numerous individual and communal survival and organizing skills.

The central message from the Sendai Framework on these issues is that equality and effectiveness in risk reduction is reached through inclusion of all stakeholders. When certain groups are omitted, the strategies and plans that ensue are often less effective. Ignoring or omitting the acquired experience of risk and disaster impacts of such groups, can result in impacts that are unequal, even discriminatory.

Inclusion and empowerment of women, vulnerable groups, people with disabilities and socially marginalized people within national frameworks of law, policy and institutions underpin effective risk reduction and uphold the all-of-society tenets of the Sendai Framework and "leave no one behind" principle of the 2030 Agenda.

10.3

Conclusions

Regional and national frameworks are important aspects of the enabling environment for successful risk reduction by Member States.

Regional intergovernmental organizations, regional platforms on DRR and new forms of partnership within global regions allow Member States and other stakeholders to pool resources and capacities to support national and local risk reduction. They also provide mechanisms to focus on specific regional risks. The foregoing account indicates a high degree of engagement and activity at regional level to support implementation of the Sendai Framework. These processes are now at the stage, with strategies and mechanisms in place, where the focus can shift to practical support to Member States' efforts in implementation, supplemented by regional and cross-border risk reduction efforts.

The primary responsibility for Sendai Framework implementation lies with the Member States. The broader national framework of laws, policies and institutions for risk reduction, development and action on climate change have a significant impact on States' ability to formulate and implement national and local strategies and plans on DRR, development and CCA. Such overarching frameworks are key in empowering and including all stakeholders, establishing the basis for gender equality, and for including people and groups more exposed and more vulnerable to disaster impacts than the wider population.

The legislative, policy and institutional structures and processes that include the views and experiences of women and girls, people with disabilities, older persons, and for example, people from different ethnic or religious backgrounds, and which include protection measures for children, result in measures at national and local levels that allow a more equal and more effective reduction of risk.

These enabling frameworks can be understood as central components of national and local plans for DRR, development, CCA and the emerging integrated approaches to risk reduction, which are discussed in the following chapters.

Chapter 11: National and local disaster risk reduction strategies and plans

The development of national and local DRR strategies and plans by 2020 is a dedicated target in the Sendai Framework (Target E). Compared with the other global targets, which are due by the end of the agreement in 2030, the 2020 deadline for DRR strategies and plans was established in recognition of their importance as enablers to reduce disaster risk and loss. This chapter complements the Sendai Framework monitoring data reported in Part II with examples of the challenges, lessons learned and emerging good practices at country level.

11.1

Sendai Framework monitoring data on Target E

As discussed in Part II above, the Sendai Framework monitoring system shows that 47 Member States reported on Target E in 2017 in relation to national strategies (Indicator E-1). This is a significant increase compared with 27 countries in 2016, but at 25% of the total falls well short of what is required by 2020. Of these, 6 countries reported that they have national DRR strategies in comprehensive alignment with the Sendai Framework, while 16 reported substantial-to-comprehensive alignment, 15 moderate-to-substantial alignment, and 7 moderate alignment; 3 of the 47 reported limited or no alignment. However, using other sources of State self-reporting in addition to the formal SFM, the number is much higher. One hundred and three countries report having a national DRR strategy at some level of alignment, including 65 Member States that rated their alignment as above 50% (moderate to complete).[117] This number is much more significant as it represents more than 50% of the United Nations Member States (Chapter 8 Target E: Progress on disaster risk reduction strategies for 2020. Indicator E-1).

117 (United Nations General Assembly 2018a)

Target E also has an indicator on local strategies (Indicator E-2). It requires countries to report on the proportion of their local governments that have local DRR strategies. SFM indicates that 42 countries reported on local strategies. Of these, 18 reported that all their local governments have local strategies aligned with their national such strategies, and 7 reported no local strategies (or none aligned with their national strategies) (Chapter 8 Target E: Progress on disaster risk reduction strategies for 2020. Indicator E-2).

Although the data on Target E thus remains partial, it indicates attention to the issue of aligning national and local DRR strategies and plans with the Sendai Framework, as well as suggesting there is still some way to go to meet this target by 2020. That said, it is also important to recognize that the these indicators are not designed to provide detail on the challenges countries face and what innovations and good practices they are developing to create the right enabling environment to reduce risk along the way to meeting the target. The essential purpose of asking for national and local strategies to be developed and implemented in alignment with the Sendai Framework is to create the optimal enabling environment to enable the wide range of risks addressed in the Sendai Framework to be reduced. It is therefore important to look at the ways countries have tackled this issue.

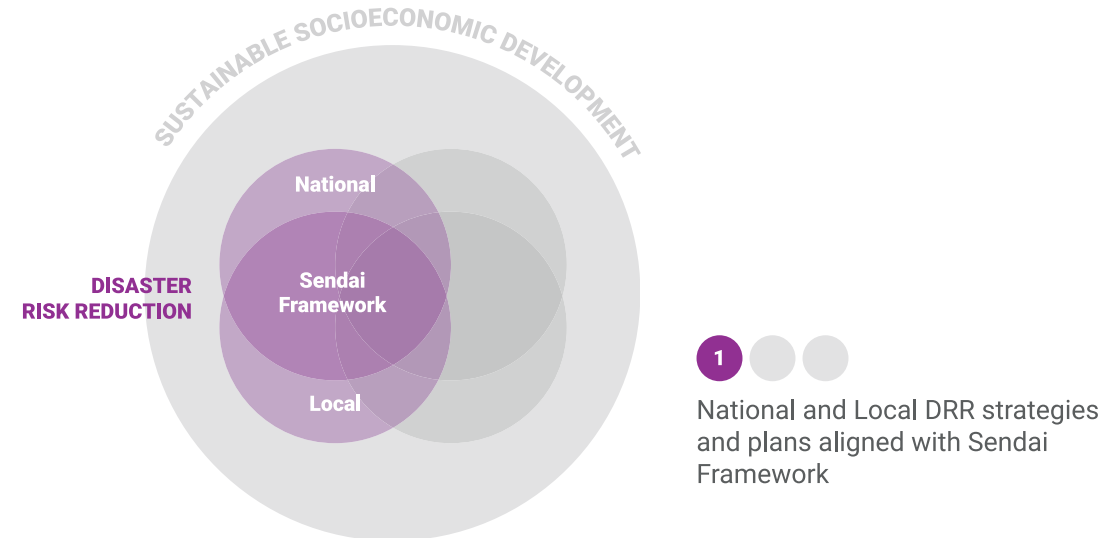
11.2

The importance of national and local disaster risk reduction strategies and plans

National and local DRR strategies and plans are essential for implementing and monitoring a country's risk reduction priorities by setting implementation milestones, establishing the key roles and responsibilities of government and non-government actors, and identifying technical and financial resources.[118] While strategies are a central element of a wider disaster risk governance system, to effectively implement policy, these strategies need to be supported by a well-coordinated institutional architecture, legislative mandates, political buy-in of decision makers, and human and financial capacities at all levels of society.

The Sendai Framework does not require countries to develop stand-alone DRR strategies and plans. However, it does ensure they have in place and implement national and local plans that do the job of supporting DRR in alignment with the Sendai Framework. Although there has been debate in the past about the merits of stand-alone or mainstreamed DRR strategies, in practice, this binary notion is not especially helpful in applying the Sendai Framework requirements. Under Priority 2: Strengthening disaster risk governance to manage disaster risk, paragraph 27(a) highlights the need to "mainstream and integrate DRR within and across all sectors and review and promote the coherence and further development, as appropriate, of national and local frameworks of laws, regulations and public policies." Paragraph 27(b) then advises Member States to "adopt and implement national and local DRR strategies and plans, across different timescales, with targets, indicators and time frames, aimed at preventing the creation of risk, the reduction of existing risk and the strengthening of economic, social, health and environmental resilience." Paragraph 27(b) highlights the importance context in defining strategies and plans, and the significance of developing of nationally-determined targets and indicators by 2020. Paragraph 27(a) identifies the fundamental role of strategies and plans in achieving the goal of the Sendai Framework by 2030. This suggests that the precise form that a country chooses to pursue DRR at a strategic level is less important than the content and effectiveness of the strategies and plans in that country context.

Figure 11.1. DRR strategies and plans by 2020 aligned with the Sendai Framework and among national and local levels



(Source: UNISDR 2019)

In some cases, risk reduction may be integrated into broader national policy planning or sectoral risk management plans and strategies; indeed, this could meet the goal of integrating risk management and development planning. In contexts where awareness of DRR is emerging, stand-alone DRR strategies and plans can be used as an important advocacy tool to sensitize decision makers to take specific actions.[119] But such strategies and plans should have among their objectives the integration of DRR into mid- and long-term planning processes, including climate risk management where these areas overlap.

In many country contexts, stand-alone DRR strategies and plans are needed because their objectives are not automatically addressed through national development or sectoral policy frameworks, or even within the systems established to manage disaster risk, many of which have traditionally focused attention and resources on response.[120] This is often, though not necessarily, the case in countries with lower governance capacity where DRR strategies and plans compensate for risk management gaps in development or sectoral policies.

Clearly it is easier to point to and assess a single strategy, but this can also be in the form of a framework for integrated risk governance across sectors and ministries, addressing climate resilience and risk-informed socioeconomic development. In line with the Sendai Framework and 2030 Agenda, either mainstreamed or stand-alone risk reduction strategies should extend beyond the systems of civil protection or DRM and also include elements that are highly cross-sectoral in nature, such as urban risk management, land-use planning, river basin management, financial protection, public investment resilience regulations, preparedness and early warning, which cannot be addressed comprehensively through any individual sectoral strategy or plan.

118 (UNISDR 2015e)
119 (UNDP 2019o)
120 (IFRC and UNDP 2014b); (IFRC and UNDP 2014a)

DRR strategies, whether stand-alone, mainstreamed or a combination of both approaches, may also have a role in tempering market mechanisms, requiring public policy to address issues related to DRR as a "public good". Public goods are underprovided by the market, are non-excludable and create externalities.[121] For example, individuals and communities may not construct sufficiently robust levees if they do not consider that their flood protection could help others, instead constructing levees that protect themselves only, which may even have a negative impact on those who live outside the embankments.[122]

Having in place **subnational and local DRR strategies or plans** that complement the national policy framework has been increasingly recognized over the past two decades as an important requirement of a functioning risk governance system. The implementation of national DRR strategies hinges on the ability to translate and adapt the national priorities to local realities and needs. Local strategies or plans then allow for a much more nuanced territorial approach (local, subnational and national) that fosters accountability through direct engagement with a range of stakeholders who need to be involved to avoid creating new risk, to reduce risk behaviours or to have a voice as the main groups suffering the impacts of disaster events.[123] The penetration of DRR strategies or plans down to the local level is likely to depend on the level of practical decentralization, while the formal structure of government – centralized or federal – may or may not be a critical factor depending on the country context.[124] As risk is not confined to any territorial or political division, it is also critical that DRR strategies or plans consider transboundary and regional solutions, such as basin- or ecosystems-based management, or arrangements that comprise multiple local government territories.

11.3

Aligning strategies and plans with the Sendai Framework

The Sendai Framework calls on national and local governments to adopt and implement these strategies and plans, across different timescales, and to include targets, indicators and time frames. They should aim to prevent the creation of risk, reduce existing risk and strengthen economic, social, health and environmental resilience. Importantly, Target E has also been reflected in two SDG indicators: (a) number of countries that adopt and implement national DRR strategies in line with the Sendai Framework and (b) proportion of local governments that adopt and implement local DRR strategies in line with national DRR strategies.[125]

The Sendai Framework suggests several requirements to be covered by DRR strategies, and these have been distilled into 10 criteria for monitoring (Box 11.1).

It is assumed that DRR strategies and plans that meet all 10 requirements will create the best conditions to substantially reduce disaster risk and losses in lives, livelihoods, health, economic, physical, social, cultural and environmental assets. While all 10 criteria are important, a few stand out in terms of what is considered "new" about the Sendai Framework and its contribution to the global DRR policy agenda. These include a stronger focus on preventing the creation and accumulation of new risk, reducing existing risk, building the resilience of sectors, recovery, building back better and promoting policy coherence with SDGs and the Paris Agreement.

Policy coherence requires that national and local plans are aligned and designed for the context of the society and environment as defined by relevant hazards, high-priority risks and socioeconomic setting. Hence, the selection of risk reduction targets and the balance of different types of measures will be situation specific and will also depend on the risk perception and risk tolerance of the society represented by decision makers.[126] However, making a mere reference to other relevant policies and strategies is not sufficient to meet this requirement. Done in earnest, establishing policy coherence depends on identifying common actions and instruments in support of shared policy objectives to reduce disaster risk or vulnerabilities, or to build resilience.

The 10 criteria recommended for assessing DRR strategies and plans against the Sendai Framework requirements are intended to ensure some consistency. But when the strategies or plans that have been endorsed since 2015 are compared, it is apparent that there is no "one size fits all". Depending on the national or local country context,

Box 11.1. Drawing from the Sendai Framework, the following 10 key elements should be covered by DRR strategies to be considered in alignment with the Sendai Framework

- **i.** Have different timescales, with targets, indicators and time frames
- **ii.** Have aims at preventing the creation of risk
- **iii.** Have aims at reducing existing risk
- **iv.** Have aims at strengthening economic, social, health and environmental resilience
- **v.** Address the recommendations of Priority 1, Understanding disaster risk: Based on risk knowledge and assessments to identify risks at the local and national levels of the technical, financial and administrative DRM capacity
- **vi.** Address the recommendations of Priority 2, Strengthening disaster risk governance to manage disaster risk: Mainstream and integrate DRR within and across all sectors with defining roles and responsibilities
- **vii.** Address the recommendations of Priority 3, Investing in DRR for resilience: Guide to allocation of the necessary resources at all levels of administration for the development and the implementation of DRR strategies in all relevant sectors
- **viii.** Address the recommendations of Priority 4, Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction: Strengthen disaster preparedness for response and integrate DRR response preparedness and development measures to make nations and communities resilient to disasters
- **ix.** Promote policy coherence relevant to DRR such as sustainable development, poverty eradication and climate change, notably with SDGs and the Paris Agreement
- **x.** Have mechanisms to follow-up, periodically assess and publicly report on progress.

(Source: UNISDR 2018)

121 (Wilkinson, Steller and Bretton 2019); (Dianat et al. 2019)
122 (Wilkinson, Steller and Bretton 2019)
123 (Quental Coutinho, Henrique and Lucena 2019)
124 (Wilkinson et al. 2014)
125 (United Nations General Assembly 2017c)
126 (UNISDR 2017d)

DRR strategies can take a range of formats. Some countries pursue them as stand-alone DRR strategies, and others take the route of a system of strategies across sectors linked by an overarching document or framework. There is also a wide range of different strategic and hazard- or sector-specific plans in place, for example:

- In Norway, the National Disaster Risk Reduction Strategy is outlined in the Civil Protection and Emergency Planning White Paper[127]
- In the Russian Federation, the National Disaster Risk Reduction Strategy forms part of the national security strategy[128]
- In Luxembourg, which does not have a separate national strategy, DRR strategies are in place in specific sectors, as part of one or more combined strategies, such as with respect to flood risk management[129]
- In Kenya, the National Disaster Risk Management Policy[130] is complemented by the Kenya Vision 2030 Sector Plan for Drought Risk Management and Ending Drought Emergencies[131]
- In Angola, a twofold approach is adopted with a Strategic National Plan for Prevention and Disaster Risk Management, covering three of the Sendai Framework's global priorities, and a National Preparedness, Contingency, Response and Recovery Plan, which covers the Sendai Framework's fourth global priority
- In Costa Rica, it was decided to align to the Sendai Framework through the adoption of a National Risk Management Policy 2016–2030 that provides a broad multisectoral mandate and is complemented by five-year National Risk Management Plans

The titles that countries select for their Sendai Framework aligned DRR strategies or plans can be revealing. While in some instances these may indicate context specificity and national priority, taken together they suggest greater similarity and convergence as compared with their predecessors under the HFA. For example: Master Plan for Disaster Risk Reduction (Mozambique); Joint Action Plan on Climate Change and Disaster Risk Reduction (Tonga); National DRM Plan or Strategy (Argentina, Colombia, Georgia, Madagascar and Thailand); Action Plan on Disaster Risk Reduction (Myanmar); National Disaster Risk Management Framework (Zimbabwe); or National Strategy for Disaster Prevention, Response and Mitigation (Viet Nam). HFA equivalents often used language related to civil protection, preparedness and emergency management even though they addressed elements of DRR – Burkina Faso, Canada, Dominican Republic, Kyrgyzstan and Mali for example. Consequently, the title of the policy, strategy or plan may not be a true indicator of the degree to which disaster or climate risk reduction are addressed.

11.4

Lessons learned from the Hyogo Framework for Action and Sendai Framework

While the Sendai Framework monitoring requirements for Target E set high standards for assessing compliance, there are also other criteria that viable DRR strategies or plans need to meet to achieve results. These observations are derived from country-level experiences, mostly during the HFA implementation period, since such information on recently endorsed strategies under the Sendai Framework is not yet available.

Country experience suggests that there needs to be room for flexibility to adjust, evolve and adapt to changing contexts and priorities for strategies or plans to remain relevant and implementable. Hence, regular revisions and updates are strongly recommended. In particular, this relates to the activity level, where real-world changes need to be reflected, such as in the case of making the switch from printed hazard maps to online information systems, as in Tajikistan.[132] In addition, implementation needs to be supported by financial and technical resources, and operational guidelines and tools that are commensurate with the available capacities and skills of those involved.

Implementation also benefits from having subnational and local strategies or plans in place that are linked with national DRR and development policy priorities. Good examples of this practice are known in India, Indonesia and Mozambique.[133] Implementation plans at different scales of governance can be either stand-alone, as in Bangladesh or Sri Lanka, or they can be integrated into local development plans as in Kenya.[134] In some instances, countries pursue a hybrid solution where subnational DRR plans exist in parallel with local development plans that integrate risk considerations, as the below case study from Mozambique shows.

With regard to the process of drafting or developing DRR strategies or plans, there are now increasing calls for them to be grounded in a comprehensive "theory of change" that allows for a better understanding about how beneficial, long-term change happens. This means that strategies and plans are produced through a process of reflection and dialogue among stakeholders, through which ideas about change are discussed alongside underlying assumptions of how and why change might happen as an outcome of different initiatives.[135]

The involvement of multiple stakeholders is already a key principle of the Sendai Framework, and essential when it comes to seeking agreement on and setting the DRR priorities at different levels of government. Ensuring active participation of women, persons with disabilities, youth and other groups who may not automatically have a seat at the table is a prerequisite for ensuring that their needs are addressed, and their specific knowledge and skills accessed. Calls for the recognition of the right to participate in DRM decision-making, in line with the right to self-determination and access to information, are becoming more frequent.[136] This will also require an understanding of the incentives, interests, institutions and power relations facing key stakeholders engaged in risk-reducing and risk-creating behaviours. Hence, understanding the political economy of DRR will be an essential step for insuring the involvement of all interest groups.

Ariel view of Bhutan
(Source: Curt Carnemark/World Bank)

127 (UNISDR 2017b)
128 (UNISDR 2017b)
129 (UNISDR 2017b)
130 (Kenya 2009); (Kenya 2018)
131 (Kenya 2013)
132 (UNDP 2019I)
133 (Chakrabarti 2019); (Djalante et al. 2017); (Daly et al. 2019); (UNDP 2019g)
134 (Bangladesh, Ministry of Disaster Management and Relief 2017); (Sri Lanka, Disaster Management Centre, Ministry of Disaster Management 2017); (Omoyo Nyandiko and Omondi Rakama 2019)
135 (Twigg 2015); (Wilkinson et al. 2017)
136 (IFRC and UNDP 2014b); (Sands 2019)

11.5

Good practices at national and local levels

11.5.1

Triggers to review or develop strategies

The most obvious impulse for countries to develop or revise their existing DRR strategies or plans is Target E. For example, Costa Rica, Montenegro and Sudan assessed their current strategies and concluded that they were out-dated and did not meet the requirements of the Sendai Framework and other international conventions.[137] Kyrgyzstan and Madagascar identified the need for a new strategy that was able to better address changes in the internal and external environments, meet the principles of sustainable development and be part of the national development strategy.[138] A working group was established within the National Platform, which led the drafting process of the strategy and implementation plan in 2016–2017, which was then approved in January 2018.[139]

In Kyrgyzstan, parliamentarians and heads of the Ministry of Emergency Situations and other State bodies participated in the Sendai conference in 2015. This was the impetus for the Government of Kyrgyzstan to instruct the Ministry of Emergency Situations and other State institutions to consider ways to implement the Sendai Framework. Having undertaken stakeholder consultations, the Ministry of Emergency Situations and the National Platform for Disaster Risk Reduction submitted a proposal for consideration by the government on the development of a new strategy. During 2016–2017, the National Platform led the drafting of the strategy and an implementation plan; the National Disaster Risk Reduction Strategy was approved in in January 2018.[140]

Another important impulse has been the occurrence of major disaster events and the realization that sustainable development is difficult to achieve in the face of the pervasive damage from disasters.[141] For example, this was the case after the 2016 drought in Mozambique,[142] and the 2017 floods in Chiapas, Mexico.[143] In Argentina, a host of developments following the 2015 floods in Buenos Aires Province paved the way for a DRM policy overhaul in line with the Sendai Framework, with support from the Federal Congress for Disaster Risk Reduction and the National Congress for Disaster Risk Management, the passage of a new DRM law (No. 27287) in 2017 and a national plan in 2018.[144]

Another typical trigger for developing or reviewing DRR strategies or plans can be the enactment of new legislation. This has been the case in the Philippines during the HFA implementation period, where the 2010 Disaster Risk Reduction and Management Act tasked government with developing a comprehensive DRM plan and framework. Also, the new DRM law (2015) in Argentina mandated the elaboration of a National Disaster Risk Reduction Plan.[145] Strategies or plans can have a role in supporting the process of legal reform by providing details for the implementation of new and more ambitious laws. They can also extend the reach of out-dated laws by advancing the focus on DRR or requiring DRR to be integrated into development, as was the case in Nepal until the new Disaster Risk Management Act was endorsed in 2017.[146]

No matter what impels countries to align their strategies with the Sendai Framework, it is important that a self-sustaining process is initiated that can keep stakeholders motivated to keep the strategy alive over an extended period of time. This is particularly important at times of infrequent disasters when the memory of devastating impacts is fading. Periods that are free from major disasters provide the best opportunities to focus efforts on reducing the accumulation of new risks while also tackling existing risks.

11.5.2

Foundations in assessment

Although it appears self-evident that risk analysis precedes priority setting and planning, it appears this is not yet common practice. Resource constraints often lead to short cuts when it comes to analysis; many strategies or plans therefore identify risk and capacity assessments as a key output to be produced. This may be a fair and pragmatic solution, if indeed the assessments are conducted, and their results used to review or refine the original DRR strategy. While the importance of both local and scientific knowledge is usually highlighted in the assessment process, in practice, it appears that scientific knowledge tends to be preferred in formal strategies.[147]

Ongoing infrastructure development in Egypt
(Source: Tejas Patnaik/ UNISDR)

In Europe and Central Asia, risk assessments and disaster loss databases have been identified as essential building blocks for the development and implementation of national and local strategies.[148] Low-risk awareness is one of the main challenges, not only when it comes to setting the right DRR priorities but also in implementing DRR strategies. Having access to risk information is therefore an important first step. Haiti,[149] Mexico,[150] Rwanda[151] and Uganda[152] have made great strides in understanding their risk

137 (UNDP 2019d); (UNDP 2019j); (UNDP 2019m)
138 (UNDP 2019f); (Andriamanalinarivo, Falyb and Randriamanalina 2019)
139 (UNDP 2019l)
140 (UNDP 2019f)
141 (Maurizi et al. 2019)
142 (UNDP 2019g)
143 (Maurizi et al. 2019)
144 (Argentina Civil Protection Agency 2019)
145 (Argentina Civil Protection Agency 2019)
146 (IFRC and UNDP 2014b)
147 (Jackson, Witt and McNamara 2019)
148 (UNISDR 2017b)
149 (Bureau de Recherches Géologiques et Minières et al. 2017)
150 (Maurizi et al. 2019)
151 (MIDIMAR 2015)
152 (UNDP 2019p)

profiles by developing national risk atlases, which provide a comprehensive assessment of existing risks at the national and local level in areas that are highly risk prone. The risk assessments and profiles are updated and expanded and are reportedly informing the ongoing process to align the respective DRR strategies and plans with the Sendai Framework.

In Colombia, the preparation of the National Disaster Risk Reduction Plan 2015–2030 was preceded by the development of a risk management index and a diagnostic of public expenditures for DRM in 2014.[153] Tajikistan is another interesting example of a government making a deliberate effort to take into consideration emerging threats in developing a new strategy. The country's increasing scale of industrialization and mining is expected to create new risks related to hazardous wastes and the growing volume of goods transported by road. These require risk management measurements that the Government of Tajikistan is not sufficiently familiar with. Also, so-called legacy threats from radioactive materials will require greater attention as they are technically complex and often beyond the means of local capacities.[154]

Namibia's National Disaster Risk Management Policy from 2009 was revised in 2017, in line with the Sendai Framework. The subsequent Disaster Risk Management Framework and Action Plan (2017–2021) draws upon the findings and recommendations of a national capacity assessment facilitated by the United Nations system through the Capacity for Disaster Reduction Initiative and the United Nations Disaster Assessment and Coordination. The recommendations of the assessment were endorsed by the National DRM Committee in February 2017. Following the endorsement, a stakeholder consultation process has been rolled out at national and subnational levels to prioritize actions, assign responsibilities, and agree on budgetary and timeline requirements across institutions, sectors and governance levels.[155] Other examples of DRR strategies and plans that were based on comprehensive cross-sectoral capacity assessment, include those of Côte d'Ivoire, Georgia, Ghana, Jordan, Sao Tome and Principe, and Serbia.[156] In Sudan, a SWOT (strength–weaknesses–opportunities–threats) analysis laid the foundation for identifying gaps in the DRR policy framework and emphasized the need for the new strategy to better consider the local risk context.[157]

11.5.3

Engagement with stakeholders

Most plans have been developed through some form of collaborative multisector arrangement. Inter-agency working groups, often linked to a country's National Platform for Disaster Risk Reduction, or inter-agency coordination mechanism, are usually guiding the process with representation from ministries, departments and other interested parties, such as NGOs, local governments, academia and the United Nations, like in Guatemala, Kyrgyzstan, Montenegro and Peru.[158] In Sudan, a dual mechanism of a task force and technical committee provided oversight and strategic guidance.

However, broad engagement is not always a guarantee for success. For example, in Tabasco, Mexico, the Civil Protection Master Plan of 2011 was developed in a participatory process by representatives of all state government ministries under the leadership of the Ministry of Planning. Despite the political will this process had generated the plan was only partially implemented.[159] This indicates that a range of other factors can influence the level of implementation.

There are also countries in which the national DRM authority spearheaded the drafting process, as was the case in Colombia,[160] Costa Rica[161] and Mozambique,[162] by seeking inputs on the draft text through consultations in a subsequent step. The Ministry of Local Affairs and Environment was the driving force for the strategy development in Tunisia.

Case study: Awareness-raising in Tunisia resulted in stronger political commitment towards DRR

In Tunisia, a national debate on DRR started in 2012 thanks to the leadership of the Ministry of Local Affairs and Environment – the national focal point for HFA and the Sendai Framework. To back this debate with all stakeholders, the ministry carried out an analysis on the legal and institutional framework to identify gaps related to DRR. In addition, the ministry set up a database of disaster-related human and asset losses over 30 years (1983–2013).[163] These efforts led to awareness-raising of decision makers about the development challenges emphasized by disaster risks. It also strengthened political support for the elaboration and adoption of a national strategy for DRR and improved coordination of DRR at national and local levels.[164]

Consultations, workshops and sector or focus group meetings are common features to many countries, although little information is available as to the quality of participation and access of various stakeholder groups, especially those who are "most left behind". Some countries, such as Kyrgyzstan, also have a requirement to publish new policy instruments publicly for comments before finalization.[165] Yet again, the ability of some stakeholder groups, especially the most vulnerable, to take part in such a process is questionable. Interestingly, countries in the Commonwealth of Independent States see value in the final strategies, and also appreciate the coordinated process to develop such strategies, building on national risk assessments, taking into account likely climate change scenarios, discussing and agreeing on priorities and making explicit linkages to SDGs.[166]

Apart from the difficulty in ensuring an all-inclusive process that is genuinely a whole-of-government and whole-of-society approach, a real challenge for developing strategies and plans relates to the lack of awareness of decision makers who are involved in the process, and their lack of knowledge of DRR and its links to development. It is therefore advisable to accompany DRR strategy and plan development with training and capacity-development support.

11.5.4

Policy coherence

Overcoming the siloed approaches and duplicative efforts in implementing DRR, climate change and sustainable development stands at the centre of the 2030 Agenda and is also ingrained in the Sendai Framework. In aspiring to tap into synergies among these interconnected policy and practice areas, and to overcome the related competition over resources and power, only a few countries have made good advances on this Sendai Framework requirement.

153 (Colombia 2015)
154 (UNDP 2019l)
155 (Namibia, Office of the Prime Minister, Directorate Disaster Risk Management 2017)
156 (UNDP and UNISDR 2018)
157 (UNDP 2019j)
158 (CONRED 2019); (UNDP 2019f); (UNDP 2019m); (UNISDR 2019c); (United Nations 2014)
159 (Maurizi et al. 2019)
160 (Colombia 2015)
161 (UNDP 2019d)
162 (UNDP 2019g)
163 (UNISDR 2019a)
164 (UNDP 2019o)
165 (UNDP 2019f)
166 (UNISDR 2017b)

Box 11.2. Issues for countries to consider when seeking alignment among DRR and other policy arenas, derived from lessons learned and case studies

- Understanding the similarities and differences among CCA, DRR, development objectives, processes and stakeholders.
- Establishing a common ground regarding rationale, objectives, and methodologies, instruments and terminologies.
- Clarifying the administrative set-up for developing CCA, DRR and development planning and agreement on who leads and participates in which mandate. Integrating parts of the administrative set-up if possible.
- Establishing joint or joined-up monitoring and progress reporting of CCA, DRR and development planning.
- Ensuring that the coherence agenda is also pursued at the subnational and local levels.
- Identifying common action and instruments in support of shared policy objectives to reduce disaster risk.

(Source: UNISDR 2017)

In Montenegro, the main hindrance noted during development and implementation of the strategy was that decision makers and stakeholders did not come with prior knowledge of the fields of DRR, SDGs and climate change, including how these areas interact.[167] A spot check of several Sendai Framework aligned strategies and plans has revealed that this requirement is not, or only superficially, met. As noted in section 10.1, and discussed further in section 13.5, this is not the case in the Pacific region. There, FRDP provides high-level strategic guidance to different stakeholder groups on how to enhance resilience to climate change and disasters, in ways that contribute to and are embedded in sustainable development. Under FRDP, Pacific Island governments are called to provide policy direction, incentivize funding to support implementation of coherence initiatives, ensure cross-sectoral collaboration and take measures to gauge progress.[168] Tonga's Joint National Action Plan (JNAP) on CCA and DRM (2018–2028) is one such example of a coherent approach to resilience building, which is anchored in SDGs and other relevant global and regional policy instruments. This is also highlighted as a national good practice case study in section 13.5.2. A key element of Tonga's second plan, JNAP II, is a strong focus on the development of sectoral, cluster, community and outer island resilience plans that fully integrate climate resilience and practical on-the-ground adaptation, reduction of GHG emissions and DRR.[169] Other countries' DRR strategies and plans, such as those of Vanuatu and Madagascar, also take account of risks related to climate change. Other positive examples of policy integration, between DRR and CCA, are discussed in Chapter 13.

167 (UNDP 2019m)
168 (UNISDR 2017d)
169 (Tonga 2018)
170 (Mozambique 2017)

Case study: Policy coherence in Mozambique's Master Plan for Disaster Risk Reduction 2017–2030

In Mozambique, the Disaster Risk Reduction Master Plan (2017–2030) is aligned with the climate change strategy, as well as with other development policy instruments, which have common mechanisms and indicators have been articulated for the strategies or plans.

Chapter 4 of the plan establishes the National Juridical Context and Public Policies, which articulates linkages with the country's National Development Plan, the National Agenda 2025: Visão Estratégica de Nação, the National Climate Change Mitigation and Adaptation Strategy 2013–2025, as well as the Sustainable Development Objectives.

At the level of actions, the plan presents concrete examples through the development of educational approaches integrating risk reduction and CCA (Action 1.1.3), or the creation of mechanisms for ensuring that all projects and programmes relating to poverty reduction, agriculture and rural development take into account access to water, environmental considerations and contributions to the sustainable use of water (Action 2.3.1) as a way to reinforcing resilience.[170]

Another example of policy integration is Egypt's National Disaster Risk Reduction Strategy, which provides a strong rationale for coherence.

Case study: Policy coherence in Egypt's National Strategy for Disaster Risk Reduction, 2017–2030

National Strategy for Disaster Risk Reduction (NSDRR) Courses for Action identify incorporating DRR into sustainable development policies, particularly the Sustainable Development Strategy: Egypt's Vision 2030, as one of the key focus areas. NSDRR also acknowledges that "disaster risk reduction is better addressed through developing a clearly defined vision as well as specific plans, specializations and tasks and high-level coordination within and across sectors."

The strategy specifically identifies that environment, agriculture, water, energy, housing and infrastructure sectors are more pertinent for incorporating risk considerations due to their high vulnerability to disasters and underscores the need for the government to work to mitigate the risks arising from them.

Additional research may be required to identify the specific factors that helped drive the policy alignment process in some countries. The global and regional policy agenda is certainly a supporting factor, as discussed in Chapters 1 and 10. It would also be useful to better understand the role of champions, political developments, administrative reforms, or the allocation of financing and the extent to which they foster or hinder coherence.

11.5.5

Overcoming challenges in implementation

Many countries are faced with challenges when it comes to implementation of their DRR strategies or plans. The reasons are manifold.[172] Some DRR strategies or plans are too general to guide concrete actions. Means of implementation, such as budgets, institutional arrangements, guidelines protocols and multisectoral agreements are not defined, or left for further development after the strategies' approval.[173] In other cases, strategies are too ambitious and not aligned with existing capacities. Weak managerial capacity for DRR, and low awareness of stakeholders involved in implementation are the most common causes.[174] As a result, strategies are not implemented, or only partially so. Therefore, Sudan proactively developed standard operating procedures and a DRR training manual that were adopted by government. Awareness-raising campaigns were also conducted at the federal and state levels, which helped foster trust, understanding and ownership among involved stakeholders.[175] Such measures are essential, especially in contexts of insecurity, fragility and conflict.

Making Cities Resilient in action in Cilicap, Indonesia
(Source: Tejas Patnaik, UNISDR)

As mentioned above, the limited public and private investment in DRR has been a primary reason for the patchy implementation of DRR strategies. This has been the case during the HFA period, and appears to remain an issue also for Sendai Framework aligned strategies and plans as risk reduction priorities still compete against other government priorities over scarce resources, rather than being seen as enabling sustainable development and stable economic growth. The limited understanding of risk and how it interrelates with development are obvious culprits.[176] But also, powerful disincentives in countries' risk governance systems hinder prioritizing risk reduction. In Indonesia, for example, local governments rely on the national disaster fund and are reluctant to use their provincial budgets for the implementation of DRM.[177] Other countries have established similar funds, such as the Mexican Federal Fund for the Prevention of Natural Disasters, providing a dedicated funding source for disaster prevention and a tool to central government to co-finance disaster prevention. The Fund Against the Effects of Natural Disaster in Morocco, under the auspices of the Ministry of the Interior, is another dedicated tool to finance risk reduction through the State budget. They are usually referred to as being successful in broadening public finance for risk reduction but may carry the danger of over-reliance on these central funds at the expense of co-financing from subnational and sector budgets; noting that the former are usually more constrained than the more affluent sector budgets.

In Tajikistan, the lessons related to the lack of funding for implementing the country's 2010–2015 DRR strategy led to a phased approach in which three-year plans are to be developed that underpin the new 2018–2030 strategy. In this process, the first year would identify funded and already ongoing actions. The second year would define actions and funding requirements for the following year, and so forth.[178]

Recommendations in a recent OECD report focus on the establishment of a financial strategy led by the Ministry of Finance or equivalent to support the implementation of DRR strategies and plans.[179] The report also recommends assessing financial vulnerabilities, conducting comprehensive risk assessments, developing risk transfer markets and carefully managing the financial impacts from disasters. However, it falls short of explicit language that calls on members and partners to ensure that all investment is "risk informed". The issue of public and private investment and disaster risk is critical as this is the "heavy-lifting" of risk reduction, and it is through investment that the public and private sectors either create new risk or reduce risk. Ex ante investments in risk reduction must be carefully weighted when considering the benefits of risk retention and risk transfer.[180]

The World Bank's recent Beyond the Gap report takes the resource discussion to a new level, advocating strongly for a systems approach that combines infrastructure investment and risk reduction as a much more cost-effective means to manage risk, while also reducing risk from climate change.[181] Its key messages include that: low- and middle-income countries can control spending on infrastructure for the same results through improved spending efficiency (with a spending range of between 2% and 8% of GDP); that maintaining infrastructure is central to longer-term efficiency; that with the right policy mix, low- and middle-income countries can achieve the infrastructure-related SDGs with investments of 4.5% of GDP and still be on track to limit climate change to 2°C; and that "infrastructure investment paths compatible with full decarbonization by the end of the century need not cost more than more-polluting alternatives."[182] The message is that risk-informed development is possible for low- and middle-income countries if infrastructure needs, risk reduction, and climate change mitigation and adaptation are all integrated into coherent and system-wide planning and spending policies.

11.5.6

Local-level plans and their implementation

So far, there is little information available on the impact of Sendai Framework aligned strategies in reducing disaster risk on the ground, as most plans have been endorsed only recently, and monitoring and reporting on their implementation are still in progress. However, it has been observed that implementation of national DRR strategies often does not penetrate to the local level. The results of a global survey of local DRR strategies show that among the local governments with DRR strategies, 27.4% have fully implemented the

172 (Omoyo Nyandiko and Omondi Rakama 2019)
173 (Amaratunga et al. 2019)
174 (Subba 2019)
175 (UNDP 2019j)
176 (Subba 2019)
177 (Give2Asia 2018)
178 (UNDP 2019l)
179 (OECD 2017a)
180 (OECD 2017a) (Alton, Mahul and Benson 2017)
181 (Rozenberg and Fay 2019)
182 (Rozenberg and Fay 2019)

DRR strategies, while most of the cities, accounting for 53.4%, have partially implemented their strategy and 19.2% have not yet started the implementation.[183] The reason quoted by 46% of the respondents for incomplete implementation of the strategy was the lack of financial resources, while 22% said it was due to changes in the government and priorities.[184]

Decentralized DRM systems are generally considered more effective than top-down national approaches, which may enhance power structures at the top and draw the focus away from local concerns and initiatives. Decentralized approaches can contribute to inclusive DRM, a more successful identification of people needs, bottom-up planning and empowerment of the local population. It is nevertheless crucial to ensure that DRR remains nationally driven to keep its profile a high priority on the political agenda, ensure countrywide and sectoral coordination, and warrant sufficient allocation of resources where necessary.[185] Having a system of local strategies and plans that can address territorial DRR priorities and that are, at the same time, well aligned with national DRR and development policy and planning frameworks appears to be the most promising approach.

This has been the case in the province of Potenza[186] in Italy, which outlined the #weResilient strategy aimed at pursuing territorial development through a structural combination of environmental sustainability, territorial safety and climate change contrasting policies. It presents a "structural" tool for analysing the needs and driving the choices of over 100 local governments and municipalities with a wide strategic point of view and a multilevel holistic approach.[187] In Vanuatu, the decentralized DRM system was well laid out on paper, with international and local stakeholders working together. However, new NGO actors often found the operational governance system opaque and proper channels elusive. Other factors limiting implementation include the human and physical geography, poor understanding of the causal factors of risk, community disputes and a perceived dependency on aid. It was also noted that while there are bottom-up and top-down approaches to DRM, top-down strategies were more prevalent and that more connection and continuity between the DRR strategies and stakeholders at different levels was needed.[188]

Indonesia's policy of decentralization of 1999 was reflected in the 2007 Disaster Management Law and resulted in the establishment of local disaster management agencies in provinces and districts throughout the country. However, due to gaps in technical knowledge or skills, local government staff struggle to develop DRR plans. Despite receiving training, they are still unclear about what DRR means in practice and how to translate the national policy framework into concrete programmes.[189] But there are also more promising reports of how local-level DRR action plans in Indonesia laid the foundation for the enactment of local DRM legislation, which had a positive effect on increasing financial allocations for DRR.[190]

In Bhutan, district disaster management and contingency plans (DMCPs)[191] were developed in a bottom-up process and then integrated into the national level DMCP, covering around 50% of districts. The district plans were informed by local assessments of hazards, vulnerability and capacity, which were used to generate district-level risk profiles. The plans' disaster reduction priorities address the four priorities for action of the Sendai Framework. An important aspect of the planning process was the identification of the necessary risk governance arrangements, including the identification of key roles and responsibilities and training of a cadre of newly appointed District Disaster Management Officers. In a next step, DMCPs are being integrated into the districts' annual development plans and programmes to muster more support and buy-in for the plans from stakeholders.[192] Linking local DRR strategies or plans with the development planning system appears to be a promising implementation mechanism that has received increasing traction. In Norway, most municipalities have DRR strategies integrated into local development plans with plans being coherent among local, municipal and national levels.[193]

11.5.7

Monitoring

Vague formulations and ambiguous assignment of DRR functions to broad stakeholder groups in DRR strategies can result in overlaps and gaps. This leaves organizations and individuals with an option to withdraw themselves from their responsibilities or to shift them to someone else, making it nearly impossible to hold organizations or individuals accountable for their action or inaction. Even when DRR strategies clearly spell out mandates and roles, the bottleneck may be a lack of awareness or training of stakeholders regarding their roles.[194] Agreement on assigned roles and responsibilities may require some negotiation in cases of competition over roles, or the reluctance to engage in certain functions that are seen to be too complex or less rewarding.[195] To keep strategies at a sufficient strategic level, such detail could be fleshed out in supportive standard operating procedures or similar implementation plans.

When it comes to oversight and reporting on the implementation of DRR strategies and plans, there appears to be a growing number of countries that integrate such a provision. For example, Montenegro specifies an obligation of the Ministry of Interior to regularly report on implemented activities of all institutions involved.[196] The DRR strategy of South Sudan features a dedicated section on Monitoring, Evaluation, Accountability and Learning.[197] In Mozambique, monitoring is part of a national mechanism for the follow-up of the country's multi-year development plan. Other countries that feature some type of mechanism for follow-up include Angola, Colombia, Costa Rica and Vanuatu.[198] However, a spot check of 10 selected plans showed that only 5 featured follow-up mechanisms.

11.6

Conclusions

Governments have many instruments of public policy at their disposal that can be used to influence the risk-generating or risk-reducing behaviour of the general public, the private, public and voluntary sectors. DRR strategies and plans are only one such instrument, laws and regulations, public administration, economic instruments and social services for example, can also determine the creation, accumulation or reduction of risk. Despite the development of such strategies over a span of two decades, it appears that national disaster risk governance systems are often still underdeveloped; this poses potentially a serious constraint on the implementation of the Sendai Framework.[199]

Examination of the contents of strategies and plans reveals considerable gaps, especially regarding the newer elements introduced in the Sendai Framework, such as preventing risk creation, including targets and indicators, and guaranteeing monitoring and follow-up mechanisms. Surprisingly, some of the more established elements are also not consistently addressed in the strategies reviewed, such as clear roles and responsibilities, and methods to devise and deliver local strategies.

183 (Amaratunga et al. 2019)
184 (Amaratunga et al. 2019)
185 (Subba 2019)
186 (Attolico and Smaldone 2019)
187 (Attolico and Smaldone 2019)
188 (Jackson, Wittand McNamara 2019)
189 (Give2Asia 2018, 2)
190 (Daly et al. 2019)
191 (UNDP 2019b)
192 (UNDP 2019b)
193 (UNISDR 2017b)
194 (Planitz 2015)
195 (Wilkinson, Steller and Bretton 2019)
196 (UNDP 2019m)
197 (UNDP 2019k)
198 (Subba 2019)
199 (Subba 2019)

It is nevertheless encouraging to see that there is a growing number of countries which see the value of the process, and are making a greater effort to devise more inclusive and consultative approaches to discuss and agree on their DRR priorities.

At this stage, there is little to report on the level of implementation or impact of Sendai Framework aligned strategies, as many of them have been endorsed only in the last 12–18 months. But there are early indications that the challenges encountered during the HFA decade still apply, despite many good practices and examples. With the 2020 target date fast approaching, and given the role of DRR strategies or plans as key enablers for reducing disaster risk and losses, their development and implementation in line with the Sendai Framework needs to be made an urgent priority at country level.

Chapter 12: Disaster risk reduction integrated in development planning and budgeting

12.1

The importance of integrating disaster risk reduction in development planning

Development can be a major driver of disaster risk, for example when it results in populations and economic assets being located in exposed geographic areas; in the accumulation of risk in urban areas due to rapid and unplanned developments; when it places excessive strains on natural resources and ecosystems; and when it exacerbates social inequalities if the income-generating opportunities for some population groups is curtailed. Therefore, risk should be seen as a normal and inseparable part of economic activities and development, as something built into particular development pathways and practices, constructed through day-to-day decisions by those who have a stake in particular patterns of development. Disaster risk is thus a social construct conditioned by each society's perceptions, needs, demands, decisions and practices.[200]

As presented in previous GARs and reiterated in this edition, it is time to cast off the notion that risk is exogenous to development, something that can be reduced simply by complementing

200 (Lavell and Maskrey 2013)