

# Opportunities and options for integrating climate change adaptation with the Sustainable Development Goals and the Sendai Framework for Disaster Risk Reduction 2015–2030

## Summary

This technical paper explores opportunities and options for integrating adaptation with the Sustainable Development Goals and the Sendai Framework for Disaster Risk Reduction 2015–2030 as identified by Parties and non-Party stakeholders through their practical experiences. It is primarily based on discussions held at the technical expert meetings on adaptation, which took place on 16 and 17 May 2017 in Bonn, Germany, in conjunction with the forty-sixth sessions of the subsidiary bodies. Building on the technical paper contained in document FCCC/TP/2016/6, this paper furthers the understanding of how good practices and lessons learned can lay the foundation for the enhanced implementation of adaptation actions in the pre-2020 period and beyond.

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For further information contact

United Nations Climate Change Secretariat  
Platz der Vereinten Nationen 1  
53113 Bonn, Germany  
Telephone +49 228 815 10 00  
Telefax +49 228 815 19 99

For more information, please visit: [tep-a.org](http://tep-a.org)

## Key messages

Integrating adaptation with the SDGs and the Sendai Framework can be very beneficial for building resilience comprehensively across societies. While maintaining the autonomy of each of the post-2015 frameworks, improved coherence of action to implement the three frameworks can save money and time, enhance efficiency and further enable adaptation action.

There are many opportunities to support further policy integration between adaptation, sustainable development and disaster risk reduction, owing in part to the common themes, scopes and objectives of the three global agendas. Both "resilience" and "ecosystems" can act as core concepts for motivating such integration. Actors, including state and non-state, operating across multiple sectors and scales ranging from local to global, can facilitate policy coherence, and vulnerable people and communities can benefit from and initiate effective bottom-up, locally driven solutions that contribute to multiple policy outcomes simultaneously.

Unprecedented levels of coordination and coherence will be needed. Building the capacity for it will help to clarify roles and responsibilities and to encourage partnerships among a wide range of actors.

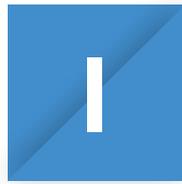
The availability of data, including climate and socioeconomic data, and their resolution remain a challenge, especially in Africa. Better data management, more informed policymaking and capacity-building are also needed.

The process to formulate and implement NAPs can effectively support the implementation of enhanced adaptation action and the development of integrated approaches to adaptation, sustainable development and disaster risk reduction, thanks in part to its demonstrated success as a planning instrument, the resources available for its support, and its iterative nature and flexible, nationally driven format.

Adequate, sustainable support for adaptation efforts from sources public, private, international and national alike is crucial. Accessing finance and technology development and transfer and capacity-building support is also critical, particularly for developing countries.

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# Introduction

## A. Background

In 2015, the international community made an unprecedented set of commitments to pursuing a sustainable future. Three landmark global agendas were produced: the Paris Agreement; the Sustainable Development Goals (SDGs) within the framework of the 2030 Agenda for Sustainable Development; and the Sendai Framework for Disaster Risk Reduction 2015–2030. The world set course for a transition to low-carbon, climate-resilient societies and economies, with countries working towards common goals while focusing on national circumstances, challenges and opportunities.

Adapting to climate change is a key objective of the three post-2015 agendas. The 2030 Agenda for Sustainable Development is aimed at achieving the full implementation of the SDGs by 2030. It makes the link to climate change very clear by noting that it “is one of the greatest challenges of our time and its adverse impacts undermine the ability of all countries to achieve sustainable development,” and that the widest

possible cooperation is needed to mitigate and adapt.<sup>1</sup>

The Sendai Framework contains seven targets and four priorities for action. Learning from the Hyogo Framework for Action (HFA),<sup>2</sup> the Sendai Framework notes that “disasters, many of which are exacerbated by climate change and which are increasing in frequency and intensity, significantly impede progress towards sustainable development”<sup>3</sup>

Given interconnectedness of climate change, sustainable development and disaster risk reduction, the second technical expert meetings (TEMs) on adaptation, under the technical examination process on adaptation (TEP-A),<sup>4</sup> focused on the opportunities and challenges associated with pursuing the three global agendas collaboratively, as well as on options to support their further integration, especially on the country level (see figure 1).

<sup>1</sup> See <https://goo.gl/bYSZ27>.

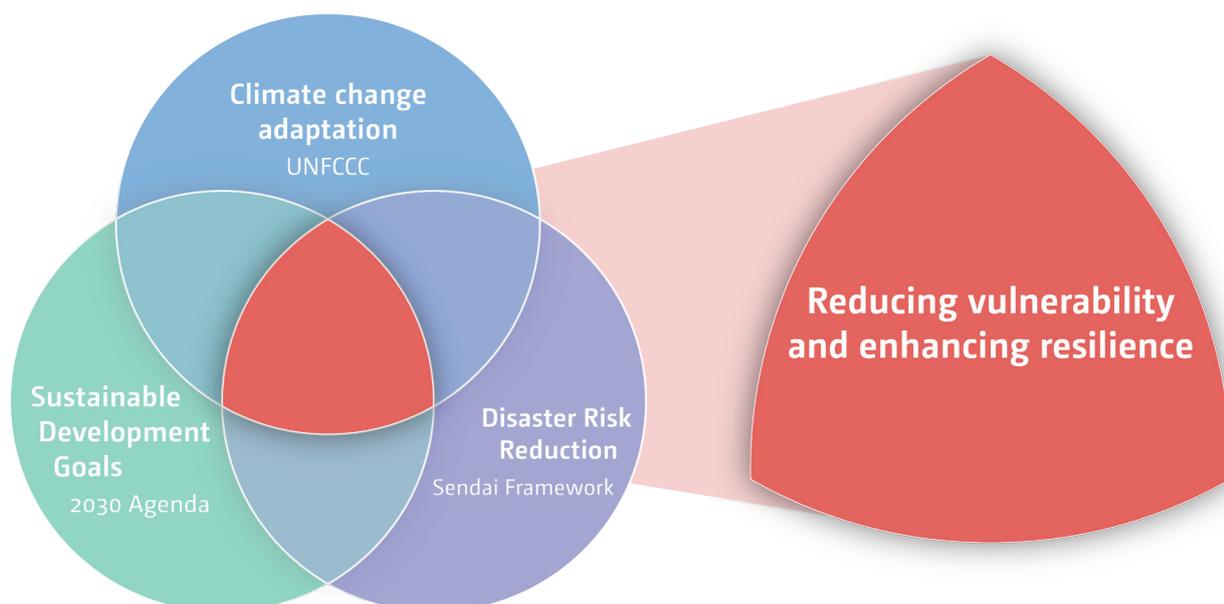
<sup>2</sup> See <https://goo.gl/5bUfBz>.

<sup>3</sup> See <https://goo.gl/74m9ea>.

<sup>4</sup> For further information, see <https://goo.gl/w19Afd>.

Figure 1

### Integrating adaptation with the Sustainable Development Goals and the Sendai Framework



These TEMs<sup>5</sup> took place in conjunction with the forty-sixth sessions of the subsidiary bodies, on 16 and 17 May 2017 in Bonn, Germany. The first day addressed linking adaptation planning and implementation with the SDGs and the Sendai Framework, focusing on the roles of resilient ecosystems, societies and economies, as well as specific integrated approaches to adaptation. The second day focused on the role of national adaptation plans (NAPs) specifically, including NAPs as a framework for creating linkages with the SDGs and the Sendai Framework, and on identifying drivers of change, opportunities and options to support enhanced action and further integration.

## B. Objective, scope and structure of the paper

The objective of this technical paper is to identify opportunities for enhancing adaptation action, as well as options for supporting the implementation of specific actions, including by integrating adaptation with efforts to achieve the SDGs and implement the Sendai Framework. The paper attempts to answer how integrating adaptation, sustainable development and disaster risk reduction can contribute to strengthening resilience, reducing vulnerabilities and increasing the understanding and implementation of adaptation actions.<sup>6</sup> The paper covers the specific policies, strategies and actions discussed at the TEMs, as well as submissions from Parties to the Adaptation Committee and other relevant sources of information.

Within the context of the technical paper, opportunities reflect emerging best practices in integrating adaptation with efforts to achieve the SDGs and implement the Sendai Framework. The paper also seeks to identify options to replicate and scale up best practices, taking into account national circumstances and specific climate impacts.

While the paper provides an overview of the presentations and discussions that took place at the TEMs and incorporates other relevant sources of information, it should not be interpreted as implying that there is consensus among Parties on any of the opportunities or options covered.

It includes key messages arising from knowledge and experience to date, provides important findings to assist further work on adaptation, and highlights some of the remaining gaps that could be further investigated with follow-up activities and reports.

The paper consists of five chapters. Following this introductory chapter, chapter II provides an overview of the three post-2015 agendas, including a discussion of the benefits of integrated approaches. Chapter III addresses several specific opportunities associated with pursuing an integrated approach to the three post-2015 agendas, drawing heavily on the practical experiences of countries and adaptation experts to date. Chapter IV, in contrast, draws attention to some important challenges associated with integrated approaches to adaptation, sustainable development and disaster risk reduction, and presents several options to overcome those challenges and support enhanced adaptation action, looking at the role of NAPs in particular. Finally, chapter V summarizes key insights and looks forward to future work.

<sup>5</sup> For further information, see: <https://goo.gl/YYD23C>.

<sup>6</sup> Decision 1/CP.21, paragraph 125.



## Integrating adaptation with the Sustainable Development Goals and the Sendai Framework

The United Nations has been the convening agent for international cooperation on global development issues for many years. While the Paris Agreement, the SDGs and the Sendai Framework are certainly not the first or only global agendas that have been developed under the auspices of the United Nations, they are critically important frameworks for policymaking in the post-2015 era.

This chapter provides an initial overview of the case for pursuing an integrated approach to adaptation, sustainable development and disaster risk reduction. It begins with a synopsis of each individual agenda, followed by a discussion of what integration may look like in this context and its potential benefits. The chapter will conclude by noting efforts made to date to incorporate the SDGs and the Sendai Framework, as included in submissions from Parties.

### A. Paris Agreement

Adopted at the twenty-first session of the Conference of the Parties (COP) in December 2015, the Paris Agreement is the centrepiece of global climate policy. The Paris Agreement brings together, for the first time, all nations under the common cause of mitigating climate change, adapting to its adverse effects and making finance flows consistent with a pathway towards climate-resilient development. The Paris Agreement entered into force on 4 November 2016, 30 days after the date on which at least 55 Parties to the Convention, accounting for at least an estimated 55 per cent of total global greenhouse gas emissions, had deposited their instruments of ratification, acceptance, approval or accession within the Depositary. As at 2 September 2017, 160 Parties had ratified the Paris Agreement.

The Paris Agreement aims to hold global average temperature increase to well below 2 °C above pre-industrial levels and to pursue efforts to limit it to 1.5 °C, recognizing that this would significantly reduce the risks and impacts of

climate change.<sup>7</sup>

Importantly, the Paris Agreement also represents the culmination of many years of work on adaptation policy. Building in particular on the Cancun Adaptation Framework, the agreement recognizes that adaptation needs are commensurate with mitigation efforts and that greater adaptation needs will involve greater adaptation cost. It also recognizes the importance of support and global cooperation on adaptation and particularly the importance of accounting for the needs of developing country Parties that are especially vulnerable to climate change impacts.<sup>8</sup> Parties also agreed on a global goal on adaptation of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change, with a view to contributing to sustainable development and ensuring adequate adaptation response in the context of the aforementioned temperature goal.<sup>9</sup>

Under the Paris Agreement, all countries undertake and communicate ambitious efforts as nationally determined contributions (NDCs) to the global response to climate change with a view to achieving the purpose of the agreement.<sup>10</sup> Progress towards achieving the purpose and goals will be assessed every five years by a global stocktake, the outcome of which will inform Parties in enhancing their level of ambition with respect to climate action.<sup>11</sup>

In addition to the Paris Agreement, adaptation is pursued under the Convention through the process to formulate and implement NAPs. The only multilaterally agreed, comprehensive adaptation process of its kind, the NAP process takes a medium- to long-term approach to reducing vulnerability to the adverse effects of climate change that is integrated with national development planning processes and strategies. The NAP process enables Parties to formulate and implement NAPs as a means of identifying

<sup>7</sup> Article 2, paragraph 1(a), of the Paris Agreement.

<sup>8</sup> Article 6, paragraph 6, of the Paris Agreement.

<sup>9</sup> Article 7, paragraph 1, of the Paris Agreement.

<sup>10</sup> Article 3 of the Paris Agreement.

<sup>11</sup> Article 14 of the Paris Agreement.

medium- and long-term adaptation needs and developing and implementing strategies and programmes to address those needs. It is a continuous, progressive and iterative process that follows a country-driven, gender-sensitive, participatory and fully transparent approach.

In order to inform the international community of their efforts and needs, Parties are requested to submit an adaptation communication reflecting their priorities, implementation and support needs, plans and actions. This communication can be submitted together with other documents such as NAPs, NDCs or national communications. It is to contain the information required by the global stocktake to, inter alia, recognize adaptation efforts and assess progress towards the global goal on adaptation. The adaptation communication is being designed by Parties in a negotiation that should be completed at COP 24 (December 2018); however, two countries have already identified the adaptation components of their NDCs as their adaptation communication.

## B. Sustainable Development Goals

The SDGs were adopted on 27 September 2015 and entered into force on 1 January 2016. They reflect the broad consensus among many stakeholders, including countries and non-state actors such as the private sector and non-governmental organizations (NGOs), and are designed to build on the success of the earlier United Nations Millennium Development Goals (MDGs), which aimed to end all forms of poverty by 2030.

The MDGs were intended to encourage actions to reduce poverty primarily in developing countries. The SDGs go beyond this to focus on the root causes of poverty. Among the many objectives of the SDGs are: eliminating poverty and hunger; addressing inequalities both within and among countries; achieving sustainable and inclusive economic growth; creating peaceful, just and inclusive societies; protecting the planet; ensuring the availability of water; achieving sustainable production and consumption; taking action to combat climate change; and enhancing global partnerships for sustainable development.<sup>12</sup>

There are 17 SDGs (see figure 2). Each goal has several associated targets and a set of measurable

<sup>12</sup> See <https://goo.gl/UV1Gb9>.

indicators used to track progress; there are 169 targets and 230 approved indicators in total across the SDGs. Goal 13 is targeted to urgently addressing climate change and its impacts.

Figure 2  
Sustainable Development Goals



Source: United Nations. 2015. Sustainable Development Goals communications materials. Available at <https://goo.gl/as1jDU>.

## C. Sendai Framework

The Sendai Framework was endorsed by the United Nations General Assembly following the Third United Nations World Conference on Disaster Risk Reduction, held in Sendai, Japan, in March 2015.<sup>13</sup> It is the successor instrument to the HFA.

The Sendai Framework solidifies a paradigm shift from managing disasters to managing current and future risks, bringing in resilience-building as the core target to be reached by 2030. To this end, countries pursue four priorities of action: understanding disaster risk; strengthening disaster risk governance; investing in resilience; and enhancing and leveraging disaster preparedness. Together, these four priorities aim for “the substantial reduction of disaster risk and losses in lives, livelihoods and health in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries”.<sup>14</sup>

The scope of the Sendai Framework includes consideration of the need to recognize small-scale and large-scale, frequent and infrequent, sudden and slow onset disasters, caused by natural or man-made hazards as well as related environmental, technological and biological hazards and risks.<sup>15</sup> The guiding principles

<sup>13</sup> United Nations General Assembly resolution 69/283, paragraph 2.

<sup>14</sup> United Nations General Assembly resolution 69/283, paragraph 16.

<sup>15</sup> See <https://goo.gl/4x9FqZ>.

indicate clearly that member States have the primary responsibility to prevent new and reduce existing disaster risk, and highlight the need for inclusivity, the need to ensure the promotion and protection of all human rights and the need for engagement by all of society. This scope and the guiding principles make the Sendai Framework a comprehensive framework for addressing current and future risks posed by hazards to all segments of society.

The Sendai Framework is the first disaster risk reduction framework to include specific targets against which progress can be measured. In February 2017, the United Nations General Assembly adopted the resolution that approved the indicators specifically designed to aid in the measurement of the progress in achieving each of seven targets.<sup>16</sup> By using these indicators, countries will be able to measure their efforts to reduce disaster losses by 2030, including mortality, numbers of people affected, economic losses and damage to critical infrastructure such as water, transportation, telecommunications, schools and hospitals. These indicators were designed to ensure coherence with the measurement of progress towards relevant targets of the SDGs. For most targets, progress will be evaluated by comparing data recorded for the decade 2020–2030 with the period 2005–2015.

The Sendai Framework embodies the expanding purview of the disaster risk reduction community by encompassing climate-related disasters as well as, more broadly, building resilience. The target-based nature of the framework is closely related to the SDGs, with the possibility of setting customizable indicators tailored to the specific circumstances of each country and creating an opportunity for more coherence with other relevant policy priorities such as adaptation.

## D. Benefits of integrated approaches to adaptation, sustainable development and disaster risk reduction

Given the centrality of the three global agendas to policymaking in the post-2015 era, many countries and other actors have expressed an interest in pursuing integrated approaches to adaptation, sustainable development and disaster

<sup>16</sup> United Nations General Assembly resolution 71/276, paragraph 2.

risk reduction. Understanding the benefits of integration, however, is contingent on a common understanding of what an ‘integrated approach’ means in this context.

Policy integration has been of great interest to policymakers and researchers for many decades and concerted efforts have been undertaken to better understand the concept of integration. One prominent perspective is that of Peters (1998), who refers to policy integration as an “administrative Holy Grail”.<sup>17</sup> Instead of viewing integration as an outcome to be achieved, it has been suggested that integration is a coordination problem, where various actors must work together to deliver outcomes and eliminate redundancies or gaps in services. In this regard, integration can be viewed as a series of steps (see the table on the next page) or a continuum (see figure 3), where complete fragmentation is portrayed in opposition to perfect integration.<sup>18</sup>

Figure 3  
Horizontal integration continuum



Source: Keast R, Brown K and Mandell M. 2007. *Getting the right mix: unpacking integration meanings and strategies*. International Public Management Journal. 10(1): 9–34 (figure 1, p.12).

Importantly, this organizational perspective should not be seen as making normative claims about what degree of integration is preferable – an issue that is especially salient in the context of adaptation, sustainable development and disaster risk reduction. Despite the positive connotations of policy integration, a fully integrated approach may be undesirable, as high levels of integration may undermine the ability of the various international policymaking processes to develop and pursue self-determined outcomes.

Instead, discussions at the TEMs indicated that partial but robust policy integration is preferred. Participants suggested that the three global agendas have important core alignments that make pursuing them in an integrated manner

<sup>17</sup> Peters BG. 1998. *Managing Horizontal Government: The Politics of Coordination*. Research Paper No. 21. Ottawa: Canadian Centre for Management Development.

<sup>18</sup> Metcalfe (1994) cited in: Persson Å. 2004. *Environmental Policy Integration: An Introduction*. Policy Integration for Sustainability Background Paper. Stockholm: Stockholm Environment Institute.

## Internal management of external relations: policy coordination scale

Step number	Step description
1	<b>Independent decision-making by ministries.</b> Each ministry retains autonomy within its own policy domain
2	<b>Communication with other ministries (information exchange).</b> Ministries keep each other up to date about what issues are arising and how they propose to act in their own areas. Reliable and accepted channels of regular communication must exist
3	<b>Consultation with other ministries.</b> A two-way process. As well as informing other ministries of what they are doing, individual ministries consult other ministries in the processes of formulating their own policies or position
4	<b>Avoiding divergences among ministries.</b> Ensuring that ministries do not take divergent negotiating positions and that government speaks with one voice
5	<b>Interministerial search for agreement (seeking consensus).</b> Beyond negative coordination to hide differences, ministries work together through, for example, joint committees and project teams, because they recognize their interdependence and their mutual interest in resolving policy differences
6	<b>Arbitration of inter-organizational differences.</b> Where inter-organizational difference of view cannot be resolved by the horizontal coordination processes defined in steps 2 to 5, central machinery for arbitration is needed
7	<b>Setting parameters for organizations.</b> A central organization of inter-organizational decision-making bodies may play a more active role by setting parameters on the discretion of individual organizations. These parameters define what organizations must not do, rather than prescribing what they should do
8	<b>Establishing government priorities.</b> The centre of government may play a more positive role by laying down main lines of policy and establishing priorities
9	<b>Overall governmental strategy.</b> This case is added for the sake of completeness, but is unlikely to be attainable in practice

Source: Metcalfe (1994) cited in: Peters BG. 1998 *Managing Horizontal Government: The Politics of Coordination*. Research Paper No. 21. Ottawa: Canadian Centre for Management Development (table 1, p.7).

desirable. Building resilient futures, for example, is a key component of all three agendas, and abundant interconnections go beyond resilience-building activities that contribute to the goals of multiple agendas. At the same time, participants highlighted the notion that some distinction between the three agendas is necessary. Indeed, each agenda has been formulated through a distinct process with different actors and legal frameworks, and the core concept of resilience is treated somewhat differently in each context.<sup>19</sup> Additionally, there is substantial merit in keeping the various policy development negotiations separated, so that important issues that fall under the purview of only one agenda are still captured and given appropriate attention.

What, then, are the key benefits of a partial but robust policy integration? These fall in to three primary categories: enhanced coherence, efficiency

and effectiveness.<sup>20</sup> Beginning with enhanced coherence, one of the clearest benefits of an integrated approach to adaptation, sustainable development and disaster risk reduction would be ensuring complementarity between actions that are undertaken as a part of each agenda. In the most basic sense, this coherence can be part of an effort to identify and reduce actions that contribute to one set of goals, but undermine another. For adaptation, this may mean avoiding activities aimed at sustainable development that have maladaptive consequences. In the event that policy priorities established by the three global agendas are contradictory, an integrated policy approach would be beneficial to resolve contradictions when possible, or to establish mechanisms to effectively prioritize goals when irreconcilable. Likewise, in its strongest form, enhanced coherence would go beyond identifying

<sup>19</sup> Peters K, Langston L, Tanner T and Bahadur A. 2016. 'Resilience' Across the Post-2015 Frameworks: Towards Coherence? Working Paper. London: Overseas Development Institute.

<sup>20</sup> See also: Meijers E and Stead D. 2004. "Policy integration: what does it mean and how can it be achieved? A multi-disciplinary review." Paper presented at the Berlin Conference on the Human Dimensions of Global Environmental Change on "Greening of policies: interlinkages and policy integration" held in Berlin on 3 and 4 December 2004.

inconsistencies and contradictions, and would highlight areas of synergy. This could occur at every level of the policy process, including identifying policy priorities, developing sets of targets and indicators that could be used to measure progress, and determining actions that contribute positively to multiple outcomes.

Another key benefit of policy integration is increased efficiency. With a limited set of human, technical and financial resources to achieve the three agendas, an integrated approach would allow countries to make better use of their available capacity. Working on the three agendas collaboratively would result in the sharing of data between relevant actors, encourage policy learning related to best practices and common issues, and reallocate resources from operations and maintenance to innovation and addressing complex problems.

Finally, the third reason for pursuing an integrated approach to adaptation, sustainable development and disaster risk reduction is so that the global community may effectively achieve the goals set forth in each of the agendas. Successful adaptation is not limited to minimizing the adverse effects of climate change. Rather, adaptation presents the global community with an opportunity to ‘adapt forward’ and work along an aspired development pathway towards the SDGs instead of regressing to the state of affairs before climate change. One of the guiding principles of the Sendai Framework is to “build back better”, suggesting that disaster risk reduction should go beyond addressing short-term risk to preventing the creation of disaster risk.<sup>21</sup> Effectively achieving the goals of one global development agenda will necessarily involve substantial progress towards the other two.

To summarize, full policy integration is not likely to be desirable as the global community works to achieve the three global agendas. Rather, a partially integrated approach is preferred that allows each policy process to maintain its autonomy and focus while benefiting from enhanced coherence with the other frameworks and a more efficient use of limited resources. This approach will help to effectively achieve the goals of all three agendas, including building comprehensive resilience across all segments of society.

<sup>21</sup> United Nations General Assembly resolution 69/283, annex II, paragraph 19(k).

## E. Linkages between adaptation, the Sustainable Development Goals and the Sendai Framework

Given the potential benefits of integrating adaptation, sustainable development and disaster risk reduction, what high-level efforts have been undertaken to establish connections between the frameworks?

While there are no explicit mentions of the SDGs or the Sendai Framework in the Paris Agreement, the global goal on adaptation provides an umbrella for integrated actions when it calls for “enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change, with a view to contributing to sustainable development”.<sup>22</sup>

Within the SDGs, goal 13 on climate action is another clear link. This SDG aims to “take urgent action to combat climate change and its impacts” and has the following specific targets:

- (a) Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries;
- (b) Integrate climate change measures into national policies, strategies and planning;
- (c) Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning;
- (d) Implement the commitment undertaken by developed country Parties to the Convention to a goal of mobilizing jointly USD 100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund (GCF) through its capitalization as soon as possible;
- (e) Promote mechanisms for raising capacity for effective climate change related planning and management in the least developed countries (LDCs) and small island developing States (SIDS), including focusing on women, youth and local and marginalized communities.

While the resolution related to the SDGs is careful

<sup>22</sup> Article 7, paragraph 1, of the Paris Agreement.

to note that the UNFCCC remains the primary forum for negotiating the global response to climate change,<sup>23</sup> the targets mentioned above are clearly aimed at supporting the work of the UNFCCC and are highly relevant for discussions on policy integration.

Importantly, SDG 13 is not the only SDG with relevance to adaptation or the Paris Agreement. Indeed, strong arguments exist that progress towards any of the SDGs is likely to increase resilience to climate change (as is the case with the SDGs on hunger, water, health, gender and ecosystems) or address some of the fundamental causes of climate change (captured in part by the SDGs on energy, infrastructure, cities, and consumption and production).

The Sendai Framework, adopted prior to the adoption of the SDGs and the Paris Agreement, also makes clear reference to the challenges posed by climate change for disaster risk reduction. As the SDGs do, the Sendai Framework acknowledges the mandate of the UNFCCC as the primary oversight body for climate change policy, but highlights the role that climate change plays as a key driver of disaster risk, as well as the ability of adaptation and resilience-building to reduce disaster risk and achieve sustainable development. And, as with the Paris Agreement and the SDGs, the Sendai Framework specifically notes the importance of working with developing countries, in particular the LDCs, SIDS, landlocked

developing countries and African countries, as well as with middle-income countries facing specific challenges.

Beyond these connections established within the three global agendas themselves, several Parties and organizations have begun to lay the foundation for further integration by highlighting the roles of the SDGs and the Sendai Framework in documents that have been submitted to the secretariat. It is important to note that the overview presented here cannot capture the true extent of integration between adaptation, sustainable development and disaster risk reduction occurring in practice for several reasons. Given that the Paris Agreement, the SDGs and the Sendai Framework were adopted in the same year, Parties had relatively little time to systematically integrate these agendas into any documents submitted to the secretariat. As such, Parties should not be faulted for not undertaking relevant discussions, although it is still instructive to see where steps towards integration have been made. Moreover, this overview does little to reflect many of the realities of policy integration within countries themselves. As a review of documents submitted to the secretariat, this exercise captures only high-level representations of national policy priorities, and it is unable to include comment on the extent to which these policy priorities have been realized. In particular, finance remains a key challenge for pursuing integrated policy approaches, especially within developing

<sup>23</sup> United Nations General Assembly resolution 70/1, paragraph 31.

#### Box 1

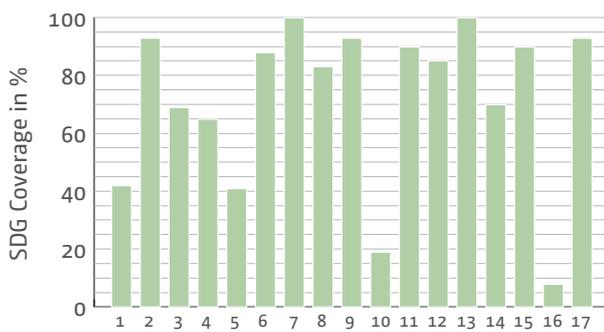
##### References to the Sustainable Development Goals in nationally determined contributions

- Bolivia (Plurinational State of): the Party's nationally determined contribution (NDC) is defined in the context of the 17 Sustainable Development Goals (SDGs) and the 169 targets.
- Egypt has developed the Sustainable Development Strategy: Egypt Vision 2030, whose goals are in line with the SDGs.
- Ghana highlights that its NDC resonates with the Ghana Shared Growth Development Agenda II, the anticipated 40-year socioeconomic transformational plan and the SDGs.
- Guatemala: the Party's contributions contained in the NDC will be incorporated into the national development plan for 2032 together with the SDGs.
- Indonesia: the preparation of the Party's NDC has taken the SDGs into account.
- Jordan: for post-2020 action, Jordan proposes to align its NDC to the SDGs, with special attention paid to linking climate measures to SDGs 1 to 5.
- Nepal aims to tackle the impacts of poverty and climate change simultaneously to achieve the SDGs.
- Sudan: the adaptation component of the Party's NDC is being prepared with a view to achieving economic and sustainable development and poverty reduction in line with the 25-year development strategy, the Millennium Development Goals and the SDGs.
- Swaziland: climate change affects the ability of the Party to attain the SDGs.
- Thailand: adaptation undertakings contribute to the Party's achieving the SDGs.
- Uganda: although its national emissions are low, Uganda is contributing to emission reductions as reflected in SDG 13, its forestry activities promote biodiversity conservation as reflected in SDG 15 and its NDC opens the door to reach SDG 7.

countries, and an expressed interest in integration is unlikely to mean that robust policy integration has indeed been achieved.

Beginning with the NDCs, only 11 Parties make an explicit reference to the SDGs (see box 1). In these cases, the linkages between the SDGs and adaptation are not elaborated in detail, although Parties suggest that their NDCs were prepared with the SDGs in mind. Despite there being few explicit references, a recent report by the United Nations Executive Office of the Secretary-General and the UNFCCC<sup>24</sup> found that several developing countries highlight the linkages between their actions to address climate change, as presented in their NDCs, and their development priorities, including social and economic development as well as poverty eradication (see figure 4).

Figure 4  
Horizontal integration continuum



Source: United Nations Executive Office of the Secretary-General and UNFCCC. 2017. *Catalysing the Implementation of Nationally Determined Contributions in the Context of the 2030 Agenda through South-South Cooperation* (figure 4, p.41). Available at <https://goo.gl/Jqr4Ts>, p.12).

For the Sendai Framework, the picture is relatively similar to that for the SDGs. Only two Parties make an explicit reference to the Sendai Framework (see box 2), although over 50 reference disaster risk reduction or disaster risk management generally.

Another important site for the development of an integrated policy approach is within NAPs submitted by developing countries to the secretariat. As at 2 October 2017, seven NAPs had been completed under the Convention, four of which contain explicit references to the SDGs (Brazil, Kenya, Sri Lanka and Sudan) and one of which explicitly discusses the Sendai Framework

<sup>24</sup> United Nations Executive Office of the Secretary-General and UNFCCC. 2017. *Catalysing the Implementation of Nationally Determined Contributions in the Context of the 2030 Agenda Through South-South Cooperation*. Available at <https://goo.gl/jPwX4M>.

#### Box 2

##### References to the Sendai Framework in the nationally determined contributions

Colombia will focus its efforts to 2030 jointly with several global targets that contribute to increasing resilience, such as those of the Convention on Biological Diversity, the 2030 Agenda for Sustainable Development and the United Nations Convention to Combat Desertification, as well as the Sendai Framework for Disaster Risk Reduction.

India: the link between adaptation, disaster risk reduction and loss and damage is important. Flash floods, extreme weather and droughts have increased in frequency and unpredictability. The Sendai Framework has laid down a road map for the required response.

(Brazil). Some Parties, for example Sri Lanka, have begun to demonstrate the usefulness of the process to formulate and implement NAPs for developing an integrated approach to adaptation, sustainable development and disaster risk reduction (see box 3).

#### Box 3

##### National adaptation plan for climate change impacts in Sri Lanka

Chapter 8 of Sri Lanka's national adaptation plan (NAP) is devoted specifically to "Adaptation and sustainable development: the potential contribution of the NAP towards achieving SDGs". In this chapter, Sri Lanka identifies eight Sustainable Development Goals (SDGs) and 13 targets closely related to adaptation in the national context. The Party specifically discusses increasing the resilience of the poor, developing sustainable food production systems, strengthening early warning and risk management systems, improving water efficiency and water-related ecosystems, reducing the number of people affected by disasters, adopting integrated policies for climate change and disaster risk management, taking climate action, minimizing ocean acidification, combating desertification and reducing the degradation of natural habitats. For each target, Sri Lanka also identifies several concrete adaptation actions that will contribute to the achievement of the relevant SDG. Fifty-one adaptation actions are listed, several of which contribute to multiple SDG targets. This integrated approach recognizes that adaptation can make important contributions to the achievement of the SDGs, and demonstrates one method of integrated policymaking where actions are identified and prioritized that support progress for both agendas.

Source: Climate Change Secretariat of Sri Lanka. 2016. *National Adaptation Plan for Climate Change Impacts in Sri Lanka*. Available at <https://goo.gl/ocY7Zq>.

Another area for integration is climate data and information. The Global Climate Observing System,<sup>25</sup> as mandated under the Convention, published its new implementation plan, *The Global Observing System for Climate: Implementation Needs*,<sup>26</sup> in 2016. The plan sets

<sup>25</sup> See <https://goo.gl/vvgZN7>.

<sup>26</sup> Available at <https://goo.gl/oUq3ZH>.

out a way forward, building on current actions, for scientific and technological innovations for the Earth observation programmes of space agencies and for the national implementation of climate observing systems and networks. It includes new and wider considerations of climate observations and their connections with adaptation and mitigation issues, including the relationship of essential climate variables to the three climate cycles of water, carbon and energy, and to the Rio Conventions, other biodiversity-related conventions, the SDGs and the Sendai Framework.

Overall, the formal integration of adaptation, the SDGs and the Sendai Framework appears to still be in its infancy. While there are relatively few instances of explicit linkages between these three agendas to date, Parties are beginning to move towards recognizing connections and developing integrated policy approaches. Critically, while formal attempts at policy integration in the adaptation space may as yet be limited, many examples exist of Parties and non-Party stakeholders working in practice towards integrating adaptation, sustainable development and disaster risk reduction. The remainder of this paper will focus on these concrete examples, with the intention of showcasing opportunities for integration and emerging best practices, common challenges and options to support further integration.



# Opportunities for pursuing integrated approaches to adaptation, sustainable development and disaster risk reduction

Given the potential benefits of integrated approaches to adaptation, sustainable development and disaster risk reduction, many Parties and non-Party stakeholders have begun to take practical steps towards integrating the three post-2015 agendas within their individual national contexts. Drawing from their experience, this chapter highlights several opportunities to pursue policy integration, as well as options to support the implementation of activities that support such an approach.

## A. Common themes: resilience and ecosystems

Several important opportunities to integrate adaptation, sustainable development and disaster risk reduction are the result of common themes that are present in all three agendas.

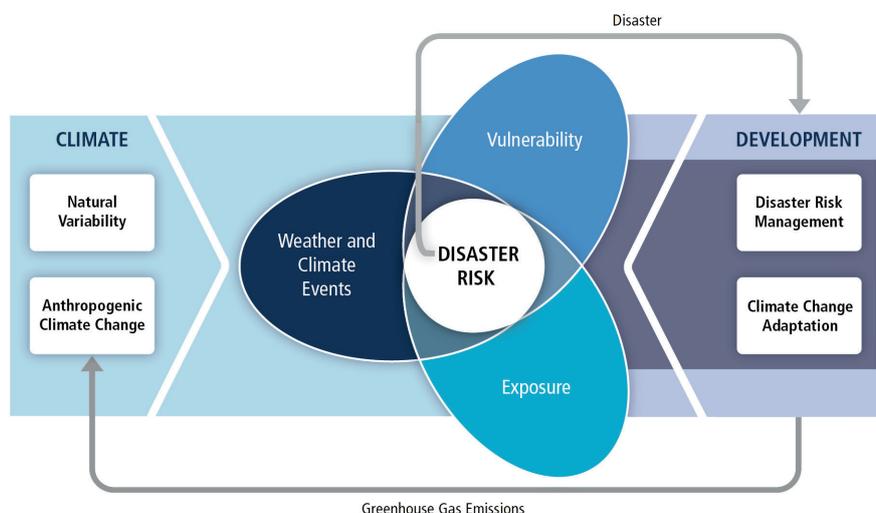
To begin, resilience features strongly in all three agendas, although usage varies slightly in each context. While the Paris Agreement does not provide a definition, according to a

special report of the Intergovernmental Panel on Climate Change, *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation*, resilience can be defined as “the ability of a system and its component parts to anticipate, absorb, accommodate, or recover from the effects of a hazardous event in a timely and efficient manner, including through ensuring the preservation, restoration, or improvement of its essential basic structures and functions.”<sup>27</sup> This definition, developed specifically for the adaptation context, suggests that resilience can include both the ability to recover from a hazardous event and the opportunity to improve or ‘adapt forward’, echoing sentiments expressed during the TEMs (see also figure 5).

The Sendai Framework, in contrast, utilizes the definition of resilience developed by the United Nations Office for Disaster Risk Reduction: “The ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its

<sup>27</sup> See box SPM.1, available at <https://goo.gl/VSkKse>.

Figure 5  
Linkages between adaptation, sustainable development and disaster risk reduction



Source: Intergovernmental Panel on Climate Change. 2012. *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation*. Special Report of the Intergovernmental Panel on Climate Change. Summary for policymakers (figure SPM.1, p.2). Available at <https://goo.gl/1gNpEs>

essential basic structures and functions through risk management.”<sup>28</sup> This definition possesses many of the same core elements as the definition referred to above, but does not include reference to future improvements.

The SDGs do not provide a definition of resilience, but use the term in connection with climate action and disaster risk reduction targets, leaving room for interpretation based on national context and the SDG in question. These slightly differing narratives on resilience closely echo statements made during session five of the TEMs, where it was proposed that approaches to resilience may depend on the sort of hazard in question, be it climate-related or otherwise.

Still, despite these differences, resilience may be useful as a unifying concept for adaptation, sustainable development and disaster risk reduction. By putting resilience at the core of planning, as opposed to one of adaptation, sustainable development or disaster risk reduction, actors can pursue solutions that contribute to all three global agendas. Sectoral approaches to planning, centred on resilience, provide an opportunity to foster better policy integration.

This focus on resilience as a core theme of all three agendas was captured in the TEMs during session three, during which discussions were held on building resilient ecosystems, societies and economies. Breakout groups discussed ways in which these systems could be made more resilient, and how resilience in one area supported resilience in another. Participants of the resilient ecosystems group agreed that well-supported ecosystems were the backbone of resilient societies and economies, while other groups acknowledged that resilient economies were necessary to support development and finance resilience-building measures, including ecosystem protection. Concrete examples were provided to support a resilience focus in session four, in which one presentation proposed that integrated approaches in coastal zone management could minimize the necessity of hard adaptation strategies such as sea walls, which have significant financial costs,<sup>29</sup> and another discussed sectoral planning for resilience in the tourism sector across the Caribbean region (see box 4).

<sup>28</sup> See <https://goo.gl/tPyD4H>.

<sup>29</sup> Intervention by a representative of the Ministry of Planning and Development of Trinidad and Tobago at the TEM on 16 May 2017. Audio available at <https://goo.gl/JtWqQs>.

#### Box 4

##### **Mainstreaming climate change into disaster risk management for the Caribbean region**

Supported by the Austrian Development Agency, the Caribbean Disaster Emergency Management Agency has undertaken steps to strengthen regional-, national- and community-level capacity for the management and coordinated response to natural and technological hazards, including the effects of climate change. Given the importance of tourism in the regional economy, this sectoral planning approach is supporting ongoing work aimed at diversifying the sector away from coastal tourism and towards community-based tourism. This diversification not only accounts for the risks posed by climate change to coastal infrastructure, but also addresses cross-cutting issues such as environmental integrity, gender and community well-being. The project combines concerns for energy security with other socioeconomic factors influencing the region. This approach suggests that robust disaster risk reduction focused on resilience-building and cognizant of climate change will contribute to sustainable development in general.

Source: Based on the presentation by the Caribbean Disaster Emergency Management Agency at the technical expert meeting on 16 May 2017. Audio available at <https://goo.gl/9sJ1A6>.

In addition to resilience, ecosystems play a central role in each of the three global agendas. Ecosystem-based adaptation has emerged as an important concept within the adaptation dialogue, and encourages “the conservation, sustainable management, and restoration of ecosystems to help people adapt to the impacts of climate change.”<sup>30</sup> Similarly, SDG 15 addresses life on land with a strong focus on ecosystems, while support is increasing for ecosystem-based approaches to disaster risk reduction that “apply ecosystem-based solutions, such as the conservation, restoration and the sustainable use and management of land, wetlands and other natural resources, in disaster and climate risk management”.<sup>31</sup>

Like resilience, ecosystems can function as a common concept that brings together adaptation, sustainable development and disaster risk reduction, and therefore provide an opportunity to encourage further integration between the three post-2015 agendas through ecosystem-based planning approaches. Box 5 provides examples of such approaches from Mexico and Peru.

<sup>30</sup> See <https://goo.gl/v1A4rW>.

<sup>31</sup> PEDRR Ecosystems for Adaptation and Disaster Risk Reduction. 2016. *Advancing Implementation of the Sendai Framework for Disaster Risk Reduction (2015–2030) Through Ecosystem Solutions*. Working Paper. Available at <https://goo.gl/6JyKFW>.

Box 5

**Ecosystem-based planning approaches in Mexico and Peru**

The project Adaptation to Climate Change Impacts on the Coastal Wetlands funded by the Global Environment Facility and implemented by various national institutions in Mexico seeks to protect three wetlands of the Gulf of Mexico that are highly vulnerable to climate change impacts. Project sites suffer from sea level rise, periodic flooding, seawater intrusion and poor access to potable water. The project applied an ecosystem-based approach taking into account the protection of biodiversity and climate change. Reforestation of 50 hectares of mangroves and 10 hectares of riparian vegetation were introduced in the wetlands and maintained by a special management unit to ensure their sustainability. A rainwater harvesting system with a purifying water system was installed to assist people suffering from limited water resources and gastrointestinal diseases. By combining different measures to address climate change related problems, the coastal wetlands of the Gulf of Mexico dramatically enhanced their adaptive capability and resilience, reduced disaster risk and improved sanitation.

Supported by the United Nations Environment Programme, the United Nations Development Programme and the International Union for Conservation of Nature, the Government of Peru implemented the Mountain Ecosystem-based Adaptation Programme in the Nor Yauyos-Cochas Landscape Reserve. The project site is severely affected by the adverse impacts of climate change because of its location in the high Andean region. Thanks to the abundant natural resources of the landscape reserve area and effective partnership between government and regional communities, agriculture, livestock, fishing and tourism as livelihood activities have provided social and economic benefits to 12 communities, around 10,390 people, living in the region. The project involved restoring water channels and reservoirs to respond to water demand, not only in the community reserve but also in the downstream area. Grassland management contributes to the enhancement of pastoral livelihoods and new income opportunities and to improved nutrition in the community, and reduces the risk of forest fires, drought, heavy rainfall and floods. The project has succeeded in enhancing adaptive capacity in the region and resilience against disaster risk, and securing consistent livelihoods in a sustainable and comprehensive manner.

Sources: for Mexico: Submission from Mexico on lessons learned and good practices on adaptation planning processes addressing ecosystems and interrelated areas such as water resources, 25 January 2017. Available at <https://goo.gl/3qAz1e>.

For Peru: Making the Case for Ecosystem-based Adaptation: The Global Mountain EBA Programme in Nepal, Peru and Uganda. Available at <https://goo.gl/K3209h>.

coordinated action among a multitude of actors, including multiple ministries and government agencies, different sectoral experts, private sector actors, NGOs, local stakeholders and international partners. This sort of coordination involves the careful synergizing of efforts to ensure complementarity, to avoid duplication and to capitalize on the various capacities of actors in a landscape where resources are limited.

Straightforward examples of this coordination include cross-sectoral and interministerial planning efforts. In these cases, key actors from various government agencies and sectoral experts are brought together to share experience. Important insights can emerge from practical experiences, and solutions to common issues can be shared across areas of expertise. This conversational space may also prove important to future planning efforts as it allows for the coordination of existing programmes and can inspire new collaborations to be pursued in the future. These dialogues provide an opportunity for relevant actors to come together and discuss how their work currently interfaces with the three agendas, as well as lay the foundations for more integration in the future (see an example in box 6).

Box 6

**The African Learning Forum on Adaptation**

Each year, the African Learning Forum on Adaptation convenes a multi-stakeholder conversation in order to facilitate knowledge-sharing related to adaptation in Africa. Up to 70 experts participate in each forum, bringing together insights from adaptation implementers, the policymaking world and financial institutions, as well as think tanks, universities and other knowledge-producing organizations. The goals of the forum include sharing knowledge and experience, as well as developing a supportive environment for African experts to foster improved coordination and collaborative experience across the continent.

While focused primarily on adaptation, the insights gained from the forum also have relevance for sustainable development and disaster risk reduction. Importantly, the networks built among African experts can be leveraged to coordinate further action in support of all three agendas.

Source: See <https://goo.gl/1wgPTt>.

## B. Common scopes: cross-sectoral and multiscalar

Another opportunity for integrating the three post-2015 agendas is created by the common need to operate across a wide variety of sectors and scales. Adaptation, sustainable development and disaster risk reduction often involve

It is important to recognize the roles that non-state actors play in pursuing adaptation, sustainable development and disaster risk reduction. In many cases, the private sector, NGOs and civil society have a part to play in pursuing the three agendas, particularly in areas where the government actors may lack the will or capacity

to act. These non-state actors may be involved in activities that contribute directly to the goals of the three agendas, and engaging them on these topics can be helpful to share ideas, take stock of ongoing work, pool resources and expertise, and identify gaps.

Within the adaptation context, one successful example of engaging non-state actors has been the Adaptation Futures conferences. The 2016 Adaptation Futures conference in Rotterdam, the Netherlands, was the largest gathering of adaptation experts to date, and included large representation of the private sector, partly due to the conference's focus on practices and solutions.<sup>32</sup> Adaptation Futures 2018, in Cape Town, is poised to have a similar impact, aiming to facilitate a dialogue for solutions among research institutions, government, civil society, international agencies, and business.<sup>33</sup>

Operation across scales is also crucial to pursuing the three agendas. The interconnectivity of information, values and policies is crucial to ensuring that solutions and actions are contextually appropriate and properly supported. Local to global policymaking has been undertaken in Tonga, for example, where a central component of developing strategies is securing political buy-in from key actors.<sup>34</sup> This is particularly important in developing policies at the regional level. It is also important to ensure that local development plans are aligned with national plans and that there is coordination from the local to national level.

Additionally, there is growing recognition that, in many cases, adaptation requires coordination across borders. Sometimes referred to as 'transnational climate impacts', there are instances where resources are shared across boundaries and adaptation activities must be co-managed by all relevant actors. A common example of this is a border-crossing river – while a country upstream may wish to install hydroelectric power generation facilities as part of its adaptation strategy, this may be maladaptive for a downstream country that relies on the same river for fishing resources. In

<sup>32</sup> Kehler Siebert C, Klein RJT, Biskupska N, Dickin S, Piman T and Vulturius G. 2017. *Adaptation Futures 2016: Practices and Solutions*. Conference Synthesis. Available at <https://goo.gl/rR13AH>.

<sup>33</sup> For further information, see <https://goo.gl/DckVoQ>.

<sup>34</sup> Intervention by a representative of the Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications of Tonga at the TEM on 17 May 2017. Audio available at <https://goo.gl/Y1B1yG>.

such cases, it is critical to ensure that transnational governance encourages actors to collaborate and coordinate their actions as they impact shared resources.

More complex examples of transnational climate impacts involve the flow of goods, people and finances across borders that are impacted by climate change.<sup>35</sup> For instance, changing climates may influence the agricultural production of commodities such as soy or coffee. Import-dependent countries will be impacted by fluctuating commodity prices and therefore will have an interest in bolstering the resilience of agrarian systems many thousands of miles away. Many adaptation activities may be of interest to partners across the globe, and collaboration is necessary to ensure that resources are properly protected and adaptation activities are supported. These transnational climate impacts are explored in more detail in box 7.

#### Box 7

##### **Role of transnational climate impacts in Senegal**

Researchers from the Stockholm Environment Institute found that Senegal was particularly susceptible to international rice prices, and could suffer if rice crops in Thailand and Viet Nam were impacted by climate change. As rice is a central feature of the Senegalese diet, increased rice prices would negatively impact food security throughout Senegal, which may in turn hinder poverty alleviation and economic development efforts. To combat this, Senegal is both investing in its own rice production to achieve a degree of self-sufficiency and working to diversify diets as a method of spreading risk. A grain reserve has also been considered by the Economic Community of West African States.

The authors suggest that future planning efforts under the process to formulate and implement the Senegalese national adaptation plan should account for transnational climate impacts, and that improved cooperation between Parties could benefit adaptation, sustainable development and disaster risk reduction efforts.

Source: Davis M, Benzie M and Barrott J. 2016. *Transnational Climate Change Impacts: An Entry Point to Enhanced Global Cooperation on Adaptation?* Policy Brief. Stockholm: Stockholm Environment Institute.

Policymaking across scales, from local to transnational, also provides an opportunity to pursue integrated policy approaches to adaptation, sustainable development and disaster risk reduction. Local actors will continue to be key consultants for policy development, just as there are transnational dimensions to achieving all three

<sup>35</sup> Benzie M, Hedlund J and Carlsen H. 2016. *Introducing the Transnational Climate Impacts Index: Indicators of Country-level Exposure – Methodology Report*. Working Paper. Stockholm: Stockholm Environment Institute.

agendas. Efforts to develop coherence at multiple scales can at the same time be used to develop coherence among actions that contribute to adaptation, the SDGs and the Sendai Framework.

### C. Common objectives: impacting people and communities

People and communities play a central role in each of the three global agendas; they benefit from action, have the opportunity to innovate and lead on new ideas, galvanize neighbours and other groups, and lead through example. Focusing on people-centred approaches to adaptation, sustainable development and disaster risk reduction creates more opportunities to pursue integration and actions that benefit all three agendas simultaneously.

One instance of a successful people-centred approach is the Brazilian Climate Action on Agriculture programme. Its goal is to increase agricultural output while increasing adaptation and resilience and decreasing carbon emissions. The programme uses a farmer-centred process that makes use of agricultural training programmes, small loans operated by local banks, and state-level commissions that include both farmers and members of civil society. Since the launch of the programme in 2009, integrated crop–livestock–forest systems have grown at an unprecedented rate in Brazil, which is important for agricultural development and reducing climate risks. By structuring the programme around the role of the farmer, the key implementers of the programme had the necessary technical and financial support to increase their productivity and build resilience.<sup>36</sup> A people-centred approach highlights that farmers do not pursue adaptation, sustainable development and disaster risk reduction separately, but rather address them all at once as they work to improve their livelihoods. As a result, there is an opportunity to learn directly from vulnerable people which actions may best contribute to all three agendas at once.

Another example of a people-centred approach to policymaking came from Liberia during the preparation of a national vulnerability assessment.<sup>37</sup> After having struggled to respond

<sup>36</sup> Intervention by a representative of Brazil at the TEM on 16 May 2017.

<sup>37</sup> Intervention by a representative of the Environmental Protection Agency of Liberia at the TEM on 17 May 2017. Audio available at <https://goo.gl/ckLy9j>.

effectively to the 2014–2016 Ebola virus disease outbreak in West Africa, Liberian officials worked closely with communities to better understand the context in which disasters may occur. In this case information and experience was transferred in both directions – national actors concerned about climate change and adaptation were able to increase awareness of climate change, while community members provided important insights on how climate-related disasters were impacting livelihoods. Using this approach, officials gained a better understanding of how the agriculture sector was being disrupted by pests and how coastal areas were being impacted. With this improved understanding, decision makers have been able to secure more support from the Environmental Protection Agency of Liberia to pursue subnational adaptation actions to benefit the communities in question.

Communities are also critical agents of change for all three agendas and local actors can often drive processes at higher levels of policymaking. The 100 Resilient Cities initiative, pioneered by the Rockefeller Foundation, and the Making Cities Resilient Campaign, supported by the United Nations Office for Disaster Risk Reduction, are important examples of this, focusing on bottom-up resilience-building in urban areas across the globe. The 100 Resilient Cities initiative has created a network of 100 cities that works to reduce the risk of disasters, while also working to address many of the root causes of vulnerability. Activities are designed to reduce poverty, improve the provision and use of public transportation, and prevent water and food shortages, among

#### Box 8

##### Indonesia Climate Change Trust Fund

Established in 2009, the Indonesia Climate Change Trust Fund<sup>a</sup> has been a critical institution for financing climate action in Indonesia. While a large portion of funding is used for programmes led by international and national actors, the Small Grant Program allows a variety of actors to submit proposals for smaller projects. These grants average USD 50,000, and have been awarded to private sector actors, civil society organizations, non-governmental research intuitions and universities to undertake urgent adaptation or mitigation projects, often at the community level. This programme allows communities to lead on climate action based on local needs and goals, and can help to contribute to sustainable development and disaster risk reduction by encouraging bottom-up action that directly impacts the lives of community members.

Source: Based on an intervention of a representative of Indonesia at the technical expert meeting on 17 May 2017. Audio available at <https://goo.gl/BcA8N2>.

<sup>a</sup> For further information, see <http://icctf.or.id>.

other things.<sup>38</sup> As at September 2017, the Making Cities Resilient Campaign had more than 3,600 cities worldwide committed to implementing the priorities outlined in the Sendai Framework and working towards reaching the seven targets of the framework at the local level; these include target E, which refers to the adoption of local disaster risk reduction strategies by 2020.<sup>39</sup> These cities are poised to become leaders on climate action in their countries, and can encourage enhanced ambition with regard to all three global agendas.

Communities can also act as agents of change when working independently. Activities that increase resilience to climate change, support sustainable development and reduce disaster risk often have high upfront costs with low financial returns on investment. In such cases, financial and technical assistance can be instrumental in enabling communities to achieve their goals. While this support may come from a variety of

sources, an example where support is provided through a government-led small grants facility is discussed in box 8.

By recognizing the potentially transformative role of communities in contributing to the three post-2015 agendas, an opportunity arises to support further integration between adaptation, sustainable development and disaster risk reduction. As with vulnerable individuals, supporting communities will help to encourage policy integration based on effective actions identified at the community level.

## D. Opportunities to foster policy integration

Overall, because of the common themes, scopes and objectives of the three post-2015 global agendas, there are several opportunities to foster integration between adaptation, sustainable development and disaster risk reduction (see box 9 for a summary).

<sup>38</sup> Intervention by a representative of the Local Governments for Sustainability (ICLEI) at the TEM on 16 May 2017. Audio available at <https://goo.gl/icnG3E>.

<sup>39</sup> See <https://goo.gl/9qe5kf>.

### Box 9

#### **Opportunities and options for common themes, scopes and objectives across the Paris Agreement, the Sustainable Development Goals and the Sendai Framework**

*Common themes: both resilience and ecosystems are core concepts in all three agendas and can encourage integrated planning approaches*

Opportunity: pursue sectoral planning approaches centred on resilience or ecosystem-based planning approaches that pursue solutions that contribute to all three agendas.

Options to support implementation:

- (a) Create an enabling environment to encourage sector-wide or ecosystem-based planning;
- (b) Support research to improve understanding of ecosystems, climate change and human–ecosystem relationships;
- (c) Provide resources to relevant actors, including finance and information related to integrated planning approaches and the three global agendas.

*Common scopes: adaptation, sustainable development and disaster risk reduction all span multiple sectors and scales, requiring action across a complex network of actors*

Opportunity: leverage collaborative planning processes to bring together relevant actors, encourage coherence of actions and make efficient use of available capacities.

Options to support implementation:

- (a) Develop spaces to encourage dialogue between multiple sectors and ministries, including state and non-state actors;
- (b) Implement mechanisms and incentives to connect actors at the local, regional, national and international levels;
- (c) Provide resources, including relevant data, to non-state actors so they may meaningfully participate in planning and action;
- (d) Recognize the role of transnational climate impacts in achieving sustainable development and disaster risk reduction.

*Common objectives: benefiting vulnerable people and communities is the overarching goal of adaptation, sustainable development and disaster risk reduction*

Opportunity: learn what works from collaborating closely with vulnerable people and communities, and taking people-centred approaches to policymaking.

Options to support implementation:

- (a) Establish mechanisms, support and incentives to gather input from vulnerable people and communities;
- (b) Provide financial, technical and capacity-building support at the community level to pursue relevant community-led projects.

# IV

## Challenges posed by policy integration and options to support integration, including through national adaptation plans

This chapter addresses three types of challenges that have arisen when seeking an integrated approach to adaptation, sustainable development and disaster risk reduction: coordination and coherence; the availability of data and information; and access to support. In addition to highlighting these challenges, options to effectively address each are discussed, including the role of NAPs.

### A. Coordination and coherence

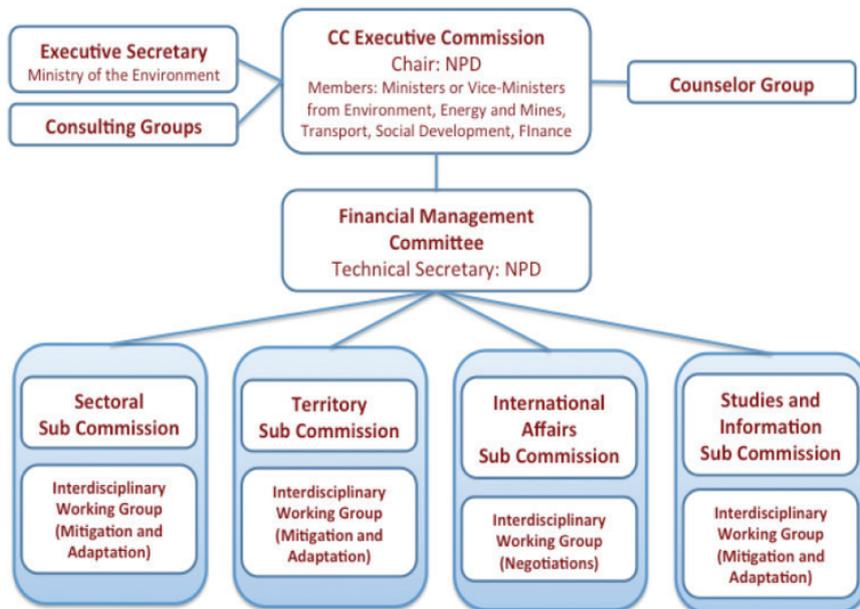
Actors, both state and non-state, operating across multiple sectors and scales, from local to global, can facilitate policy coherence and learning as integrated approaches to adaptation, sustainable development and disaster risk reduction are developed. Yet extensive collaboration on this scale is unprecedented and likely to pose a significant challenge.

Cross-sectoral and interministerial collaboration can be challenging because it is not always apparent how the activities of different ministries

interrelate, and coordination across institutions can be difficult. Implementing changes through multiple institutional frameworks can prove challenging; in the case of projects funded through international climate finance, for example, it is unclear what role various ministries may have in coordinating expenses and activities. Even coordinating activities subnationally or within a single ministry may be problematic as various stakeholders, implementing partners, financiers and planners may have different ideas of how project implementation should proceed, or what the project goals are.

Despite this challenge, many Parties have successfully coordinated the complex set of actors involved in adaptation, sustainable development and disaster risk reduction. For example, Colombia has a sophisticated institutional structure for capturing the expertise of relevant experts across sectors and ministries. A national Climate Change Executive Commission has been created, led by the National Planning Department and including the Minister or Vice-Minister from each of the

Figure 6  
Colombia’s institutional structure for coordinating climate change action



Source: Comstock M, Santelices I and Vanamali A. 2012. Case Study: Colombia’s National Climate Change Process. Washington, D.C.: Center for Clean Air Policy (figure 3).

Ministries of the Environment, Energy and Mines, Transport, Social Development, and Finance. This executive commission receives support from the Ministry of the Environment, as well as independent consulting and advisory groups. It also oversees a sectoral subcommission, a territory subcommission, an international affairs subcommission, and a studies and information subcommission, each of which is supported by an interdisciplinary working group (see figure 6). Well-articulated institutional structures and mechanisms for informational exchange help Colombia to best utilize the many actors involved in its national planning.

Non-state actors may have a unique ability to undertake coordination efforts. Partners for Resilience, an alliance of civil society organizations led by the International Federation of Red Cross and Red Crescent Societies (IFRC), supports integrated risk management in 14 disaster-prone countries at the community level as well as policy planning by local, regional and national governments. IFRC has a long history of working with organizations and people in vulnerable countries. Successful projects of Partners for Resilience, impacting over half a million people across nine countries to date, include the installation of reservoirs for drinking water, diversification of livelihoods in drought-susceptible areas and reforestation of unstable slopes. Capacity built over many years is a critical feature of programme success. This example illustrates the important role of civil society in supporting national governments in the planning and implementation of integrated risk management, serving common objectives of the UNFCCC, the SDGs and the Sendai Framework.<sup>40</sup>

Likewise, public–private partnerships are important tools to help to coordinate activities among actors. An example of such a partnership is discussed in box 10, which describes how the business community in Morocco recognized a role for itself in adaptation activities.

Working closely with private actors may remove some of the institutional barriers associated with government-coordinated action, and allow well-resourced companies and investors to apply their capabilities to activities that result in both profit and public benefit.

#### Box 10

##### Confederation of Business Communities of Morocco

Many business leaders recognize the growing opportunities to participate in climate mitigation and adaptation activities. Yet, according to the Confederation of Business Communities of Morocco (CBCM), in developing countries, fewer actors than there is the potential for are currently engaging with the climate community. Business often involves weighing and managing risks, and as such business leaders are well positioned to benefit from and aid in fostering effective climate action. To encourage such action, CBCM developed a capacity-building initiative to make clear the link between economic risks within business and climate change risks more broadly.

While this initiative has been successful to date, business owners are interested in pursuing closer partnerships with government actors, where the public sector may provide a road map for action, and private actors can participate accordingly. A public–private partnership of this sort would capitalize on the convening power of government-led initiatives while benefiting from the expertise and efficiency brought by private companies.

Source: Based on an intervention during session two of the technical expert meeting on 16 May 2017. Audio available at <https://goo.gl/FFBF7t>.

## B. Availability of data and information

Another challenge associated with pursuing integrated approaches to adaptation, sustainable development and disaster risk reduction is the lack of data and information available to actors. Data on a wide variety of indicators relevant to the three post-2015 agendas are simply unavailable in many areas of the world, especially data that relate to socioeconomic conditions and other facets of well-being. In general, there is a need to improve the amount and quality of information being collected across a range of indicators.

More specifically, a key theme throughout the TEMs was the need for higher-resolution information about the impacts of climate change and the risks that climate change poses to societies. Several Parties are developing information platforms to address this issue. Japan, for instance, is in the process of designing a database for tailored adaptation and disaster risk reduction solutions that will include information on the whole Asia-Pacific region.<sup>41</sup> Given that many resilience-building activities and planning processes take place at the local level, accessing local-scale information and continuing to reduce the uncertainty associated with climate projections is of concern to many Parties, particularly

<sup>40</sup> Intervention by a representative of IFRC at the TEM on 17 May 2017. Audio available at <https://goo.gl/x7VYUQ>.

<sup>41</sup> Intervention by a representative of the Climate Change Adaptation Office of Japan at the TEM on 17 May 2017. Audio available at <https://goo.gl/eCux8D>.

developing country Parties that may have poor access to this sort of information. During the TEMs it was highlighted that some African States do not have access to basic climate and weather data, which makes modelling difficult. The need for data to support decision-making in the LDCs and other vulnerable developing countries was also highlighted. Additionally, concerns exist about the degree of uncertainty associated with local-level climate projects and the resources required to carry them out, and there is a need to strike a balance between the detail and resolution of data and the practical needs of planners.

Climate model projections and other data are most useful when they are successfully communicated to policymakers and other users. As such, another priority is the development of climate services and related information in formats that can be easily accessed and digested by non-scientists. Successful information-sharing tends to occur when knowledge is co-produced with the help of end users, and products can include simple data packages published in accessible formats, policy briefs and other information materials, and information disseminated through videos, podcasts and other multimedia applications. Working with stakeholders to train individuals to better utilize climate information is also important (see box 11 for an example).

Training on climate science and climate information to promote familiarity can occur outside more traditional contexts. In Fiji, for

example, the Ministry of Education, Heritage and Arts provides a holistic and empowering education programme on climate change as a component of its broader strategic framework. In accordance with the Education Sector Strategic Development Plan 2015–2018,<sup>42</sup> climate change begins to be taught as early as at primary school and continues throughout secondary education. Many teachers and lecturers have been trained on methods to engage students of all ages with climate change, and learning materials have been provided, ranging from picture books and posters to web portals with more advanced information.

Traditional indigenous knowledge includes critical information that has been accumulated over many generations. Working together with indigenous communities to co-produce relevant information for policymaking will allow adaptation, sustainable development and disaster risk reduction to occur in a more locally connected manner that better reflects the needs of communities.

Finally, it is important to recognize that a lack of high-resolution data does not warrant inaction. Adaptation, sustainable development and disaster risk reduction can be pursued despite information gaps. Planning and adaptive management can be employed in order to make progress on the three post-2015 agendas urgently while allowing space to change course as better information becomes available.

## C. Access to support

Financial resources and technical support are necessary to plan, implement, maintain and evaluate activities that advance adaptation, sustainable development and disaster risk reduction. Developing country Parties in particular need assistance in their pursuit of these agendas.

Some mechanisms have been put in place to provide funding and begin filling the financing gaps of developing countries, while new and innovative ideas continue to emerge. The GCF, for example, seeks to fund projects that encourage paradigm-shifting change, and has worked towards the aim for a 50/50 balance between mitigation and adaptation finance.<sup>43</sup> As at July

### Box 11

#### Pilot programme for the Global Framework for Climate Services

The African Center of Meteorological Application for Development (ACMAD) began the Monitoring for Environment and Security in Africa (MESA) programme in 2010 as part of a regional effort to bridge the gap between climate service provision and capacity development in African institutions. One key function of the ACMAD-MESA programme is to produce information materials for policymakers, including monthly policy briefs and periodic press releases. These materials specifically address the uncertainty of climate projections in user-friendly terms, and are designed to aid in the planning process.

ACMAD-MESA also conducts a training programme to ensure that stakeholders are sufficiently familiar with climate information to effectively employ it. Both in-person and online courses are offered on a variety of technical topics with support from regional partners. The courses are designed to build on other available training in the region led by academic institutions or governments, and to fill knowledge gaps wherever possible.

Note: For further information, see [www.acmad-au.org](http://www.acmad-au.org).

<sup>42</sup> See <https://goo.gl/EvfskH>.

<sup>43</sup> Discussions are ongoing about the labelling of cross-cutting projects where finance is used for both mitigation and adaptation purposes.

2017, close to 80 per cent of adaptation funding had targeted LDCs, SIDS and African States. The African Development Bank is continuing its development of a new funding mechanism called the Adaptation Benefit Mechanism, which draws from earlier experience with market mechanisms and will aim to provide an incentive for investment in activities that contribute to adaptation.

Not all funding for integrated action will come from sources interested specifically in climate change. The Global Facility for Disaster Reduction and Recovery has expressed an interest in providing funding and technical assistance for climate resilience projects as well as other disaster risk reduction work that will also directly contribute to adaptation and sustainable development. In this way, integrated approaches to pursuing the three global agendas broaden the pool of resources available to interested countries. Rather than pursuing three streams of support, an integrated approach will allow countries to undertake actions that contribute to all agendas simultaneously while accessing a greater diversity of resources than may have been possible previously.

Countries are not limited to relying on external funding, and can leverage both public and private sector investments to serve multiple agendas. For instance, investments in development or infrastructure may also support adaptation and/or disaster risk reduction, and public finance can be used to 'de-risk' a project to encourage private sector investments. Countries can also look to reform and tailor domestic financing mechanisms such as credit provision, subsidies and tax allocation to capitalize on existing capacities, as South Africa, for example, has done.<sup>44</sup>

## D. National adaptation plans as an option to support the implementation of integrated policy approaches

Given the challenges with developing collaboration and coherence and accessing support, the process to formulate and implement NAPs could play an important role in the development of collaboration and coherence, given that countries preparing NAPs will probably

need to build the capacity of actors in-country while also clarifying the roles and responsibilities of ministries in the context of adaptation. The process of formulating a NAP may also help to identify gaps and needs that could be addressed, including through international cooperation, in order to enhance action on adaptation.

Through the NAPs the awareness of the business opportunities associated with adaptation could be increased. NAPs could enable linkages between national and subnational development processes by encouraging subnational governments to undertake vulnerability assessments and by providing clear guidance, through a legal framework, of what different levels of government and ministries or agencies should do. NAPs, by defining national adaptation objectives, could help actors determine how they can contribute to those objectives. Developing tools for training and building the capacity of local governments is also important. A robust process can help to overcome the coordination challenge, and in turn support an integrated approach to adaptation, sustainable development and disaster risk reduction.

Approaches are being developed that work specifically on building coherence between the three global agendas in practice, by integrating either sustainable development (see box 12) or disaster risk reduction (see box 13) with the NAP process.

### Box 12

#### Least Developed Countries Expert Group iFrame for adaptation and the Sustainable Development Goals

The Least Developed Countries Expert Group (LEG) has recently prepared and tested an approach to integrating adaptation and the Sustainable Development Goals (SDGs). This methodology, called the integrated framework or iFrame, works by systematically assessing the sensitivity of particular SDG targets to climate change in a particular national context. Many of the SDG targets are related either directly or indirectly to climate change, and can therefore be prioritized using this methodology based on urgency. After prioritization, countries can then create a nationally specific road map complete with SDG-based measurable targets to address both climate and development issues in parallel.

The iFrame approach was tested during a regional training workshop in Malawi in February 2017 and has received positive feedback. According to the LEG, this approach is particularly useful as it harmonizes indicators used to measure contributions to the Paris Agreement and the SDGs, and is likely to be most successful when strong coordination exists between all relevant organizations and international partners.

Source: Based on a presentation by the LEG at the technical expert meeting on 17 May 2017. For further information, see <https://goo.gl/6StvTE>.

<sup>44</sup> See <https://goo.gl/RbgVuT>.

Box 13

**Joint National Action Plans for adaptation and disaster risk reduction**

Three countries in the Asia-Pacific region have completed Joint National Action Plans (JNAPs), which work to combine adaptation with disaster risk reduction. Tonga was the first country in the region to prepare a JNAP and along with the Secretariat of the Pacific Regional Environment Programme has provided guidance to others. As an agricultural nation, and one of the small island developing States, Tonga's JNAP recognizes that the economy is particularly vulnerable to exogenous shocks, including climate- and weather-related hazards, heavy rainfall, droughts, heatwaves and sea level rise. A set of six goals has been developed under the JNAP, in line with Tonga's sustainable development plan, adaptation ambitions and disaster risk reduction efforts; that is, the JNAP cuts across all three global agendas.

While countries have varied in their approaches to integrated planning, it has been particularly successful when strong working relationships between government agencies already exist, and key policy documents for climate change and disaster risk reduction are in place. This suggests that countries that have already committed substantial resources to planning are most likely to find success with integrated planning approaches.

Source: Based on an intervention by a representative of the Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications of Tonga at the technical expert meeting on 17 May 2017. Audio available at <https://goo.gl/HdS8tW>.

The anticipated finalization of most NAPs and target E of the Sendai Framework have the same deadline of 2020. Target E refers to the development and adoption of national and local disaster risk reduction strategies. The common deadline provides an opportunity for close coordination to ensure coherence between the NAPs and the national disaster risk reduction strategies, which will lead to a closer coordination between adaptation activities and disaster risk reduction.

The NAP process also opens new avenues for financial and technical support to pursue policy integration. The GCF supports the formulation of NAPs and will provide developing countries with up to USD 3 million for this purpose. This funding can be used to build technical capacity within countries and to begin establishing the institutional frameworks for success.

Another example of support opportunities available for the process to formulate and implement NAPs is the funding provided by the Global Environment Facility (GEF) through the Least Developed Countries Fund (LDCF)

and the Special Climate Change Fund. Through the LDCF alone, a total of USD 41.7 million had been approved for the LDCs' NAPs as at 30 June 2017. Notably, several projects combined requests for funding to support NAPs with requests to support concrete adaptation investments for the implementation of national adaptation programmes of action (NAPAs). Such requests concern, for instance, investments in hydrometeorological infrastructure to provide climate and weather data that are intended for use by decision makers when integrating climate change impacts and adaptation measures into regional, national and subnational policies and plans, including for NAPs. Such joint NAPA–NAP projects include separate components that are solely devoted to the NAP process through technical assistance and capacity-building. In its support of NAPs, the GEF follows the country's needs and priorities, providing flexibility to combine NAP and NAPA financing in joint projects, enhancing efficiency and simplifying access to finance in response to the COP's request.

In practice, NAPs sometimes suffer from a lack of both ownership across sectors and collaboration with all relevant groups. Yet NAPs can also be used as a vehicle to revise current policy goals and continue to improve collaboration over time. In Mexico, for instance, the NAP is part of the larger Special Climate Change Program 2014–2018, and is expected to be revised every two years. In this regard, NAPs can be seen as a process of continuous revision and improvement, not an endpoint that has been reached once a plan has been written.<sup>45</sup>

Overall, the NAP process provides an important option to support the development of integrated approaches, due in part to its demonstrated success as a planning instrument, the resources available for its support, and its iterative nature and flexible nationally driven format. Discussions during the TEMs highlighted the notion that NAPs may be an integral part of supporting national development planning and may work to integrate the essence and targets of each post-2015 agenda in a meaningful way.

<sup>45</sup> Intervention by a representative of Mexico during the TEM on 17 May 2017. Audio available at <https://goo.gl/VA3DHG>.

## E. Options to support integrated policy approaches

To summarize, several challenges exist to developing an integrated approach to adaptation, sustainable development and disaster risk reduction. Importantly, there are several options to overcome these challenges and support further integration, including through the process to formulate and implement NAPs (see box 14).

Box 14

### Challenges to integration and options to overcome them

*Challenge: unprecedented levels of coordination and coherence will be necessary to develop integrated approaches*

Options to overcome challenge and support implementation:

- (a) Develop institutional structures to clarify roles and responsibilities of actors;
- (b) Collaborate with non-state actors, including the private sector, to capitalize on existing capacity and activities;
- (c) Utilize national adaptation plans (NAPs) to develop linkages between the three post-2015 agendas and build structures for coordination and coherence.

*Challenge: more data and information are needed to build understanding and encourage policy integration*

Options to overcome challenge and support implementation:

- (a) Invest in broader, reliable and more frequent data collection, including for socioeconomic information and information needed for climate modelling;
- (b) Support development of climate services products and tools to communicate climate information;
- (c) Build capacity to understand climate change and climate data, including through professional training and education more broadly.

*Challenge: financial and technical support needed, particularly in developing countries*

Options to overcome challenge and support implementation:

- (a) Develop proposals to fund activities that contribute to adaptation, sustainable development and disaster risk reduction, and submit proposals to climate and non-climate funders;
- (b) Continue to explore innovative funding mechanisms, both internationally and nationally, and work to leverage private finance flows;
- (c) Acquire support, including from the Green Climate Fund and the Global Environment Facility, to plan and build capacity through NAPs.



## Conclusions

There is substantial interest and merit in pursuing integrated approaches to the three post-2015 agendas: the Paris Agreement, the SDGs and the Sendai Framework. To effectively achieve the goals of all three agendas, increased integration will help to enhance coherence between the frameworks and more efficiently utilize limited resources. Integrated approaches will help to build comprehensive resilience across all segments of society, while allowing each policy process to maintain autonomy and self-direction.

There are many opportunities to enhance adaptation action prior to 2020 by pursuing integrated approaches to adaptation, sustainable development and disaster risk reduction. The common themes of resilience and ecosystems can serve as core concepts around which integrated planning can be organized, while the common scopes of the three agendas provide space to improve coordination and coherence among all relevant actors. Additionally, the overarching objective of adaptation, sustainable development and disaster risk reduction – to benefit vulnerable people and communities – can aid in identifying highly effective adaptation actions that contribute to all three sets of goals simultaneously.

The pursuit of greater policy integration and enhanced adaptation action, however, is not without challenges, including the unprecedented levels of coordination required, the need for more and higher-resolution data and the ability to access financial and technical support. Both state and non-state actors have made strides towards overcoming these challenges, and continued progress on these issues will support the achievement of all three global agendas, including enhanced adaptation action. Strategies to mobilize resources for the implementation of the post-2015 agendas are particularly important. It is integral to ensure that adequate, sustainable support is available to support developing countries in their adaptation efforts and opportunities are maximized to strengthen resilience, reduce vulnerability and enhance adaptation, including by integrating adaptation with sustainable development and disaster risk

reduction efforts.

NAPs have the potential to become a key instrument to facilitate the integration of adaptation, sustainable development and disaster risk reduction. Given their success as planning instruments, the resources available for their support and their iterative nature and flexible, nationally driven formats, NAPs are an excellent option to support the implementation of enhanced adaptation action.

This technical paper, along with a summary for policymakers that highlights its key findings and provides recommendations for action, set the stage for further research, policy development and action on integrated approaches to pursuing adaptation, sustainable development and disaster risk reduction.