framework Priority	Interaction characteristics
Africa			
AICED – Appui aux Initiatives Communautaire de Conservation de l'Environnement et de Développement Durable (Sustainable Development)	**Community at the Centre of Resilience:** Raises awareness of spillover of zoonotic diseases from community expansion into forest zones and consumption of wild meat	Hazard reduction (zoonotic spillover from forest edge zones and consumption of wild meat) Sendai Framework Priority 1	- Shared management/ leadership committee - Awareness-raising efforts - Social capital/ solidarity
Ntengwe for Community Development (Education)	**Schools feeding programme:** The programme was challenged by COVID-19 lockdown restrictions	Vulnerability reduction (food security) Sendai Framework Priority 4	- Shared activities - Local partnerships
UPDDHE/GL – Union for Promotion, Protection, Human Rights Defense and the Environment (Human Rights and Development)	**General disaster risk reduction programming:** COVID-19 limited ability to implement its forest programmes that would have had co-benefit for future zoonotic spillover	Hazard reduction (prevent zoonotic spillover from forest edge zones) Sendai Framework Priority 1	- Multi-hazard awareness (climate change and COVID-19)
Women's Climate Centers International (Sustainable Development)	**Keeping disaster displaced persons safe from Covid-19 spread**	Exposure reduction (preventing spread) Sendai Framework Priority 4	- Provision of resources (disaster response)
Asia			
Gram Bharati Samiti (Rural Development)	**General programming:** Continued support for migrant people, slum dwellers and daily wage earners	Exposure (personal protective equipment) and vulnerability reduction (food, water, transportation) Sendai Framework Priority 4	- Provision of resources (food, water, transportation)
CARE Indonesia (Humanitarian)	**Management of village fund**	Capacity: disaster response Sendai Framework Priority 4	- Legal framework - Local partnership

HOPE Worldwide – Pakistan (Humanitarian)	**Internal protocols and provision of food, personal protective equipment and health supplies** Ongoing adaptation of safety measures	Exposure (internal protocols) Sendai Framework Priority 4	- Provision of resources (food, health, personal protective equipment) - Provision of safety measures
Philippines National Resilience Council (Governmental)	**Resilient Local Government Systems Scorecard for "Prepare, Adapt and Transform"**	Capacity: monitoring of disaster risk reduction and disaster management by local governments Sendai Framework Priority 2	- Shared management/ leadership committee - Local partnerships
PwC Philippines (Consulting)	**General programming:** Continued work facilitated through its business continuity plan and availability of technology for remote work	Exposure reduction (internal protocols) Sendai Framework Priority 2	- Communications technology - Provision of resources (capacity, monitoring, healthy lifestyle)
Participatory Development Action Program (Human Rights and Development)	**Food and hygiene support for 500 poor families**	Vulnerability reduction (food security) Sendai Framework Priority 4	- Multi-hazard awareness (natural disasters and COVID-19) - Provision of resources (housing)
UDYAMA (Disaster Risk Reduction)	**Food system, WASH system and Education programmes:** Having impact during pandemic	Exposure reduction (WASH) and vulnerability reduction (food security) Sendai Framework Priority 4	- Communications technology
SEEDS India (Disaster Risk Reduction)	**Disaster risk reduction training using online platforms**	Vulnerability reduction Sendai Framework Priorities 1, 2 and 4	- Funder support
Americas			
Adobe Home Aid (Housing)	**Community development**	Vulnerability reduction (living habitat) Sendai Framework Priority 3	- Provision of resources (housing)
LIDÈ Foundation (Human Rights and Development)	**General programming:** - Door-to-door visits for COVID-19 prevention awareness and programmes for local skills development - Training for organizations on the impacts of trauma on mental and physical well-being, and coping/self-care strategies	Exposure reduction (personal protective equipment) and vulnerability reduction (mental health) Sendai Framework Priority 1	- Local presence, local partnerships, flexibility, creativity, long-term thinking, trust, communication, respect, inclusion and community participation, multidisciplinary approaches, teamwork

Cruz Roja Mexicana (Health)	**Flood resilience programme:** initiated strategy of community sensitization called "COVID-19: from physical distancing to community outreach".	Exposure reduction (physical distancing practices) Sendai Framework Priority 4	- Provision of resources (capacity for hygiene and sanitation)
Virgin Islands Territorial Emergency Management Agency (Governmental)	**Expanded shelter space capacity to meet social distancing requirements**	Exposure and vulnerability reduction (expanded shelter capacity) Sendai Framework Priority 4	
Middle East			
Arab Network for Environment and Development (Sustainable Development)	**Views from the frontline:** Programme to highlight the views of the most vulnerable and marginalized on the targets of the Hyogo Framework for Action.	Vulnerability reduction (socioeconomic and environmental) Sendai Framework Priority 2	- Flexibility - Communications technology

New disaster risk programming

Table 2 Overview of reported new programmes and projects that contributed to disaster risk reduction in the context of COVID-19

Organization	New programme or project	Category, type of intervention and Sendai Framework Priority	Interaction characteristics
Africa			
Kenya National Farmers' Federation (KENAFF), the Kenyan National Farmers Organization and a member of the World Farmers Organization (Agriculture)	**KENAFF COVID-19 response adaptation and resilience building** including emergency response to support farmers to mitigate the impact of COVID-19	Disaster response Sendai Framework Priority 4	- Local partnerships - Trust
Kikandwa Rural Communities Development Organization in partnership with Mukono District NGO Forum (Rural Development)	Led the Government's **COVID-19 awareness, sensitization and monitoring programme** in Mukono District, Uganda	Exposure reduction Sendai Framework Priority 1	- Teamwork
Bahir Dar University (Education)	**Incident management plan; regional COVID-19 prevention, preparedness and response coordination and communication manual.**	Preparedness (plan) Sendai Framework Priority 4	

Synergie des Partenaires pour la Promotion des Droits de la Femme (Human Rights and Development)	**Internal protocols**	Exposure reduction Sendai Framework Priority 4	- Awareness-raising efforts
African Development Bank (Financial)	**National COVID-19 response funding**	Disaster response and exposure/vulnerability reduction Sendai Framework Priority 4	- Multidisciplinary approach
Sustainable Environment Food and Agriculture Initiative (Agriculture)	**Personal protective equipment project**	Exposure reduction (personal protective equipment) Sendai Framework Priority 4	- Awareness-raising efforts - Provision of resources (food, personal protective equipment)
Agri South Africa (Agriculture)	**Sector advocacy for COVID-19**	Vulnerability reduction (maintenance of essential services) Sendai Framework Priority 4	- Local engagement - Local knowledge - Communication
Apt Succor Organization (Sustainable Development)	**WASH**	Exposure reduction (WASH) Sendai Framework Priority 4	- Awareness-raising efforts
Global Ecovillage Network (Sustainable Development)	**COVID-19 awareness kits**	Exposure reduction (awareness) Sendai Framework Priority 1	- Communication - Training/education - Synergy/coordination with stakeholders
People's Federation for National Peace and Development (Sustainable Development)	**Internal COVID-19 protocols**	Exposure reduction and vulnerability reduction (internal protocols) Sendai Framework Priority 4	- Social capital/ solidarity
Youth and Environment Vision (Sustainable Development)	**Supporting WASH facilities for orphanages, the elderly and people with disabilities.**	Exposure reduction (WASH) Sendai Framework Priority 4	- Awareness-raising efforts
Asia			
Philippines National Resilience Council (NRC) (Governmental)	**Web-based geospatial risk database system for COVID-19 pandemic response and recovery**	Capacity: monitoring disaster risk reduction and disaster management by local governments Sendai Framework Priority 1	- Shared management/ leadership committee - Local partnerships

Asian Institute of Management (Education)	**Covid Situation Room:** provision of forecasts and situation reports for decision-making	Vulnerability reduction (physical, food and financial security) Sendai Framework Priority 1	- Local partnerships - Local co-creation of solutions - Training (supply chain continuity, business continuity)
Food for the Hungry Philippines (Humanitarian)	**Handwashing in schools and village centres**	Exposure reduction (WASH) Sendai Framework Priority 4	- Awareness-raising efforts
Far Eastern University (Education)	**Protocols for preventing spread of COVID-19:** Entry/exit protocols, disinfection.	Exposure reduction (preventing spread) Sendai Framework Priority 4	- Creativity - Proactive thinking
National Campaign on Dalit Human Rights (Human Rights and Development)	**Inclusion monitoring survey for COVID-19 relief schemes and policy advocacy**	Vulnerability reduction (inclusion) Sendai Framework Priority 1	- Social protection schemes linked with disaster response - Local partnerships
UNDRR ARISE (India) (Disaster Risk Reduction)	**Preventative advisories; reopening measures; micro-small and medium-sized enterprise cash flow packages; facilitating movement of migrants; compulsory insurance for informal sector; info webinars**	Vulnerability reduction (liquidity, info) Sendai Framework Priority 4	- Flexibility - Local knowledge - Provision of resources (hospital space)
Americas			
LIDÈ Foundation (Sustainable Development)	**Telephone tutoring for health and mental health support; local meal preparation**	Vulnerability reduction (mental health) Sendai Framework Priority 4	- Local presence, local partnerships, flexibility, creativity, long-term thinking, trust, communication, respect, inclusion and community participation, multidisciplinary approaches, teamwork
Honduran Foundation for Corporate Social Responsibility (FUNDAHRSE) (Sustainable Development)	**Special report on COVID-19, weekly webinar programme on COVID-19 and corporate social responsibility and sustainability, and COVID-19 emergency committee**	Capacity: corporate social responsibility practices; disaster response Sendai Framework Priority 4	- Awareness-raising efforts

Oxfam (Humanitarian)	**Working with partners in Puerto Rico to prevent spread**	Exposure reduction (preventing spread) Sendai Framework Priority 4	?
Europe / Oceana / Global			
Global Fire Monitoring Center (Governmental)	**Information portal and webpage on interface between COVID-19 and landscape fire management, including preventing potential future hazards that could spill over from systems already overburdened by the pandemic.**	Vulnerability reduction Sendai Framework Priority 1	- Awareness-raising efforts
Cairns Regional Council (Governmental)	**Local COVID-19 hotline**	Vulnerability reduction (for people to manage their circumstances) Sendai Framework Priority 4	- Local partnerships - Local engagement - Existing networks - Local knowledge

Table 3
Actions taken to reduce risks to persons with disabilities

Category	Types of Action
Awareness and advocacy:	- Awareness-raising (safety) - Awareness-raising targeting persons with disabilities - Incorporated views of disabled persons into community action plan - Advocacy for resources targeting persons with disabilities - Collaboration with government services for persons with disabilities
Education:	- Education and training on WASH facilities for persons with disabilities - Capacity assistance for persons with disabilities (applying for protection schemes) - Ongoing education and engagement programme for persons with disabilities - Online training
Information and analysis:	- Baseline survey on persons with disabilities - Identification and advocacy related to COVID-19 relief measures that are not addressed needs of disabled persons - Identification of persons with disabilities to inform targeted relief efforts - Dissemination of COVID-19 information and contingency plans to persons with disabilities - Research on impacts for persons with disabilities - Surveys that are disaggregated to identify persons with disabilities
Provision of resources and equipment:	- Provision of resources and equipment (including financial, food, personal protective equipment, special quarantine room, safety, health, housing, mini radios for remote learning, hand washing facilities) - Funding provisions focused on persons with disabilities - Home visits to provide personal protective equipment - Ensuring access to physical spaces for disabled persons
Employment related:	- Reduction of workload for staff with vulnerable dependents - Provide work-from-home capability
Programming:	- Social protection programme including a focus on persons with disabilities - Targeted programmes for persons with disabilities - Ramping up existing programmes that focus on connecting with youth with disabilities - Mainstreamed disability considerations in future programming
Protocols:	- COVID-19 safety protocols - Existing inclusion and do no harm internal protocols

Challenges faced in the disaster risk reduction case examples

Challenges experienced by Stakeholder Engagement Mechanism organizations during the implementation of initiatives for addressing disaster risk reduction and disaster management needs in the context of the COVID-19 pandemic (either through adapting existing initiatives or creating new ones) included:

- Lack of resources (human, financial, and institutional support)
- Lack of or limited government capacity (including heavy bureaucracy)
- Limited communications technology and infrastructure (including to reach persons with disabilities)
- Inaccurate or limited information and evidence (e.g., inaccurate COVID-19 test results information and dissemination, which resulted in lack of trust among local residents and therefore a lack of implementation)
- Lack of equipment and supplies (including educational)
- Difficulties to reach local communities due also to travel restrictions (including lack of face-to-face communications)
- Lack of awareness and training (including social stigma towards COVID infected people)
- Limited expertise in pandemic response and preparedness (including private sector capacity to deal with pandemic impact)
- Ineffectiveness of COVID-19 response protocols (frequently changing, and not aligned with local conditions)

Annex B: Supporting information on partnerships and collaboration

Partnerships addressing biological hazards

Table 1
Types of partnerships addressing biological hazards

Categories of Partnerships	Types of Partnerships
Awareness-raising	- Survey results contained eight listings of partnerships related to general awareness raising
Equipment	- Survey results contained four listings of partnerships relating to equipment including sanitizer, masks and other basic requirements during quarantine.
Education and training	- Education and knowledge - Educational materials
Enforcement	- Enforcement of public policy - Enforcement of COVID-19 health guidelines - Public measures and enforcement

Coordination	- Prepare local government for a "double whammy" of responding to a natural disaster (i.e., typhoon or volcanic eruption) during COVID-19 restrictions - Establishing special task force on COVID-19 response - Integrating hazards into national plans - National COVID-19 response strategy (to reduce exposure, training of medical teams for testing, treatment facilities and protocols) - Rescheduling of mass concentration events - Standard operating procedures for wearing masks and washing hands - Governments and non-governmental organizations working hand in hand to track positive cases, tracing persons who may have come into contact with them, quarantining at detention centres or at home, ensuring that the lockdown advisories are adhered to by the public, feeding people in the informal sector (this was taken over in particular by civil society organizations, religious institutions and volunteer organizations, including RWAs). - Thematic guidelines - Sharing and circulating government advisories for social and physical distancing, staying home, hand washing, isolation and house quarantine - Sharing good practices - Sharing outcomes of policy implementation
Funding	- Establishment of a pandemic donation fund - Facilitated cash support for ultra-poor for purchasing medicine, essentials, nutrition - Indian Government announced special package for all the sectors amounting to 20 lakh crore rupees. - Reallocating national and local budget for COVID-19 response - Stimulus packages
Information and analysis	- Geospatial risk database system for COVID-19 response and recovery - Information dissemination, including translation - Monitoring entitlement and mobilizing network for immediate humanitarian support and mainstreaming - Surveys to identify hygiene needs
Localization	- Local actors on the ground, who are often the first to respond, becoming empowered to act quickly with more autonomy and adequate resources in consultation with community members - Improved community response
Advocacy and support	- Advocacy to promote culture-, nature- and science-based solutions; initiatives to accelerate to enhance immunity with better nutrition, health boosters, safe water, hygiene, sanitation; building capacities; and strengthening adaptation capability of building social, cultural, natural, ecological and economical capital - Strategic support to government for community resilience - Input to policy guidelines
Transportation	- Arranging the buses for the migrant workers was carried out by both governmental and non-governmental organizations - Special trains run by the Government to carry migrants to their home states

Creating plans, policies, programmes and guidelines	- Creation of emergency response plans - Policies for cremation of COVID-19 patients - Policies for proper disposal of hospital waste - Policies for use of personal protective equipment - Development of COVID-19 prevention guidelines - Creating and giving social assistance for disabled and vulnerable persons - Enacting legal frameworks to give certainty on the implementation of the COVID-19 response - Improving health facilities - Increasing basic prevention measures - Policy guidelines - Policy advocacy to protect supply chains - Promotion of ecotourism - Protection and care of the elderly - Psychosocial counselling and behavioral change for stranded and returned migrants - Social assistance for persons with disabilities and other vulnerable persons - Social distancing measures - Special orders issued for insurance of front-line workers (including doctors, nurses, paramedical staff, local health workers, police and others) - Special provisions made for elderly populations and those with disabilities - Special provisions initiated for micro-, small and medium-sized enterprises and informal sector workers and for social security measures - Suspension of school and non-essential activities

Table 2
Suggestions for strengthening partnerships to address biological hazards

Categories	Types of actions for strengthening partnerships
Address root causes	- Address underlying causes of vulnerability (including poverty and dependence - Change mentalities to fight root causes of pandemics - Enhance ambit of disaster risk reduction - Giving farmers substantive role in management of produce markets (to reduce potential for zoonotic spillover) - Laws and policies for reducing biological hazards - Stringent preventive action - Apply the law on the legitimate possession of wild species - Propose alternative occupations to hunting and the bushmeat trade. - Respect the hunting calendar - Strengthen the empowerment of the communities to fight against their poverty so that these communities do not go poaching and thus increase the hunting of zoonoses. - Training farmers on food safety across value chains - Encourage collaboration between the veterinary environmental service and all stakeholders involved in the game meat consumption chain
Enhance monitoring	- Application and monitoring of safety precautions - Close monitoring and reporting - Deployment of testing - Establishment of a disease surveillance system and rapid information-sharing - Monitoring entitlement; mobilizing networks for immediate humanitarian support; and mainstreaming

Better awareness and education	- Awareness-raising in all languages - Consistent awareness-raising to maintain protocols especially in era of new normal - Education and awareness - Educative resources must be increased (like posters and brochures). - Increased awareness - More targeted and timely information - Preparing for impact of vaccine rejection or vaccine nationalism - Public education and engagement - Sharing and circulating government advisories for social and physical distancing, staying home, hand washing, isolation and house quarantine - Changing attitudes and lifestyles
Provide facilities and equipment	- Better environment and education facilities for children - Clean, liquid soap and paper towels - Adequate washbasins and water in hospitals and health centres - Appropriate toilet facilities - Provision of basic health services and sources of income for home-based workers through modern technology - Protection for doctors who are mixed up with the injured - Provision of equipment at community level - Provision of potable water supply, sanitation, and hygiene for all vulnerable groups - Provision of protective gear - Sanitizers, masks and other basic requirements during quarantine - Systems to ensure physical distancing and other precautions
Increase capacity	- Preparing vaccine supply chains - Building capacities of medical systems at all levels - Building capacity of frontline workers for disaster risk reduction - Strengthening public healthcare systems at all levels - Working with industry to mass produce personal protective equipment
More localization	- Increased local government support to enhance project sustainability end effectiveness. - Partnering with NGOs on the ground - Strategic support to Governments for community resilience - Strengthening local-level health standards and food quality offices - Strengthening community-level preparedness and response to epidemics or global pandemics such as COVID-19
Increased support	- Supporting community groups to manufacture renewable face masks - Empowering women and girls through home-based training and awareness-raising and encouraging women to go out with necessary hygienic preparation - Ensuring that pay and benefits are not reduced for personnel who are unable to perform their duties virtually - In order to reduce hunger, turning school-based food aid into home-based distribution, with strict observation of COVID-19 regulations - Knowledge-sharing to enhance understanding of disaster and health-related emergency risks, - Restoring livelihoods and ensuring prevention measures to save lives - Ensuring health and safety of workers
More accountability	- Civil society organizations playing role of watchdog and raising awareness of community issues - Increasing power of stakeholders - Listening to the early warnings from the World Health Organization - Stricter enforcement of public health orders
Pursue sustainability	- Developing Sustainable Development Goal communities - Green and sustainable solutions that provide opportunities for employment

Better coordination	- Extension of disaster risk governance to manage both disaster risks and potential health emergencies, particularly for humanitarian coordination aspects - Inter-institutional risk management - International standards to reduce likelihood of future pandemics - Increased collaboration between NGOs and community-based organizations in order to widen interventions to ensure that more people with disabilities are reached - National integrated landscape fire management policies - Sharing outcomes of policies - National and local government must take on a science and technology-based, evidence-informed and whole-of-society approaches (multisectoral and transdisciplinary), including for task forces to manage the pandemic and disaster risk
Develop and enforce guidelines and protocols	- Guidelines for frontline workers to ensure the continuation of critical and essential services (e.g., non-transferable support services to vulnerable populations) - Handwashing - Transitioning to virtual ways of working wherever possible - Limiting movement of people except for essential needs, including limited public transportation - Mask wearing and requirement to cover mouth and nose - Medical protective suits, masks and dedicated showers - Engaging community water points and promoting social distance
Leave no one behind	- Finding special multimedia communication for people with disabilities like Braille prints for blind people, big prints for people with albinism, videos with sign language interpretation for deaf people - Food security and a safety net for women and girls. - Funding for research and awareness for the benefit of youngsters and stakeholders - Humanitarian response to support returned migrants and stranded labourers through the COVID-19 pandemic (food and nutrition kits, hygiene kits, school kits for children, preventive kits for front-line workers and agro-kits for farmers with nutrition supplements/health boosters; setting up call centres for IEC, employment skill-building; area sanitization by drone. - More financial resources should be invested to increase interventions and reach more persons with disabilities - Provision of affordable housing for the poor including toilet and water facilities - Psychosocial counselling and behavioural change for stranded and returned migrants - Continue to profile vulnerable households and create linkages and referrals so that people do not die of hunger

Annex C: Synthesis of gaps, challenges and obstacles

Community-level challenges

Challenges observed by Stakeholder Engagement Mechanism member organizations at the community level clustered around the following areas:

- **Engagement of vulnerable and at-risk groups:** It was emphasized that many vulnerable groups were left behind in disaster risk reduction efforts and that more efforts need to be put into meaningful engagement of all community groups. For example, there has been a significant increase in teenage pregnancies and gender-based violence because of school

closures; remote and displaced individuals and communities (i.e., homeless people and migrants) have not had access to government assistance programmes and thus are at higher risk of contracting COVID-19; indigenous people's practices and traditions are not brought to the table and fully utilized to inform disaster risk reduction actions; elderly people are isolated and excluded from decision-making and also have the highest fatality rate from COVID-19.

- **Financial resources:** A lack of financial resources was often reported as a challenge from both an income and a funding perspective. First, substantial job losses to low-income households caused by the pandemic resulted in increased food insecurity as well as people having to resort to risky behaviors to support their family. For example, low-income individuals were disregarding lockdown rules to try to find work. Secondly, in several instances, funds were redirected away from organizations implementing disaster risk reduction programmes to respond to the pandemic, which led to reduced funding for dealing with other hazards (e.g., fires, droughts and floods) which continued to occur during the pandemic.
- **Capacity:** The lack of capacity was noted in many instances as affecting the ability of organizations to provide support to vulnerable groups within their community (in essence, people who were not connected were not protected). A lack of local capacity was also noted, with one organization observing that, often, too many human resources are concentrated at headquarters or the central level, with very few on-the-ground workers present to implement activities. Technological capacity was also identified as a big gap, particularly with regard to digitalization for remote working and commerce and hosting of virtual meetings.
- **Information:** A lack of information as well as an increase in misinformation in the community hindered efforts to encourage a change of behaviour by individuals for their own protection and that of their surrounding communities.
- **Policy coherence:** A lack of policy coherence was noted by several organizations, both vertically, in relation to a gap between national and local levels, and horizontally, in relation to other disaster risk reduction issues being sidelined by the attention given to the pandemic and a disconnect between approaches for the formal sectors versus informal sectors.
- **Social protection:** A lack of social protection was noted by respondents, which hindered their ability to address the needs of vulnerable groups. For example, in India, many marginalized groups live in hazard-prone

locations with precarious livelihoods and social protection. In this context, access to and strengthening of the social protection net, disaster response and disaster risk reduction measures become exceedingly constrained when such groups (including persons with disabilities, women and girls, LGBTQ, racial or ethnic minorities, older persons, or others) intersect with caste, ethnic and religious identities.

Human resource challenges

A minority of respondents indicated that the transition to a remote work setting during the pandemic went very smoothly with little disruption. However, the majority of stakeholders reported a common set of human resource challenges during the pandemic which touch on issues related to capacity and knowledge, an inability to adapt quickly and the physical and mental health of staff. Such challenges hindered both the effective delivery of disaster risk reduction activities and organizations' ability to address COVID-19. The challenges include:

- **Lack of capacity and training:** A lack of capacity to respond to COVID-19 regulations among organizations' staff, including inexperienced workers. A shortage of specialized staff (e.g., for sign language) was also an issue.
- **High turnover of staff:** In many cases, the reasons for a lack of human resource capacity were the need to lay off staff because of financial constraints (funding substantially reduced); and employees' fear of getting COVID-19 because they did not have access to the necessary personal protective equipment to do their job and, as a result, voluntarily left the organization.
- **Unclear regulations and lack of monitoring:** In one instance, unclear provisions in national legislation were highlighted as a perceived challenge, as were unclear mandates, especially on leading programmes, and poor monitoring systems.
- **Mental well-being:** Issues cited in relation to mental well-being included dealing with ever-changing and often confusing restriction protocols from local governments, as well as challenges caused by having to adapt working modalities (e.g., restrictions of movement making work difficult, challenges in remote working, quarantine measures when coming into contact with infected individuals). Moreover, some organizations expressed frustration at the low uptake of COVID safety measures

following awareness-raising campaigns and training.

- **Lack of preparedness:** It was noted that traditional human resources management focus on "normal" times, with very few organizations versed in crisis scenarios. It was emphasized that with disaster risk reduction not being on the radar until after a crisis has occurred, there is little opportunity for critical thinking and innovative solutions.
- **Stigmatization:** In one instance, it was reported that discrimination and stigmatization was a challenge. This affected persons who, due to pre-existing medical conditions, are more sensitive to the disease, as well as infected people and medical and nursing staff who provide care.

Logistics challenges

The supply chain was identified as a primary challenge by Stakeholder Engagement Mechanism organizations in relation to logistics, because of significant price increases for goods (including medicines and personal protective equipment) and delays in receiving goods. The reasons for these price increases and delays include border closures, lack of available transportation, restriction of movement and supply shortages.
Other logistics challenges experienced by organizations included:

- **Lack of funding or support:** organizations noted that funding was cut down and limited, with little to no resources to equip volunteers. This was exacerbated by the cost of some services, especially WASH facilities, increasing by as much as double.
- **Poor coordination:** logistical response mechanisms were not coordinated between the national and local levels.
- **Disaster fatigue:** one respondent expressed concern that the pandemic could overshadow and divert attention away from the typical vigilance for other serious disasters such as fire safety and prevention, water conservation and flooding, among others.
- **Communication and information communications technology:** internet connectivity was noted as an issue given the requirements for virtual working.
- **Compliance with protocols:** upgrading response protocols, shelter facilities, community-based isolation centres, and evacuation centres to comply with World Health Organization and national health authorities directives for physical distancing and personal protective equipment in the context of the pandemic was highlighted as a challenge by one organization.

Funding challenges

Stakeholder Engagement Mechanism organizations described funding challenges and gaps on both the income side and expense side. Regarding income, specific challenges included reduced and delayed funding, access to funds, previous funding for disaster risk reduction work being diverted to deal with COVID-19 and catering to very specific goals, and donors having their own budget constraints.

On the expense side, challenges included an increase in costs due to supply issues for both material and human expertise as well as inflationary pressures, and labour strikes or diverted labour. Additionally, some funding cuts came as a result of donors being unable to be on site to provide sufficient oversight of work (due to government COVID-19 travel restrictions).

Whether it was because of a decrease in funding or increase in expenses, the bottom line for survey respondents was that their ability to deliver the necessary disaster risk reduction services was compromised during the pandemic.

Partnerships challenges

The impact on partnerships across the respondent organizations was uneven: for some it was “business as usual”, while others faced significant challenges and barriers.

Two main challenges were identified regarding partnerships. The first was connecting with partners. As Governments implemented international travel restrictions, Stakeholder Engagement Mechanism organizations faced connectivity issues with partners (virtual versus in-person) including unstable broadband connections, lack of access to the necessary technology (hardware and software) as well as need for technical expertise to assist in this new way of working. This lack of connectivity affected relationships with existing partners and created a barrier to gaining new partners.

Secondly, **having to compete with other organizations** was a serious challenge experienced by respondents. Funding from donors either was reduced because donors had their own budget constraints due to COVID-19 or was redirected and focused on specific pandemic-related support rather than disaster risk reduction, or donors could not provide adequate funding as they could not be on site to oversee project implementation due to travel restrictions. These funding reductions caused organizations to compete rather than cooperate with each other for funding and donors’

time. The result was a move away from seeking a multisector and cross-disciplinary approach.

The key negative outcomes of the inability to connect with partners and having to compete with other organizations over funding were that disaster risk reduction services were underfunded and the capacity to deal with disaster risk reduction issues was compromised.

Policy challenges

Several policy gaps and barriers were raised which affected the ability of organizations to address disaster risk reduction and resilience in the context of the pandemic. There were also some noteworthy challenges (with significantly different perspectives from respondents) including:

- **Global versus local:** a few respondents cited the lack of global policy coordination as a main challenge while others indicated the lack of authorities being able to implement policy at the local level and policy design lacking localization as barriers.
- **Policy development versus execution:** a few respondents stated that the main challenge related to the development of policies. For example, policy-makers were described as lacking capacity and necessary knowledge and skills for agile policy development and did not understand the root causes of a disaster. Others claimed that although existing policies were sound, the execution of those policies was suboptimal (e.g., lack of coordination, direction and/or resources), with their general opinion being that execution was disconnected from development.

Other gaps and barriers raised by respondents included **a lack of:**

- **mainstreaming** of disaster risk reduction in other sectors and poor understanding of the importance of coordination with other sectors
- **integration** of pandemic response plans into disaster risk reduction policies, highlighting the need to renew or update those policies to reflect future pandemic risks
- **harmonization** of policies and approaches for disaster risk reduction, including multisector and cross-disciplinary policies for addressing disaster risk reduction in areas affected by multiple disasters (i.e., existing coastal zone vulnerability to climate change exacerbating the risk posed by other hazards, including pandemics)

- **evidence-based data** used to formulate policy, leading to a lack of policies to protect vulnerable individuals (e.g., people with disabilities, displaced and homeless persons and others)
- **adherence** of citizens to government policies, especially regarding restrictions on movement and gatherings.

Other challenges

Additional challenges not captured in sections above included:

- lack of preparedness for the pandemic despite World Health Organization warnings
- lack of government planning and policies to assist economic recovery
- disaster risk reduction and resiliency funding as an afterthought for most Governments
- negative impacts of lockdown restrictions, including increased domestic gender-based violence and heavy economic downturn
- increasing education gaps, with many children from low-income households losing an entire year of education
- fear of climate-related disasters being the next major challenge for unprepared societies.

Annex D: Synthesis of reported recommendations from survey respondents on improving disaster risk reduction in the context of COVID-19

Nature-based solutions for pandemics and disaster risk reduction

Stakeholder Engagement Mechanism organizations described how the application of nature-based solutions could benefit and strengthen disaster risk reduction and pandemic response. Organizations suggested that nature-based solutions contribute by:

- reducing possibility of a “double whammy” of other hazards occurring during a pandemic
- reducing zoonotic hazard (livestock rearing as alternate to bushmeat trade; reduced fragmentation of forests; reforestation; integrated landscape management; more dispersed settlement; sustainable communities with multi-hazard co-benefits)
- providing natural medicines and remedies

- reducing vulnerability (employment generation with multi-hazard co-benefits; reducing food insecurity during lockdown; using community knowledge of agrobiodiversity and agroecology)
- reducing waste and increasing resource efficiency.

Organizations suggested that the application of nature-based solutions in disaster risk reduction could be strengthened through:

- community-level funding mechanisms and maintenance of contingency funds
- disaster early warning systems
- ex post disaster analysis and improvements based on lessons learned
- facilitation of local dialogue and engagement of local communities in creation and design of solutions
- capacity-building and education on nature-based solutions for civil society and local government
- government scorecards and assessments (of ecosystem management and rehabilitation; protection of socioecological systems from hazards; and pollution management);
- pollution prevention and environmental management mechanisms
- policy coherence and coordination and standardized operating procedures.

Lessons learned

A more detailed overview of the lessons learned as reported by Stakeholder Engagement Mechanism members is provided in the table below

Lessons learned from pandemic response for disaster risk reduction	
Categories	**Areas of importance identified by lessons learned from pandemic response for disaster risk reduction**
Policy effectiveness and coherence	- Policy coherence and coordination - Integrated responses across multiple issue areas (food security; WASH; education; health; livelihoods; child and social protection; shelter and housing) - Collaborative governance, including: concerted efforts for protecting health; biodiversity; clean water and sanitation; coordination among stakeholders and sectors - Investment in education and health - Government and donor cooperation for leaving no one behind - Localization of capacity development and responses and region-specific approaches - Government commitment - Digitalization and technology-based responses - Strengthening of essential infrastructures (including WASH and public transportation) - Nature-based solutions

Preparedness	- Business continuity planning for business, including micro-, small and medium-sized enterprises - Preparedness, including for lockdown - Pandemic response and sustainability plans - Speed of response implementation - Learning from country experiences, including for international cooperation - Access to financing, information and communications technology, expertise and services - Awareness-raising to ensure inclusion - Mainstreaming of disaster risk reduction and preparedness at all levels - Multi-hazard disaster risk reduction and preparedness
Collaboration	- Co-creation of solutions - Solidarity and social capital - Effective and open communication - Engagement of stakeholders - Public-private partnerships - Sharing of resources and technical expertise
Evidence and information sharing	- Early warning systems - Evidence-based responses, including for leaving no one behind - Timely information-sharing, including for leaving no one behind - Vaccine development - COVID-19 testing - Science and technology
Guiding principles	- Simplicity - Leadership - Leaving no one behind - From crisis comes innovation

Top ten recommendations reported by survey respondents

Survey respondents were asked to list their top ten recommendations for improving the ability to reduce the risk of disasters in the context of the COVID-19 pandemic response and recovery phases. An analysis of these recommendations revealed 13 unique categories and 41 subcategories. These are summarized below, along with illustrative recommendations.

- **Regulatory frameworks**
  - Introduce legal frameworks to institutionalize government funds for disaster risk reduction
  - Improve awareness among government departments that special regulations are needed to operate in times of crisis
- **Policy coherence**
  - Horizontal coherence (i.e., examine the links and cross-over impact of cascading or compounding disasters, such as the ties between climate change, the COVID-19 pandemic and disaster risk reduction; and strengthen international and regional cooperation and partnerships to ensure joint efforts)
  - Vertical coherence (i.e., ensure interoperability of disaster risk reduction both at national and multilateral/international levels)

- Sharing lessons learned and increasing cross-sectoral coordination (i.e., avoid undermining each other's efforts)

- **Strengthen systems**
  - Food security and access to water (i.e., improve access to drinking water)
  - Healthcare (i.e., expansion and construction of additional health facilities in rural areas to reduce overcrowding in urban hospitals)
  - Social protection (i.e., strengthen family systems towards resilience; ensure employment and decent work to enhance social cohesion, prevent crisis and build resilience)
  - Supply chain (i.e., secure the continuity of the supply chain for essential commodities and services)
- **Preparedness and COVID-19 protocols**
  - Coherent planning and management (i.e., each country should adopt a multi-hazard approach and ensure coherence between local, national and international guidelines)
  - Finance (i.e., improve global rapid disaster reduction and response funding)
  - Awareness-raising (i.e., increase awareness of the general population about the effects of the risks to which they are exposed)
  - Focus on preparedness (i.e., humanitarian response to support marginalized groups such as returned migrants)
  - Continued maintenance of protocols throughout the pandemic (i.e., until vaccination is complete)
  - Policies to be evidence-based
- **Prevention of zoonotic spillover**
  - Consumption and trade of wild meat (i.e., regulate the consumption of game meat)
  - Protecting habitat (i.e., regulate the formation of new cities that encroach on the environment and put people in contact with wildlife)
- **All-of-society engagement, partnerships and collaboration**
  - Disaster risk reduction and recovery committees (i.e., establish disaster reduction committees in every village)
  - Coordination and teamwork (i.e., –ensure involvement of experts from different areas of expertise)
  - Partnerships and civil society engagement (i.e., strengthened public-private-partnership, involving civil society in all disaster risk reduction efforts)
- **Communication, information sharing and early warning**
  - Sharing of relevant information (i.e., web-based geospatial risk mapping for local governments to inform their disaster risk

governance in the context of pandemic)
  - Misinformation (i.e., regular release of correct information by the Government on television, radio and social media to dispel false info being circulated by others)
  - Surveillance (i.e., use of scientific and traditional predictive mechanisms to early warn communities)
  - Digitalization (i.e., need to provide mobile and free internet facilities for the community people)
  - Principles for communication (i.e., use or create effective communication channels to involve all the stakeholders, establish secure communication channels with communities)
- **Enabling environments**
  - Expertise (i.e., having enough learned professionals who can make risk decisions)
  - Research and development (i.e., strengthen global institutional capacity to research and develop solutions for emerging threats, strengthen ex ante and ex post analysis)
  - Support to emergency responders (i.e., provide appropriate equipment to frontline personnel)
  - Support to business and small and medium-sized enterprises (i.e., improve preparedness in the business sector, creating or restoring enabling environment for sustainable enterprises)
- **Capacity development**
  - General (i.e., provide templates for known pandemics)
  - Foci for education and training (i.e., train village health teams for identification and data collection; ensure the flow of recovery funds reaches the most vulnerable communities)
  - Knowledge sharing (i.e., share good practices through webinars)
- **Localization and leaving no one behind**
  - Comprehensiveness (i.e., consider not just the physical but also the social, mental and emotional well-being of peoples)
  - Care, respect and trust (i.e., respect home-grown solutions and avoid imposing hybrid solutions ideas on local players and organizations)
  - Vulnerable groups (i.e., special safety measures for women, children, persons with disabilities, the elderly and terminally ill in marginalized communities)
  - Livelihoods (i.e., dedicated disaster risk reduction programmes and resource allocation for immediate livelihood restoration activities)
  - Resources and capacities (i.e., highlight the crucial role of local context and how this influences the asset base, start with providing resources

for the most vulnerable and marginalized communities)
- Focus on community-based organizations (i.e., work directly at the grass-roots level rather than with national and international organizations to deal with ground-based issues)
- Response (i.e., listen to people at the local level, push for coordinated response and action at all levels, provide fast and sufficient funding to the local level, and put science before politics)
- Social accountability strategies (i.e., participatory budgeting, social audits, and public expenditure tracking)

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Stakeholder Engagement Mechanism

SENDAI FRAMEWORK

FOR DISASTER RISK REDUCTION **2015-2030**