6.
Advancing and Expanding Disaster Risk Reduction Capabilities

Action Area

6.1: Education for Disaster Risk Reduction

6.2: Innovation and Use of Technology for DRR

Action Area 6.1: Education for Disaster Risk Reduction

DRR capacity is developed to a significant degree through the availability of relevant educational opportunities, most notably at the higher-education level. The availability of higher education curricula focused on disaster risk management topics is a relatively new phenomenon, and as such there is wide variability in the coverage, quality, and effectiveness of inventory between countries. At the same time, inclusion of DRR lessons in training and education across a broad array of disciplines (e.g., finance, architecture, urban planning) has increased significantly in the past two decades, and this represents a valuable resource to promote CD. The Sendai Framework articulates the role that education plays in the reduction of new and existing risk in its first priority, "Understanding Disaster Risk". Priority 1 calls for the building of knowledge among government officials, civil society, communities and volunteers, as well as the private sector, through sharing experiences, lessons learned, good practices and training and education on DRR, including the use of existing training and education mechanisms and peer learning. It encourages progress in this area through: the promotion of investments in multi-hazard and solution-driven research in disaster risk management; the incorporation of disaster risk knowledge into formal and non-formal education, civic education, as well as professional education and training; and the promotion of national strategies to strengthen public education and awareness in disaster risk reduction. CD programmes that utilize or support DRR education are understandably hailed for the significant role they play in the achievement of Sendai Framework targets.

Actions
- Establish a national-level platform to promote and support the development and improvement of higher-education programmes in DRM, including the development of standards of teaching and learning, competency-based curricula, demand-driven coursework, and other support.

- Target education ministry leadership and staff to raise awareness of their role, motivate them to action, and ensure the efforts they initiate or promote are in line with DRR goals.

- Encourage/empower schools (primary, secondary and university) to incorporate resilience programmes that address risk through a multitude of means (e.g., changing the organizational culture, DRR lessons in the curriculum, and instituting enterprise risk management).

- Provide teachers with curriculum materials and training of trainer courses to enable broad-reaching exposure of risk reduction education and messaging.

- Incentivize and support the mainstreaming of DRR into standard curricula.

- Provide the materials and support that enables embedding of DRR materials and messages into existing professional training programmes, including employee on-boarding, staff technical training, and other avenues for entry across all government and societal sectors.

- Establish competency-based standards for key positions that encourage applicants and incumbents to seek and enrol in DRR training and education relevant to their job

roles, and that encourage programmes of higher-education and professional training to develop and offer relevant courses and degree-based programmes to source expected vacancies

• Assess DRR research needs and increase availability of financial support to encourage educational facilities to address those needs through training and degree-based programmes.

• Engage with community centres and civil society organizations to identify opportunities for non-traditional engagement of target populations with risk-related messages including on early warning systems (e.g., through community theatre, civic association meetings, public events, and other venues).

• Increase access to education and training using online learning systems.

Action Area 6.2: Innovation and Use of Technology for DRR

The need to develop and apply innovative DRR solutions is consistently identified as a key area of need in both the literature and by participants in the consultative process. There exist substantial global disparities with regards to the awareness of and access to technologies that promote DRR and enable disaster risk reduction capacity. Moreover, there are insufficient motivators and/or incentives for stakeholders, irrespective of their sector, to actively pursue research, innovation, and development in the areas of science and technology that support DRR capacity. All too often, training, education, and CD in general is based on anecdotal evidence or assumptions rather than on research methods and hard science. Without purposeful investment in this area, including that which supports CD, insufficient capabilities to achieve progress in several core areas of the Sendai Framework will persist.

Actions
- Promote and incentivize DRR research and development by partners in academia, the private sector, the media, civil society organizations, and others, through action by the national disaster management office or other government entity actively engaged in such efforts.

- Encourage and enable government decisionmakers in key ministries to assess the cost-benefit relationship of public investments in DRR research considering the reductions that may be expected in terms of minimized direct and indirect disaster losses.

- Promote academic investments in research, development, and student scholarship by creating an environment wherein employment prospects among students engaged in research and development viewed positively.

- Engage and support the mass media by enabling media stakeholders to synthesize and communicate innovations and opportunities for research, and the availability and purpose of the products of innovation, to spur the action of other stakeholders.

- Support an economic environment through policy and other methods that incentivize private sector development of DRR-focused technologies either directly (e.g., a promise to purchase products or technologies directly) or indirectly (a policy that ensures a market for such products or technologies) that ultimately serve to increase capacity of one or more target groups.

- Create, improve, or otherwise support platforms and fora by which government and other relevant stakeholders (e.g. private sector, academia.) may work collaboratively to promote and/or invest in DRR as an innovative, practical, affordable, and localized pursuit.

Effective CD depends on the involvement of all stakeholders, all partners, and all of society. Stakeholders may become involved as a provider of CD assistance, as a recipient of training or some other benefit through interventions, or perhaps a mix of provider and recipient roles. In some cases, this may involve little more than providing leadership, authority, or other forms of support, or receiving exposure to risk reduction messages.

During the consultative process, workshop and survey participants worked to characterize in broad and inclusive terms the CD for DRR roles and responsibilities of each of the following stakeholder categories for which roles and responsibilities are listed:

1. National Government (including elected leaders, parliamentarians, and line ministries)
2. Local and Sub-national Government
3. Private Sector and Professional Organizations
4. Nongovernmental and Civil-Society Organizations (NGOs and CSOs)
5. Education and Research Institutions
6. Individuals and Households
7. Media
8. Regional Organizations including IGOs
9. The UN, International Organizations (IGOs), and International Financial Institutions (IFIs)

Each of the primary stakeholder groups concerned with or impacted by CD for DRR are presented in terms of the expected or likely roles and responsibilities. These are presented to assist stakeholders in recognizing not only the value that is gained through engagement with the DRR process, but also to support a broader understanding of how each may assume greater control of efforts to improve their own capabilities and those of their community or nation, and how the common and collective roles and responsibilities of each are interlinked.

Stakeholder analysis is suggested while developing the national DRR strategy and plan, and as a first step to establish the key partners and stakeholders. Note: the list below is not exhaustive.