BUILDING RESILIENCE TO DISASTERS IN ASIA AND THE PACIFIC:

Resilience in the Global Development Frameworks

A briefing note for policymakers

2017
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Building resilience to disasters to sustain growth has remained an objective of global development agendas over the past three decades. The initial impetus came from the 1987 *Our Common Future* report of the World Commission on Environment and Development, which emphasized the devastating impacts of disasters on a country’s economic and social development and highlighted the need for building up national resilience. The United Nations General Assembly responded by designating the 1990s as the International Decade of Natural Disaster Reduction and adopting an International Framework of Action that called upon governments to “formulate national disaster-mitigation programmes, as well as economic, land use and insurance policies for disaster prevention and, particularly in developing countries, to integrate them fully into their national development programmes”.

The Yokohama Strategy and Action Plan for a Safer World, adopted at the First World Conference on Disaster Reduction in 1994, reiterated that “disaster prevention and preparedness should be considered integral aspects of development policy and planning” (United Nations, 1994). A review of the Yokohama Strategy, however, revealed that “ensuring an established disaster reduction strategy that is integrated into national and local development planning and objectives” remained one of the most critical gaps in both the strategy and the plan of action (United Nations, 2004).

The Hyogo Framework for Action tried to resolve this gap with the “integration of disaster risk reduction into sustainable development policies, planning and programmes at all levels” as a Priority for Action and strategic goal, which would take on the underlying risk factors across all sectors of development. This Priority for Action includes three areas—(i) environmental and natural resource management, (ii) social and economic development practices and (iii) land-use planning and other technical measures. The Hyogo Framework prescribes 18 activities for reducing the risks of disasters in all these areas (UNISDR, 2005). Reviews by national governments, regional organizations, global assessment reports and independent assessments of civil society organizations of the progress on the Hyogo Framework’s priorities to date have pointed out that tackling the underlying risk factors remains the most difficult and slowest among all four Priorities for Action, particularly in developing and least developed countries (UNISDR, 2011, 2013, 2015). In the Asia-Pacific region,
the average score of 58 countries on addressing the underlying risk factors remained at less than 3 out of 5 in 2013 in all four biennial assessment cycles (UNISDR, 2013).

One of the reasons attributed for this lack of progress was the disproportionate emphasis on disaster response and preparedness, with limited effort on mainstreaming disaster risk reduction across all sectors of development. There was limited appreciation for the long-term benefits that can be gained from investing in risk reduction, which results in inadequate public investment. Even the benefits of limited public investment could not be fully protected because the underlying risk factors were not addressed, while the process of unplanned development created new risks, compounding the already accumulated risk factors.

Creation of new institutions on disaster management generated hopes for disaster risk reduction across sectors. But these institutions, in most of the countries cited in the documentation, have become compartmentalized as a sector, which only limited their outreach to the different sectors of development. This situation thus calls for a comprehensive and holistic approach to the underlying risk factors, including the risks related to climate change and unplanned urbanization. Additionally, providing a framework of risk governance at the local, national, regional and global levels would enable the participation of all stakeholders and facilitate enhanced international cooperation for capacity development, technology transfer and finance.

This briefing note offers guidance to national policymakers and decision makers towards building their respective country's resilience to disasters and to more effectively following through on the six global development frameworks. Although the perspective and focus of each development frameworks differs, there are common elements relevant to resilience building (10 common elements are highlighted further on). Policymakers can use these 10 common elements as starting points to establish coherence in their respective country's efforts to follow through on the frameworks at the national level.
GLOBAL DEVELOPMENT FRAMEWORKS
The global development frameworks adopted in 2015 and 2016 create opportunity for disaster risk reduction and resilience: (i) the 2030 Agenda for Sustainable Development; (ii) the Sendai Framework for Disaster Risk Reduction 2015–2030; (iii) the Paris Agreement under the United Nations Framework Convention on Climate Change; (iv) the Agenda for Humanity; (v) the New Urban Agenda; and (vi) the Addis Ababa Action Agenda of the Third International Conference on Financing for Development. Although separate, they are also interrelated, as this section elaborates.

Global development frameworks adopted in 2015 and 2016

2030 Agenda for Sustainable Development

In a special September 2015 session, the United Nations General Assembly adopted a resolution on Transforming Our World: The 2030 Agenda for Sustainable Development, described as “a plan of action for people, planet and prosperity”. This agenda builds on the gains of the Millennium Development Goals (MDGs) but broadens to “shift the world to a sustainable and resilient path” (United Nations, 2015e). The agenda includes 17 Sustainable Development Goals (SDGs) with 169 associated targets that balance
the economic, social and environmental dimensions of development. Disaster risk reduction and resilience are embedded in as many as eight of the goals.

**Targets relevant to disaster risk reduction and resilience in the Sustainable Development Goals**

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<th>Targets relevant to disaster risk reduction and resilience</th>
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<td>Goal 1: Ending poverty in all its forms</td>
<td>Target 1.5: By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters</td>
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<td>Goal 2: Ending hunger, achieving food security and promoting sustainable agriculture</td>
<td>Target 2.4: By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality</td>
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<td>Goal 3: Ensuring healthy lives</td>
<td>Target 3d: Strengthen the capacity of all countries, in particular, developing countries, for early warning, risk reduction and management of national and global health risks</td>
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<td>Goal 4: Ensuring inclusive and equitable quality education</td>
<td>Target 4a: Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all.</td>
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<td>Goal 9: Building resilient infrastructure</td>
<td>Target 9.1: Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access</td>
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<td>Goal 11: Making cities and human settlements safe, resilient and sustainable</td>
<td>Target 11.5: By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting</td>
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<tr>
<td>Goal 13: Combating climate change and its impacts</td>
<td>Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries</td>
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<tr>
<td>Goal 15: Reversing land degradation</td>
<td>Target 15.3: By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world</td>
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These goals and targets are expected to stimulate action over the next 15 years (to 2030) in areas of critical importance for our sustainable and resilient future.
Sendai Framework for Disaster Risk Reduction 2015–2030

The Sendai Framework for Disaster Risk Reduction 2015–2030, adopted at the Third World Conference on Disaster Reduction in 2015, aims to achieve “substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries” (United Nations, 2015d, para. 16). To achieve the overarching goal, seven targets were specified, with four Priorities for Action for disaster risk reduction. The global targets cover a substantial reduction in the number of disaster mortalities and affected people and the reduction of direct economic loss and damages to critical infrastructure, in addition to increasing access to multi-hazard early warning systems and enhancing international cooperation for disaster management. The four Priorities for Action cover: (i) understanding disaster risks; (ii) strengthening risk governance to manage risks; (iii) investing in disaster risk reduction for resilience; and (iv) enhancing preparedness for effective response, recovery, rehabilitation and reconstruction. A series of activities are prescribed under each priority relevant to local, national, regional and global levels.

Paris Agreement

The Paris Agreement on climate change was adopted at the 20th session of the Conference of Parties of the United Nations Framework Convention on Climate Change (UNFCCC) in December 2015. This global climate “deal” aims to avoid dangerous climate change and limit global warming to below 2°C. It further sets out how high-income countries can support developing countries and those countries most vulnerable to climate change to mitigate and cope with the effects of climate-related hazards. The Paris Agreement, which contains both legally binding and non-binding provisions, formalizes the process of developing national plans and ongoing assessments and reviews of progress.

Article 8 of the agreement outlines eight action areas for enhancing “understanding, action and support” for disaster reduction: early warning systems; emergency preparedness; slow onset events; events that may involve irreversible and permanent loss and damage; comprehensive risk assessment and management; risk insurance facilities, climate risk pooling and other insurance solutions; non-economic losses; and resilience of communities, livelihoods and ecosystems.
Agenda for Humanity

The World Humanitarian Summit, an event initiated by the United Nations Secretary-General in Istanbul in May 2016, endorsed five core responsibilities within the Agenda for Humanity to target humanitarian crises arising out of conflicts and disasters. One of these responsibilities—invest in humanity—closely relates to reducing risks and building resilience to disasters. Such investments are financial as well as political and institutional and cover developing capacities for building resilience and for promoting the stability of institutions and governance.

The specific action areas on investment encompass: (i) increase domestic resources for risk management by expanding tax coverage, increasing expenditure efficiency, setting aside emergency reserve funds and dedicating budget lines for risk reduction activities; (ii) complement national investments with bilateral and South-South cooperation by providing expertise, knowledge transfer and technology; (iii) facilitate public-private partnerships to facilitate risk-based investment; (iv) encourage the insurance industry to integrate risk consideration into asset investments; and (v) dedicate at least 1 per cent of overseas development assistance to disaster risk reduction and a significant percentage of climate change adaptation funding to disaster preparedness and prevention.

New Urban Agenda

The New Urban Agenda was adopted at the United Nations Conference on Housing and Sustainable Urban Development in October 2016 in Quito, Ecuador. Based on SDG 11 on making cities and human settlements safe, resilient and sustainable, the New Urban Agenda focuses on three transformative commitments for sustainable urban development: (i) social inclusion for ending poverty; (ii) inclusive urban prosperity and opportunity for all; and (iii) environmentally sustainable and resilient urban development. The New Urban Agenda’s commitment for resilient urban development is a strong reiteration of the Sendai Framework:

“We commit ourselves to strengthening the resilience of cities and human settlements, including through the development of quality infrastructure and spatial planning, by adopting and implementing integrated, age- and gender-responsive policies and plans and ecosystem-based approaches in line with the Sendai Framework for Disaster Risk Reduction for the period 2015–2030 and by mainstreaming holistic and data-informed disaster risk reduction and management at all levels.”
to reduce vulnerabilities and risk, especially in risk-prone areas of formal and informal settlements, including slums, and to enable households, communities, institutions and services to prepare for, respond to, adapt to and rapidly recover from the effects of hazards, including shocks or latent stresses.” (United Nations Human Settlement Programme, 2016).

**Addis Ababa Action Agenda**

Finally, the Third International Conference on Financing Development (in Addis Ababa in July 2015) adopted the Global Framework for Financing Development Post-2015. Known as the Addis Ababa Action Agenda, the framework focuses on four principle mechanisms for financing development (in order of importance): (i) domestic public resources; (ii) domestic and international private business and finance; (iii) international development cooperation; and (iv) international trade.

Mobilization of domestic resources and their effective use are also crucial for financing sustainable development. Domestic resources are generated, first and foremost, by economic growth, and supported by an enabling environment at all levels. Sound social, environmental and economic policies, including countercyclical fiscal policies, adequate fiscal space, good governance at all levels and democratic and transparent institutions responsive to the needs of all people, are necessary for mobilizing and using domestic resources. Private business activity, investment and innovation in agriculture, industry and services are major drivers of productivity, inclusive economic growth and job creation. Thus, the private and corporate sectors must be engaged as partners in the development process to encourage their investments in areas critical to sustainable development and to shift to more sustainable consumption and production patterns. International trade is an engine for inclusive economic growth and poverty reduction and contributes to the promotion of sustainable development. A universal, rules-based, open, transparent, predictable, inclusive, non-discriminatory and equitable multilateral trading system encourages long-term investment in productive capacities.

International development assistance can complement the efforts of countries to mobilize public resources domestically, especially in the poorest and most vulnerable countries with limited domestic resources. The success of the global development agenda in developing countries cannot be ensured unless there are generous flows of material as well as technical and financial assistance from high-income countries to developing countries, as envisaged in all the global frameworks. At the same time, there is persistent need to improve the quality, impact and effectiveness of international development cooperation.
RESILIENCE IN THE GLOBAL DEVELOPMENT FRAMEWORKS
Building resilience to disasters is a common theme that binds all six global frameworks. But the term has not been used with a coherent meaning, thus prompting the United Nations Secretary-General to call for developing a “shared understanding of sustainability, vulnerability and resilience” (United Nations, 2016d).

The Sendai Framework draws from the UNISDR definition of resilience as “the ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions” (UNISDR, 2009). The Sendai Framework makes resilience an integral part of its goal as well as targets and priorities (Lovell and others, 2016). The overarching goal of the Sendai Framework is to strengthen resilience, which is seen as the task of disaster risk management, covering all its aspects and dimensions:

“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.” (United Nations, 2015d)

The Sendai Framework reiterates the commitment of countries to build resilience to the impacts of disasters with a renewed sense of urgency, within the context of sustainable development and poverty eradication, and to integrate this into policies, plans, programmes and budgets at all levels.

“Resilience” features prominently throughout the 2030 Agenda—in its preamble, vision, goals and targets—even though it is not defined clearly. Resilience is regarded simultaneously as a quality to be built, developed and strengthened, as a tool to reduce the exposure of people and as a foundation for inclusive economic growth and prosperity. The term is also used in relation to inclusive and safe cities and high-quality and reliable infrastructure.

Resilience is an integral theme in the Paris Agreement, particularly for building adaptive capacity and reducing vulnerabilities to the adverse effects of climate change. Like adaptive capacity, resilience is a characteristic that must be strengthened, built or fostered. Building resilience is emphasized in relation to communities and livelihoods as well as social, economic and ecological systems and is further considered a global mechanism for reducing damage and loss associated with the impacts of climate change.
The understanding of resilience in these three frameworks are echoed in the New Urban Agenda, which combines elements of risk management, adaptive capacity and inclusive development, while the Agenda for Humanity focuses on building preparedness for disaster response within communities. In the Addis Ababa Action Agenda, resilience is seen as both economic resilience of countries to absorb the shocks of disasters as well as the financial resilience for mobilizing resources for sustainable and resilient development.

Just as the perspectives and focus of each of the six global frameworks differ, so too do the agencies that spearhead them within the United Nations system and in the national governments. The legal framework, institutional mechanisms and financial means for implementing these frameworks at the national and local levels also differ. Thus, it is extremely important to have cohesiveness and a common understanding of what is “resilience” across all agencies and at all levels. This cohesiveness can be built on the common elements of resilience in all the frameworks. The following elaborates on 10 of those common elements.

Sustainable development is the core of all the global development frameworks.

There is general agreement with the classic definition of sustainable development as the “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations, 1987). It contains two concepts: (i) the concept of needs; in particular, the essential needs of all people, but particularly vulnerable people—those who are poor, excluded and discriminated against, to which overriding priority is given in all the frameworks; and (ii) the idea of limitations imposed by the state of technology and social organization on the environment’s ability to meet the present and future needs. The two concepts call for balancing the economic, social and environmental dimensions of sustainable development. These concepts run through all the SDGs and are reiterated in the Sendai Framework, the Paris Agreement and the New Urban Agenda. Even the Agenda for Humanity, which focuses on humanitarian crises, underscores the need to tackle the root causes of any crisis arising out of unsustainable development practices.
Resilience to disasters is at the heart of the sustainable development agenda of all the frameworks.

Despite diverse perspectives on resilience, there is a general understanding that the risks of disasters are endemic in nature as well as social and economic development. Disasters cannot be prevented or pre-empted altogether, but they can be assessed, anticipated, mitigated, adapted to and recovered from through risk management and “the preservation and restoration” of essential basic structures and functions (UNISDR, 2009). Inherent in the concept of resilience is an admission that, in the complex modern world, there is no escape from living with risks, and that risk management is the best approach for achieving resilience. The Hyogo Framework marks a paradigm shift from prevention to resilience, which is further strengthened in the Sendai Framework.

The structure of the mitigation-adaptation framework in the Paris Agreement is similarly founded on the bedrock of realism—that the world cannot go back to the low-emission regime of the pre-industrial era. But it can “resist” the trend of increasing emissions and absorb the shock of emissions through technological interventions and adaptive practices. The supremely ambitious and transformational nature of the 2030 Agenda is echoed in the New Urban Agenda and the Humanity Agenda.

Resilience is a cross-cutting issue that concerns many disciplines and sectors.

The Hyogo Framework, the predecessor of the Sendai Framework, underscored three sectors with related subsectors for building resilience of nations and communities to the impacts of disasters: ecosystem management (environmental and natural resource management), social and economic development practices (food security, health, education, infrastructure, social safety nets, livelihoods and insurance) and land-use planning (urban planning and management, rural development, building codes and standards). The Sendai Framework further broadens it to include the private sector, supply chain management, tourism, livestock, culture and heritage. The SDGs include a range of sectors, covering almost every aspect of society, economics and the environment. Climate change mitigation and adaptation involve every sector that either emits greenhouse gases or is impacted by them. The New Urban Agenda concerns the entire range of urban planning, development and management, covering housing, transport, infrastructure and services. It includes health care, education, the environment and security. Thus, no single sector or agency of a government at any level can alone handle the issues of resilience; it must always be the collective efforts of what is often described as “the whole of government".
Building resilience is not the task of government alone.

The multi-stakeholder character of resilience is emphasized in all the global frameworks. One of the guiding principles of the Sendai Framework is all-of-society engagement and partnership, which should be institutionalized through mechanisms like multi-stakeholder disaster risk reduction platforms at various levels and the articulation of responsibilities across public and private stakeholders, including business and academia, to ensure mutual outreach, partnerships and complementarities in roles and accountabilities. The United Nations General Assembly constituted a Technology Facilitation Mechanism that is based on multi-stakeholder collaboration between member States, civil society, the private sector, the scientific community, United Nations entities and other stakeholders. It was expected that similar mechanisms would be set up at the regional, national and local levels. The legally binding Paris Agreement provides for a technology mechanism for accelerating, encouraging and enabling innovation. Outside the framework of the Paris Agreement, the Conference of Parties highlighted the important role of all non-party stakeholders to address and respond to climate change, including those of civil society, the private sector, financial institutions, city government and other subnational authorities. The multi-stakeholder approach for resilience also finds resonance in both the New Urban Agenda and the Agenda for Humanity.

Building resilience requires strong coordination mechanisms within and across sectors and the full engagement of all institutions of an executive and legislative nature at the national and local levels.

This is clearly stated as a guiding principle in the Sendai Framework and further detailed in the second Priority for Action on risk governance. The 2030 Agenda does not prescribe national mechanisms for the SDGs, but it nonetheless has mechanisms for regular and inclusive reviews of progress involving civil society, the private sector and other stakeholders, in line with national circumstances, policies and priorities. The Paris Agreement recognizes the importance of coordination across instruments and relevant institutional arrangements for the same, while the Agenda for Humanity calls for coordination around each collective outcome, with the diverse range of actors responsible for achieving it.
Resilience can be strengthened through research and innovative and application of science and technology.

The Sendai Framework calls for enhancing access to and support for innovation and technology as well as long-term, multi-hazard and solution-driven research and development in disaster risk management. The SDGs highlight the need for innovation in science and technology in all relevant fields, which are built into the targets. Article 10 of the Paris Agreement deals with the long-term vision of technology development and transfer to improve resilience to climate change impacts and establishes a technology framework to provide overarching guidance to the work of the Technology Facilitation Mechanism set up under the UNFCCC. The New Urban Agenda calls for leveraging innovations in technology to produce better living environments, particularly in areas like spatial planning, transport and mobility and other basic urban services. In the same vein, the Agenda for Humanity encourages leveraging knowledge and technology to contribute to sustainable solutions that bring stability and dignity to peoples’ lives. The Addis Ababa Action Agenda appeals for harnessing the potential of science, technology and innovation and for closing technology gaps.

Resilience can be achieved through planning and investments across various development sectors.

All the frameworks stress the critical importance of planning and investment for building resilience. “Investing in disaster risk reduction for resilience” is one of the four Priorities for Action of the Sendai Framework. This includes both public and private investment as well as public-private partnerships and mechanisms for risk transfer and insurance, risk sharing and retention, and financial protection for investment. Mobilizing climate finance from a variety of resources, instruments and channels, with high-income countries taking the lead to assist developing countries, is one of the hallmarks of the Paris Agreement. The Conference of Parties agreed to set a new collective quantified goal, at a floor of $100 billion per year, taking into account the needs and priorities of developing countries. Planning and financing of housing and urban development activities run through the New Urban Agenda, while the Agenda for Humanity calls for investing on humanity and a shift from ad hoc funding to regular financing for humanitarian actions. Financing sustainable development across the global frameworks is the core of the Addis Ababa Action Agenda, which discusses domestic public

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2 See section 25(g) and 25(i) of the Sendai Framework.
3 Technology development and transfer forms part of the targets of seven SDGs: targets 1.4, 2a, 4b, 7a, 7b, 9b and 14a.
4 See Article 10 (1) and 10(4) of the Paris Climate Agreement, 2015.
7 See Article 9 of the Paris Agreement, 2015.
8 See section 65 of the decision of the 21st meeting of the Conference of Parties, 2015.
resources, private business and finance, international development cooperation and international trade as mechanisms.

Resilience requires development of capacity across all sectors and at all levels.

The importance of capacity development is emphasized in all the global frameworks. The Sendai Framework speaks of capacity development in all its dimensions—scientific, technical, financial and administrative and among all parts of society, especially for people who are poor, other vulnerable groups and women. And at all levels (local, national, regional and global). Capacity development features in 12 of the 17 SDGs. Article 11 of the Paris Agreement seeks to enhance the capacity of countries that are particularly vulnerable to the adverse effects of climate change, such as small island developing States, including adaptation and mitigation actions. The Conference of Parties established the Paris Committee on Capacity-building with the intent of resolving gaps and needs, both current and emerging, in developing countries.

Resilience can be facilitated and strengthened through international cooperation.

International cooperation is key to building up and strengthening the resilience of many countries, particularly the small island developing, the least developed and other developing countries. Such cooperation is crucial for grooming capacities, transferring technologies and mobilizing financial assistance. All six global frameworks emphasize such cooperation through the established mechanisms of the United Nations and multilateral financial institutions as well as North-South and South-South cooperation. The Sendai Framework sets a global target to substantially enhance international cooperation to developing countries to complement their national actions. Articles 9, 10 and 11 of the Paris Agreement are devoted to three important aspects of international cooperation: financial assistance, technology transfer and capacity development. All three issues also figure prominently in SDG 17 on strengthening the means of implementation and to revitalize the global partnership for sustainable development.

International cooperation occupies half of the Addis Ababa Action Agenda, with two of the Priorities for Action dealing with international development cooperation and international trade. Enhanced international cooperation and partnerships among governments at all levels is highlighted in the New Urban

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9 These include the targets 2a, 3d, 6a, 8.10, 11.3, 12a, 13.1, 13.3, 14.6, 14a, 15c, 16a, and 17.9.
10 See section 72 of the decision of the 21st meeting of the Conference of Parties, 2015.
Agenda, just as the Agenda for Humanity calls for an international order that is based on solidarity and collaboration, with people at its centre.

Progress achieved in building resilience must be monitored.

The global development agendas emphasize achieving goals and targets: The Sendai Framework has seven targets, the 17 SDGs have 169 targets, and the Paris Agreement has the goal of holding the increase in global average temperature to well below 2°C (above pre-industrial levels). Mechanisms were set up to monitor and measure the progress. The Sendai Framework established an Open-Ended Intergovernmental Working Group, comprising experts nominated by member States, to develop indicators for measuring the progress. The working group recommended a set of indicators for monitoring the achievement of the global targets. The Inter-agency and Expert Group on SDG Indicators has recommended more than 200 indicators for monitoring the progress in achieving the 169 targets. The Paris Agreement leaves it to the Conference of the Parties to periodically take stock and assess progress made at the global and national levels towards achieving climate change resilience. The New Urban Agenda encourages voluntary, country-led, open, inclusive, multilevel, participatory and transparent follow-up and review (see ESCAP, forthcoming, for more discussion on this common element).
CHALLENGES TO BUILDING RESILIENCE IN ASIA AND THE PACIFIC
Integrating the ambitions of all these global frameworks into long-term national development policies, plans and programmes and further implementing a cohesive development agenda across all sectors towards building up resilience to disasters are by no means easy tasks in the Asia-Pacific region. There are formidable difficulties, constraints and challenges, as the following summarizes.

The Asia-Pacific region is most vulnerable to disasters.

The region accounts for almost 60 per cent of the global population and produces nearly 40 per cent of the global gross domestic product (GDP). More than one in four people in the region’s developing countries experience poverty in multiple dimensions (ESCAP, ADB and UNDP, 2017b). The exposure of such a large vulnerable population and their habitats to a range of natural and human-induced hazards have created huge risks of disasters. This is reflected in stark realities—since 1970, disasters caused by natural hazards have killed around 2 million people, or about 57 per cent of the global death toll (ESCAP, forthcoming).

Climate change is exacerbating the risks of disasters.

Climate change, in combination with social and environmental factors, is expected to increase the frequency and intensity of various disasters and may impact adversely on livelihoods, food security and health of the human and animal populations. Rising temperature and rainfall variability is impinging upon the delicate environment and ecology of many fragile regions, while the spectre of sea-level rise is threatening the existence of many low-lying small island countries and territories.

Rapid urbanization is raising the level of exposures to disaster risks.

The Asia-Pacific region is urbanizing at a rapid pace. In 2015, nearly 2.4 billion people lived in urban areas, which accounted for around 60 per cent of the world’s urban population. The region’s urban population is projected to almost double between 2000 and 2025. The region is home to 10 of the world’s 15 largest cities, and by 2050, urban areas will account for nearly two out of every three people (ESCAP and UN-Habitat, 2015).

From 2014 to 2030, urban growth of South Asia is projected to surpass that of other subregions, from 609 million to 875 million people (an increase of 266 million people), compared with an increase of 247 million people in East Asia (from 960 million to 1,207 million people) and an increase of 109 million people in South-East Asia (from 294 million to 403 million people) (DESA, 2015). The South Asian urban growth will be propelled mostly by push factors as more and more impoverished people migrate out of their rural homes to urban areas in search of employment, adding to already overstressed conditions. This will exacerbate the layers of vulnerabilities and exposure to urban risks of disasters.

Most countries have huge capacity gaps at various levels.

Many countries lack the required institutional capacity and technical and managerial expertise to implement the transformative agendas of the global development frameworks. Assessing the capacity gaps and responding to the capacity needs are, by themselves, difficult tasks for many countries.
Countries lack resources for implementing the global development agendas.

Mobilizing resources to implement the goals and targets is even more difficult in this region. ESCAP estimates that the cost of implementation for the SDGs and climate mitigation and adaptation in the region will be close to $2.1 trillion, or even $2.5 trillion, per year for the next 15 years (ESCAP, 2015a). There are interesting ideas on how such resources can be mobilized through tax reform, domestic and foreign direct investments and international trade and assistance, as detailed in the Addis Ababa Action Agenda. Implementation of the Addis Ababa Action Agenda is critical to the achievement of the other development agendas.
OPPORTUNITIES FOR BUILDING RESILIENCE IN ASIA AND THE PACIFIC
Despite the difficulties and constraints, the region has considerable potential and opportunities that can be harnessed to overcome the challenges to building the sustainable and resilient future promised in the global development agendas. The following summarizes some of those opportunities.

The region’s overall economy is growing faster than any other region in the world.

Despite the recent slowdown, the Asia-Pacific economy is growing at a fast rate. The region’s developing economies now account for a third of the world’s output, and the average economic growth in developing economies is estimated to have been 4.9 per cent in 2016 (ESCAP, 2017b). Some of the major developing economies of the region have grown much higher. And the high rates of economic growth in China and India contributed significantly to achieving the MDG targets. The prospects of similar or greater economic growth in India during the next decade will facilitate achieving some of SDG targets regarding poverty, hunger and other indices of human development.

There is a strong foundation for disaster risk management across the region.

Nearly every country has established a legal and institutional framework for disaster management, developed national frameworks, policies and action plans on disaster risk reduction, improved their early warning systems and strengthened the systems of disaster preparedness and response. The region has shown political commitment by regularly organizing Asian Ministerial Conferences on Disaster Risk Reduction, which has set a trend for other regions.

Many countries have made significant strides in integrating disaster risk reduction with climate change adaptation.

Almost all countries have national adaptation plans and formulated Nationally Determined Contributions for the implementation of the Paris Agreement. India has set up eight national missions on climate action. The Philippine Disaster Risk Reduction and Management Act of 2010 provides a legal framework for integrating disaster risk reduction with climate change adaptation and the Philippine National Disaster Risk Reduction and Management Plan was formulated to operationalize the Act. In Indonesia, the National Medium Term Development Plan for 2015–2019 includes the integration of climate change...
adaptation as a development policy priority. Bangladesh set up a Climate Change Resilience Fund to support projects for reducing the risks associated with extreme climatic events. Many such initiatives throughout the region have created the groundwork for the larger global agenda of building resilience to disasters.

Stakeholder groups are pushing the global development agendas.

Various stakeholder groups on disaster and climate risk management, have been active throughout the region. Many such groups have regional networks and federations that pursue the agendas of disaster and climate resilience in various national, regional and global forums. Many of these organizations have had an important role in shaping the global frameworks. For example, civil society organizations, along with other stakeholders, have consistently participated in the annual Asia-Pacific Forum on Sustainable Development since 2014—the region’s preparatory meeting for the High-Level Political Forum on Sustainable Development. Their continued participation and active engagement will facilitate the implementing of activities and the monitoring of them.

The region has made some progress in developing cohesive frameworks and road maps for building resilience.

In 2017, ESCAP member States adopted the Regional Road Map for Implementing the 2030 Agenda for Sustainable Development in Asia-Pacific. Recognizing that there is a scope for strengthened regional cooperation in managing specific hazards, the regional road map embraces disaster risk reduction as one of the priority areas of regional action.

Seven priority areas of regional cooperation were identified:

(a) Promote effective regional and subregional efforts to strengthen disaster risk modelling, assessment, mapping, monitoring and multi-hazard early warning systems of common and transboundary disasters;

(b) Facilitate regional dialogue and cooperation in integrating disaster risk reduction into related development activities;

(c) Maximize the efficiency of existing regional cooperation mechanisms, including the World Meteorological Organization/ESCAP Panel on Tropical Cyclones and the Regional Cooperative Drought Mechanism for Drought Monitoring and Early Warning;

(d) Improve analysis to enhance regional knowledge on disaster risk and resilience, promote the wide dissemination of such knowledge, identify
challenges and opportunities for data-sharing and provide the analytical basis for regional cooperation;

(e) Promote capacity-building regarding climate resilience, including climate-related disaster risk reduction, through policy dialogues and the sharing of experiences and information;

(f) Develop and implement holistic and participatory disaster risk management at all levels, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, the Asian Ministerial Conference on Disaster Risk Reduction in 2016 and the 2030 Agenda for Sustainable Development;

(g) Promote a “Build Back Better” approach in recovery, rehabilitation and reconstruction, as well as implementation of the health aspects of the Sendai Framework for Disaster Risk Reduction 2015-2030, including the Bangkok Principles, with a view to ensuring more systematic cooperation, coherence and integration between disaster and health risk management.

There is a regional action plan and road map for the Sendai Framework. The regional plan covers: (i) broad policy direction to guide the implementation of the Sendai Framework in the context of the 2030 Agenda; (ii) a road map spanning the 15-year horizon of the Sendai Framework; and (iii) a two-year action plan with specific activities that are prioritized, based on the long-term road map and in line with the policy direction. The Pacific subregion has adopted a Framework for Resilient Development in the Pacific, which provides an integrated approach to address climate change and disaster risk management. Members of the Association of Southeast Asian Nations have adopted a Declaration on Institutionalizing Resilience of communities and people to the impacts of disasters and climate change. The Declaration underlines the importance of producing coherence, consistency and alignment across all relevant sectors by systematically mainstreaming disaster risk management and climate change adaptation within policies, strategies, plans, programmes and projects. These regional frameworks, action plans and declaration have created excellent opportunities for the global development agendas and thus for building up resilience in the region.
5

PRINCIPLES OF BUILDING RESILIENCE TO DISASTERS
Based on the global frameworks, the regional and subregional frameworks and road maps, experiences gained and lessons learned, certain guiding principles seem essential for building resilience to disasters in the specific contexts of the Asia-Pacific region, as the following explains.

1. **Consolidation**

The gains made by countries on disaster risk management, climate change mitigation and adaptation and various thematic areas of the SDGs can be consolidated. Such consolidation could be based on critical review of the achievements, strengths and weaknesses of the frameworks, systems and processes. It may include not only the formal and institutionalized systems but also informal and traditional systems, such as indigenous knowledge, which can considerably contribute towards sustainable and resilient development.

2. **Integration**

The whole-of-government approach prescribed in the Sendai Framework and the other global frameworks makes it imperative that integration takes place in all government policies, plans, programmes and activities. This will ensure that scarce resources are utilized optimally and efficiencies are established in the planning, implementation and delivery of services. An integrated approach makes the complex task of building resilience much easier than what could be achieved otherwise. The process of integration must be led from the top of government and institutionalized in every level of governance.

3. **Prioritization**

Governments generally lack sufficient resources for building resilience, and therefore the tasks must be prioritized according to needs and relevance. Universal basic needs of people—food, shelter, health care and education—must receive priority over other interests. This would reduce vulnerabilities, develop capacities, reduce risks and take care of most of the goals for sustainable development. Although the SDGs are universal, governments are expected to nationalize these goals and single out priorities. Based on their priorities, governments can then develop smart strategies for phasing out the goals and targets within the 15-year time frame for achieving the agendas.
Mainstreaming

Mainstreaming is the most used but least understood principle of disaster risk management. It has been routinely stated in every framework, starting from the International Framework of Action of the International Decade of Natural Disaster Reduction, but progress has been limited. Mainstreaming assumed great significance in the 2030 Agenda, when the issues of disaster risk reduction and resilience were embedded into the SDGs and targets of almost every sector of development, such as poverty eradication, agriculture, health care, education, infrastructure, urban and rural development, environment and natural resources management. This provides historic opportunity to aggressively pursue the mainstreaming agenda, which remains one of the most critical tasks of disaster risk management in the region.

Inclusion

The message of inclusive development is explicit 2030 Agenda, and this must be the hallmark of the Asian-Pacific principles relative to building resilience. Inequalities, in terms of access to opportunities and basic services, affect vulnerable populations, such as women, persons with disabilities, minorities and people living in rural areas (ESCAP, ADB and UNDP). All people excluded from the process of development must become a part of it. Development is not a largesse that can be bestowed upon people; it is a human right that must be secured through an inclusive process of participation in planning and implementation.

Partnership

Sustainable and resilient development is not the job of government alone; it requires strong and active partnership with and participation of all stakeholders—civil society, the private sector, scientific and technical organizations, professional bodies, academic institutions, women's organizations, media and grass-roots organizations working with rural and urban communities. Such partnerships should be institutionalized through various formal and informal processes so that decision-making is enriched through diverse knowledge, insights, standpoints and perspectives. Implementation becomes easier with the participation of all stakeholders.
Coordination

The whole-of-government and all-of-society approach for building resilience requires that a strong mechanism for coordination is available for taking everybody (within and outside government) on board. This is not an easy task because consensus of diverse standpoints may not be possible on many issues, and thus rules of the game must be defined, whereby final decisions are left to the government. Coordination is even more important, so that multiple agencies work with a common vision and purpose for the achievement of the objectives and outcomes of resilient development.

Collaboration

In a globalized and interdependent world, sustainable and resilient development is not possible without collaboration at various levels—bilateral, regional and international. The risks of transboundary disasters can be addressed only through bilateral and regional collaboration. Regional organizations, including ESCAP, can facilitate the implementation of the global frameworks in their regional context by exchanging knowledge and good practices and various other joint activities. International collaboration can open windows of opportunities for capacity building, transfer of technology and development assistance. The developing countries of the region, particularly the least developed and the small island developing countries, are likely to derive significant benefits through such collaboration.
STRATEGIES FOR BUILDING UP RESILIENCE IN ASIA AND THE PACIFIC
Every country of the Asia-Pacific region must develop its own strategy for building resilience to disasters, taking into account the pattern of its current and emerging risks, national laws, policies, commitments, resources and capacities. Most countries in the region are in the process of developing such strategies.

China adopted its 13th Five-Year Plan in March 2016 that articulates a strategy for innovative, coordinated, green, open and shared development. A domestic coordination mechanism, comprising 43 government departments, was established for implementing the 2030 Agenda, which has been publicized nationwide to mobilize domestic resources, raise public awareness and create a favourable social environment. China will strengthen its inter-sector policy coordination and review and revise relevant laws and regulations to provide policy and legislative guarantees for implementation. In the next five years, China aims to lift 55.8 million rural residents out of poverty and to double its GDP and per capita income levels of 2010.

The Philippines has conducted advocacy campaigns to build awareness among stakeholders of the 2030 Agenda. The process of integrating the SDGs simultaneously into the long-term vision and goals and the national, sector and subnational plans and frameworks has been initiated. The assessment and prioritization of the global SDG indicators, based on the national context, relied on a participatory and iterative process that was jointly led by the national planning and statistics agencies. The resulting list of indicators serves as inputs into the ongoing preparation of the Medium-Term Development Plan. The Government is planning to create an inter-ministerial committee that will be chaired by the president and led by the National Economic Development Authority.

The Republic of Korea has taken six major steps to implement the 2030 Agenda: (i) reviewing the national social, economic and environmental conditions against the SDGs; (ii) analysing the SDGs, with special attention to trade-offs and synergies between goals and targets; (iii) mapping and screening the government and non-government institutions to address the SDGs; (iv) selecting national indicators for the SDGs; (v) collecting relevant data from both government and non-government organizations; and (vi) singling out organizations and actors in the three dimensions of sustainability (economic, social and the environment) with potential to contribute towards achieving the SDGs.

Samoa is implementing its national sustainable development strategy with a long-term vision to ensure a good quality of life for all. The strategy is based on seven national outcomes that are supported by sector-based outcomes that reflect the three dimensions of sustainable development. The strategy is being aligned to the SDGs and their targets.

Countries are in the process of developing their strategies for the global frameworks. This is a critical juncture for policymakers to consider the essential components that should be incorporated into national action plan and road map for the global frameworks. These components would make the strategy coherent, consistent and comprehensive and provide guidance to all implementing agencies and other...
stakeholders regarding their roles and responsibilities in the implementation of the framework, the process to be followed as well as for monitoring the results and outcomes.

1 Develop a national strategic action plan and road map for implementing the global development frameworks.

This action plan could be structured with the following six components: (i) comprehensive review of the status of all the thematic areas of development that are relevant for the country; (ii) assessment of the gaps and needs, with reference to each of the goals and targets of the development agendas in the specific contexts of the country; (iii) prioritization of the needs, based on resources and capacities; (iv) estimation of additional funds required to be mobilized from various sources for implementing the agendas; (v) preparation of a realistic road map for implementation; and (vi) developing a monitoring and evaluation framework, with particular reference to strengthening the national statistical system (with reference to the suggested indicators under each development agenda).

The strategic action plan could be developed by the apex national institution assigned responsibility for long-term planning and endorsed with strong political commitments by the highest political authority of the country. Almost every country in the Asia-Pacific region prepares some sort of medium- or long-term development plans, spanning three to five years.12 A few countries have a longer-term strategic plan that is rolled out in short-term plans.13 Some of the plans that were drafted after 2015 refer to the 2030 Agenda, but they are not systematically integrated into the development plans. The advantages of having a separate strategic action plan on the 2030 Agenda are obvious, but essential it will set up a national vision for sustainable development, provide a sense of direction and commitment to all the implementing agencies and facilitate sector strategies and plans.

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12 Nepal has three-year development plan, Bangladesh, China, Cambodia and Philippines have five-year development plans. Until recently, India had five-year development plan, but it has been discontinued.

Expand national strategic action plan beyond the SDGs, to cover the gamut of each global development framework.

If the ongoing process of developing an action plan is any indication, countries of the region seem to be focusing exclusively on the SDGs. It may be argued that this is the correct approach because the SDGs incorporate all the development goals of the frameworks. The goals of disaster risk reduction and resilience are embedded into the targets of as many as eight SDGs. And SDG 13 incorporates the goals of the Paris Agreement, while the New Urban Agenda is essentially a detailed elaboration of SDG 11 on making cities and human settlements inclusive, safe, resilient and sustainable.

Thus, national strategic action plans could go beyond the SDGs and cover all six global development frameworks. Depending on the contexts and priorities of countries, the strategic action plan could be structured in five or six parts: The first part could give a broad overview of the plan; the second part could be devoted to implementation of the Sendai Framework and Agenda for Humanity, with particular reference to the SDG targets on disaster risk reduction and resilience; the third part could deal with the strategy for implementing the Paris Agreement, with particular reference to the Nationally Determined Contributions; and the fourth and the most important part could focus on the remaining SDGs that are not covered in parts two and three. This part could have separate chapters or sections on each of the SDGs. Countries in which urbanization is a growing challenge could consider adding a separate chapter on sustainable urban development. The last part should cover all implementation issues, such as mobilization and allocation of resources, capacity development, monitoring and evaluation, with reference to strengthening the national statistical system for monitoring progress on the basis of indicators developed under these frameworks.

Address building resilience to disasters across all sectors in the national strategic action plan.

Reducing the risks of disasters and building resilience to disasters are cross-cutting issues of sustainable development that figure in all the global frameworks. It is necessary to highlight how this agenda of resilience will be implemented across all sectors in a coherent, effective and time-bound manner for achieving the goals and targets of the frameworks. These include the seven targets of the Sendai Framework, the eight goals referring to resilience in the SDGs and the goals of climate change adaptation and urban resilience in the Paris Agreement and the New Urban Agenda, respectively.

These goals and targets are not limited to reducing deaths in disasters. They have much broader agendas of building resilience in various sectors of development.
As noted, the SDGs focus on eight areas of building resilience to disasters: poverty eradication, food security, health care, education, infrastructure, cities and human settlements, climate change and ecosystems. The Paris Agreement promises resilience across all sectors that are impacted by disasters, which includes food security, water security, ecosystem management and human and animal health. Thus, the sectors in which resilience to disasters must be developed are common across the frameworks, and there is a large degree of resemblance in the respective approach, process and methods. Climate change adaptation, for example, has strong similarities with disaster risk reduction. The strategic action plan should integrate the issues of resilience into the different frameworks and provide an integrated framework for building resilience at the national and local levels.

Include generic guidelines for building resilience across all relevant sectors of development.

Resilience to disasters can be built across sectors of development through systemic processes of mainstreaming. Mainstreaming disaster risk reduction within development has been highlighted in every successive global and regional framework on disaster reduction and is reiterated in every national policy and framework in the region. But the progress achieved so far has not been uniform across the board.

Similarly, mainstreaming climate change adaptation in development figures in the decisions of several meetings of the UNFCCC Conference of Parties, but progress has been limited to date (ESCAP, forthcoming). Several countries have found the similarities in the approach and methodology of mainstreaming disaster risk reduction and climate change adaptation in development and emphasized the need for integrating the twin processes of mainstreaming. But integration has not taken place except in a few countries and in some sectors. There are compelling lessons to learn from the good and bad practices of mainstreaming and integration of disaster risk reduction and climate change adaptation in development.

ESCAP (2017) developed a regional guideline on mainstreaming disaster risk reduction on development. The guideline suggests a three-fold process of mainstreaming at the national and sector levels and provides guidance for mainstreaming in project cycle management. The strategic guidelines from national planning commissions should prescribe the principles and approach that every sector should follow for mainstreaming and integration; the national guidelines from the national disaster management agency should prescribe the process, method and tools for mainstreaming and integration; the sectoral guidelines should be developed by the relevant sector, in accordance with needs and available resources. Thus, the strategic action plan should lay down general principles and guidelines for mainstreaming disaster risk reduction.
and climate change adaptation in all sectors of development. This should be included in the second part of the strategic action plan dealing with resilience to disasters, including extreme climate events.

A national strategic action plan can provide a blueprint on the means of implementation.

The national strategic action plan will require resources, both human and financial. Gaps in resources at all levels must be assessed and strategies developed to cover those gaps. Gaps in human resources can be reduced through education, training and incentives. Gaps in financial resources must be bridged through reforms in tax administration and loans, incentives for private and foreign direct investment, international development assistance and support from multilateral funding institutions.

The strategic action plan will require strengthening of the administrative and technical capacities of institutions, creation of new institutions, setting up strong coordinating mechanisms and an inclusive and participatory process of development that involves all stakeholders at all levels. The strategic action plan should provide a blueprint for these arrangements.

The strategic action plan will also require appropriate technology, which may be a mix of scientific, traditional and new-age technologies in different sectors. Access to cutting-edge technologies may be problematic for many countries; thus each country must realistically assess the situation in its own context and suggest an appropriate plan of action.

Last, the strategic action plan will prescribe a road map so that all the development goals are implemented in a phased manner by 2030.
INDICATORS FOR MEASURING PROGRESS
The Sendai Framework and the SDGs have set global targets to be achieved by 2030 and indicators have followed for each for measuring the progress made in achieving the targets.

To ensure that both sets of indicators were aligned, the Sendai Framework specifically required that the Open-Ended Intergovernmental Working Group collaborate with the Inter-agency and Expert Group. The latter group finalized its deliberations in February 2016, recommending a set of 223 indicators for measuring the progress of achieving the 17 SDGs (United Nations, 2016e). The Open-Ended Intergovernmental Working Group completed its work in December 2016, suggesting a set of 38 indicators to monitor the progress towards the seven targets of the Sendai Framework (United Nations, 2016f). See the Annex for a matrix of the Sendai Framework indicators and SDG indicators that pertain to building resilience to disasters.

The two sets of indicators are closely aligned with each other to facilitate development of a database for measuring progress. The SDG indicators 1.5.1, 11.5.1 and 13.1.1 on disaster-related mortality and affected people find resonance in Sendai Framework indicators A-1 and B-1; these are further disaggregated in A-2 to A-3 and B-2 to B-5. Sendai Framework indicators E-1 and E-2 closely resemble SDG indicators 11.b.1, 13.2.1 and 14.2.1 and measure the adoption and implementation of disaster risk reduction strategies, in line with other international frameworks. The Sendai Framework indicator G-1 is closely related to SDG indicator 13.3.1 to facilitate the development of multi-hazard early warning systems.

The Sendai Framework indicators are more focused and direct, while the SDG indicators are more generic. But both sets of indicators pose considerable challenge to governments to develop a national statistical system to collect, compile, classify and analyse data on a range of issues of disaster damage, losses and resilience, on which information is scarce. This is one of the critical issues that must be addressed in the national strategic action plan to build resilience to disasters.
Conclusion
The world is in the second year of the 15-year window for implementing the transformative 2030 Agenda and the Sendai Framework. This second year will be crucial for developing the strategic action plan and road map for achieving the goals and targets of these agendas. The Asia Regional Plan for Implementation of the Sendai Framework for Disaster Risk Reduction 2015–2030 and road map for implementation of the Sendai Framework were adopted at the First Asian Ministerial Conference on Disaster Risk Reduction in November 2016.

All subregions have their own frameworks that integrate the various global frameworks. In March 2017, ESCAP member States adopted the regional road map for implementing the 2030 Agenda, which identifies disaster risk reduction and resilience as priorities for cooperation. The countries in the region are at different stages of developing their national action plans and road maps. This briefing note may assist policymakers in the drafting of coherent, consistent and comprehensive action plans and road maps that lay the foundation for building resilience to the impacts of disasters in the region.
References


Building Resilience to Disasters in Asia and the Pacific through Coherent Responses to the Global Development Frameworks


Conclusion


Disaster Risk


### Annex

**Common targets and indicators for building resilience to disasters in the Sendai Framework and the Sustainable Development Goals**

<table>
<thead>
<tr>
<th>Sendai Framework</th>
<th>Sustainable Development Goals</th>
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<tbody>
<tr>
<td><strong>Targets</strong></td>
<td><strong>Targets</strong></td>
</tr>
<tr>
<td>Substantially reduce the number of affected people globally by 2030, aiming to lower the average global figure per 100,000 in the decade 2020–2030 compared to the period 2005–2015.</td>
<td>2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.</td>
</tr>
<tr>
<td>B-1 (Compound) Number of directly affected people per 100,000 population attributed to disasters.</td>
<td>2.4.1 Percentage of agricultural area under sustainable agricultural practices.</td>
</tr>
<tr>
<td>B-2 Number of injured or ill people per 100,000 population, attributed to disasters, per 100,000 population.</td>
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<td>B-3 Number of people whose damaged dwellings were attributed to disasters.</td>
<td></td>
</tr>
<tr>
<td>B-4 Number of people whose destroyed dwellings were attributed to disasters.</td>
<td></td>
</tr>
<tr>
<td>B-5 Number of people whose livelihoods were disrupted or destroyed, attributed to disasters.</td>
<td></td>
</tr>
<tr>
<td>C-1 (Compound) Direct economic loss attributed to disasters in relation to global gross domestic product.</td>
<td>3.d Strengthen the capacity of all countries, in particular, developing countries, for early warning, risk reduction and management of national and global health risks.</td>
</tr>
<tr>
<td>C-2 Direct agricultural loss attributed to disasters.</td>
<td></td>
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<tr>
<td>C-3 Direct economic loss to all other damaged or destroyed productive assets attributed to disasters.</td>
<td></td>
</tr>
<tr>
<td>C-4 Direct economic loss in the housing sector attributed to disasters.</td>
<td></td>
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<tr>
<td>C-5 Direct economic loss resulting from damaged or destroyed critical infrastructure attributed to disasters.</td>
<td></td>
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<tr>
<td>C-6 Direct economic loss to cultural heritage damaged or destroyed attributed to disasters.</td>
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Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030.
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<th>Sendai Framework</th>
<th>Sustainable Development Goals</th>
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<tbody>
<tr>
<td>Targets</td>
<td>Indicators</td>
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<tr>
<td>Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030.</td>
<td>D-1 (Compound) Damage to critical infrastructure attributed to disasters.</td>
</tr>
<tr>
<td></td>
<td>D-2 Number of destroyed or damaged health facilities attributed to disasters.</td>
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<tr>
<td></td>
<td>D-3 Number of destroyed or damaged educational facilities attributed to disasters.</td>
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<tr>
<td></td>
<td>D-4 Number of other destroyed or damaged critical infrastructure units and facilities attributed to disasters.</td>
</tr>
<tr>
<td></td>
<td>D-5 (Compound) Number of disruptions to basic services attributed to disasters.</td>
</tr>
<tr>
<td></td>
<td>D-6 Number of disruptions to educational services attributed to disasters.</td>
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<tr>
<td></td>
<td>D-7 Number of disruptions to health services attributed to disasters.</td>
</tr>
<tr>
<td></td>
<td>D-8 Number of disruptions to other basic services attributed to disasters.</td>
</tr>
<tr>
<td>Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020.</td>
<td>E-1 Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030.</td>
</tr>
<tr>
<td></td>
<td>E-2 Percentage of local governments that adopt and implement local disaster risk reduction strategies in line with national strategies.</td>
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<tr>
<td>Sendai Framework</td>
<td>Sustainable Development Goals</td>
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<tr>
<td><strong>Targets</strong></td>
<td><strong>Indicators</strong></td>
</tr>
<tr>
<td>Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of this framework by 2030.</td>
<td>11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations.</td>
</tr>
<tr>
<td>F-1 Total official international support, (official development assistance (ODA) plus other official flows), for national disaster risk reduction actions.</td>
<td>11.5.1 Number of deaths, missing people, injured, relocated or evacuated due to disasters per 100,000 people</td>
</tr>
<tr>
<td>F-2 Total official international support (ODA plus other official flows) for national disaster risk reduction actions provided by multilateral agencies.</td>
<td>11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015–2030, holistic disaster risk management at all levels.</td>
</tr>
<tr>
<td>F-3 Total official international support (ODA plus other official flows) for national disaster risk reduction actions provided bilaterally.</td>
<td>11.b.1 Percentage of cities that are implementing risk reduction and resilience strategies aligned with accepted international frameworks (such as the successor to the Hyogo Framework for Action 2005–2015 on disaster risk reduction) that include vulnerable and marginalized groups in their design, implementation and monitoring.</td>
</tr>
<tr>
<td>F-4 Total official international support (ODA plus other official flows) for the transfer and exchange of disaster risk reduction-related technology.</td>
<td></td>
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<tr>
<td>F-5 Number of international, regional and bilateral programmes and initiatives for the transfer and exchange of science, technology and innovation in disaster risk reduction for developing countries.</td>
<td></td>
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<tr>
<td>F-6 Total official international support (ODA plus other official flows) for disaster risk reduction capacity-building.</td>
<td></td>
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<tr>
<td>F-7 Number of international, regional and bilateral programmes and initiatives for disaster risk reduction-related capacity-building in developing countries.</td>
<td></td>
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<tr>
<td>F-8 Number of developing countries supported by international, regional and bilateral initiatives to strengthen their disaster risk reduction-related statistical capacity.</td>
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**Sendai Framework**

<table>
<thead>
<tr>
<th>Targets</th>
<th>Indicators</th>
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<tbody>
<tr>
<td>G-1 (Compound) Number of countries that have multi-hazard early warning systems.</td>
<td>Target 13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters.</td>
</tr>
<tr>
<td>G-2 Number of countries that have multi-hazard monitoring and forecasting systems.</td>
<td>13.2 Integrate climate change measures into national policies, strategies and planning.</td>
</tr>
<tr>
<td>G-3 Number of people per 100,000 that are covered by early warning information through local governments or through national dissemination mechanisms.</td>
<td>13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.</td>
</tr>
<tr>
<td>G-4 Percentage of local governments having a plan to act on early warnings.</td>
<td>14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans.</td>
</tr>
<tr>
<td>G-5 Number of countries that have accessible, understandable, usable and relevant disaster risk information and assessment available to the people at the national and local levels.</td>
<td>14.2.1 Percentage of coastal and marine development with formulated or implemented integrated coastal management/maritime spatial planning plans (that are harmonized where applicable), based on an ecosystem approach, that builds resilient human communities and ecosystems and provides for equitable benefit sharing and decent work.</td>
</tr>
<tr>
<td>G-6 Percentage of population exposed to or at risk from disasters protected through pre-emptive evacuation following early warning.</td>
<td>15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world.</td>
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**Sustainable Development Goals**

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<tr>
<th>Targets</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.1.1 Number of deaths, missing people, injured, relocated or evacuated due to disasters, per 100,000 people.</td>
<td>13.2.1 Number of countries that have formally communicated the establishment of integrated low-carbon, climate-resilient, disaster risk reduction development strategies (e.g. a national adaptation plan process, national policies and measures to promote the transition to environmentally friendly substances and technologies).</td>
</tr>
<tr>
<td>13.3.1 Number of countries that have integrated mitigation, adaptation, impact reduction and early warning into primary, secondary and tertiary curricula.</td>
<td>15.3.1 Percentage of land that is degraded over total land area.</td>
</tr>
</tbody>
</table>

Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to the people by 2030.
This series—a product under the **Enhancing Knowledge and Capacity to Manage Disaster Risk for a Resilient Future in Asia and the Pacific Project**—is part of a larger effort within ESCAP to support its member States in building up their resilience to changes in climate conditions and to help foster sustainable development. ESCAP and partners initiated the project with support from the United Nations Development Account.