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Chapter 3

Assessing global progress on adaptation planning

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Key messages

- Adaptation planning is critical to enable both public and private actors to prepare for and respond to the impacts of climate change. By committing all countries to engage in adaptation planning processes, the Paris Agreement underscores the importance of national-level adaptation planning in particular.
- In terms of quantity, the last two decades have seen significant progress in adaptation planning: 72 per cent of countries have at least one national-level planning instrument in place that addresses adaptation, and 125 developing countries have begun the process of formulating and implementing national adaptation plans (NAPs). Countries have also increasingly established sectoral (58 per cent of countries) or subnational (21 per cent of countries) planning instruments.
- In terms of quality, it is difficult to assess the degree to which adaptation planning efforts are adequate or effective in achieving adaptation objectives. An assessment of variables relevant to adequacy and effectiveness paints a mixed picture. While around half of countries meet the criteria for comprehensive and inclusive adaptation planning, significantly less than half meet the criteria for implementability and monitoring and evaluation. The picture for the integration criterion is mixed, with about two-thirds having horizontal coordination mechanisms in place, compared with around one-quarter that have vertical coordination mechanisms.
- Looking ahead, as countries increasingly submit more consistent information under the Paris Agreement, more rigorous analyses can provide more nuanced insights into global progress on adaptation planning.

3.1 Introduction

Adaptation planning seeks to enable public and private adaptation to climate change through a wide range of strategies, plans, policies, laws, regulations and directives. While adaptation planning occurs on a local, site-specific to global scale, national-level planning is particularly vital due to the role national governments play in mandating, enabling, overseeing and allocating resources to adaptation activities in different sectors and at different governance levels (Mimura *et al.* 2014; Nachmany, Byrnes and Surminski 2019).

The 2015 Paris Agreement (United Nations Framework Convention on Climate Change [UNFCCC] 2016) commits all countries to engage in adaptation planning processes and the implementation of actions, including the development or enhancement of relevant plans (art. 7.9). The Agreement also stresses that adaptation action should follow a gender-responsive and participatory approach with a view to integrating adaptation into relevant socioeconomic and environmental policies and actions (art. 7.5). As part of the Global Stocktake, countries will review the adequacy and effectiveness of adaptation (art. 7.14 and art. 14).

This chapter seeks to assess how much progress has been made by 196[1] Parties to the UNFCCC, of which 189 are also Parties to the Paris Agreement, in constructing such plans and strategies. It further endeavours to assess whether these plans and strategies are effective and adequate in leading to enhanced adaptive capacity, strengthened resilience and reduced vulnerability as envisaged by the global goal on adaptation (art. 7.1 of the Paris Agreement).

The Intergovernmental Panel on Climate Change Fifth Assessment Report (IPCC AR5) concluded that adaptation is transitioning from the awareness-raising phase to the construction of actual strategies and plans at the societal level (Mimura *et al.* 2014). As part of this transition, many countries have started assessing their adaptation planning, the design of which varies considerably, with differing combinations of qualitative analyses and qualitative and quantitative indicators (UNFCCC 2020a).

While there are currently no agreed-upon methods, indicators, metrics or frameworks designed for assessing progress towards the global goal on adaptation (United Nations Environment Programme [UNEP] 2017), existing frameworks provide insight into opportunities for aggregating and synthesizing country-level progress. In addition, proposals for methods of assessing adaptation as part of the Global Stocktake are beginning to emerge. Proposed criteria for assessment frameworks include the capacity to aggregate or synthesize country-level data, transparency, consideration of progress over time, avoiding undue burden on countries, inclusion of proxy indicators that are coherent with a collective understanding of meaningful adaptation, and sensitivity to national vulnerabilities, resources and contexts (UNEP 2017; UNFCCC 2020a).

1 Given that the focus of this chapter is on the analysis of the national level, the European Union, which is also a Party to the UNFCCC and the Paris Agreement, has been excluded from the analysis.

Table 3.1. Overview of criteria used to assess adaptation planning, including the underlying rationale, and associated indicators

Rationale	Indicators
1. Comprehensiveness	
Identifying climate risks and hazards and assessing vulnerability to existing and future climate hazards and impacts are both foundational steps of the adaptation planning process. Countries can use this information to prioritize sectors for adaptation action and develop a comprehensive adaptation plan by identifying adaptation options that align with these priorities and respond to the risks, hazards and vulnerabilities they face.	• Identified adaptation options address assessed risks, impacts, hazards or vulnerabilities
2. Inclusiveness	
For adaptation planning to adequately reflect existing and forthcoming risks and vulnerabilities and to effectively enhance ownership for eventual implementation, engagement of all relevant stakeholders, including local communities and the private sector, as well as gender considerations are paramount.	• Dedicated stakeholder engagement process in place • Consideration of gender
3. Implementability	
Planning can be assumed to be effective if it leads to actual implementation by public and private actors. Therefore, planning can benefit from putting in place a central administration body officially in charge of adaptation policymaking, dedicated resources – particularly finance – and a variety of policy instruments, including incentives or regulations, to lead to the desired outcomes.	Presence of: • A central administration body • Direct investments • Regulations • Incentives
4. Integration	
Integrating or mainstreaming adaptation planning and action horizontally (across sectors) and vertically (across levels of administration) is increasingly recognized as an important component of effective adaptation planning. Such efforts help ensure that adaptation planning is comprehensive, avoids duplication of efforts or maladaptation and enhances synergies.	• Sectoral and subnational coordination mechanisms in place
5. Monitoring and evaluation	
To allow for planning to remain adequate and effective, it needs to be monitored, reviewed, evaluated and revised periodically.	• Monitoring and evaluation system in place • Monitoring undertaken • Evaluation planned/undertaken

3.2 Methodology

Taking into consideration existing assessments of adaptation planning, as well as the provisions of the Paris Agreement, including the objectives of the Global Stocktake, this chapter assesses collective progress on adaptation planning, both quantitatively and qualitatively. It examines the overall number of national adaptation strategies, plans and laws, as well as the number of subnational and sectoral adaptation plans and strategies.

As there is currently no consensus on methods for assessing the extent to which adaptation planning is adequate (sufficient) and effective (successful) in achieving its targets and objectives, this chapter explores these dimensions indirectly by analysing key variables (criteria) that can reasonably be expected to contribute towards them: comprehensiveness, inclusiveness, implementability, integration and monitoring and evaluation (see table 3.1).

The criteria and associated indicators were chosen as they correspond to the commitments the Parties made under the Paris Agreement (art. 7, paras 5 and 9). They have also been included in relevant global guidance documents on adaptation planning[2] or previous global or regional assessments of adaptation planning.[3]

The analysis considered 20 national adaptation plans (NAPs[4]) and 139 nationally determined contributions (NDCs) with adaptation components[5] of developing countries and 42 Seventh National Communications[6] of developed countries. If none of the abovementioned documents were available for a country, earlier National Communications were consulted. Data were also drawn from, cross-checked with and complemented by the Climate Change Laws of the World database, managed by the Grantham Research Institute on Climate Change and the Environment and the Sabin Center for Climate Change Law.[7] Data limitations include the lack of rigorous standards regarding the accuracy and the comprehensiveness of reporting by countries. Furthermore, the criteria are output-based and do not facilitate the measurement of the actual outcomes or impacts of countries' adaptation planning.

Finally, in order to include as many countries as possible and account for the diverse quantity and quality of information, all indicators have simplistic scores ('Yes', 'No', 'Progress/partial' or 'Unknown'), which prevents any nuance or direct comparability between countries. Results are provided in percentage of countries and, given their particular vulnerability to climate change impacts and status under the UNFCCC and Paris Agreement, disaggregated for least developed countries (LDCs) and small island developing states (SIDS). To complement the indicator-based assessments, case studies are included in this chapter to illustrate how some countries are fulfilling the criteria in practice.

Box 3.1. Integrating gender considerations in Kiribati's adaptation planning

Countries have taken different approaches to integrating gender considerations into their adaptation planning, many of which rely on sex-disaggregated data. Kiribati's Joint Implementation Plan for Climate Change and Disaster Risk Management 2019–2028 is intended to serve as an implementation tool for climate change and disaster risk management-related policies. According to the plan, programmes, projects and activities to be developed should take into consideration the differences between and among women and men in terms of needs and capacities. Programmes should generate sex-disaggregated data to help ensure equitable access to financial resources and other benefits (for example, technologies and services, climate information and capacity-building on climate risk management) for women and men resulting from investments in adaptation. The plan also foresees the monitoring of the differentiated impacts of climate adaptation actions on women and men. In addition, gender balance in participation and influence in decision-making is sought.

Source: Kiribati, Secretariat of the Pacific Community 2019

2 For example, the 2012 Least Developed Countries Expert Group (LEG) technical guidelines for the NAP process (LEG 2012), the 2015 LEG progress, effectiveness and gaps monitoring and evaluation (PEG M&E) tool (LEG 2015) and the 2016 guidance note on vertical integration in NAP processes (Dazé, Price-Kelly and Rass 2016).

3 For example, the 2018 European Commission assessment of the European Union Strategy on adaptation to climate change (European Commission 2018a) and the 2019 Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy global review of national laws and policies on climate change adaptation (Nachmany, Byrnes and Surminksi 2019).

4 NAPs can be consulted here: https://www4.unfccc.int/sites/NAPC/News/Pages/national_adaptation_plans.aspx.

5 NDCs can be consulted here: https://www4.unfccc.int/sites/ndcstaging/Pages/Home.aspx.

6 Seventh National Communications can be consulted here: https://unfccc.int/NC7.

7 The database is available here: https://climate-laws.org.

Figure 3.1. Status of adaptation planning worldwide

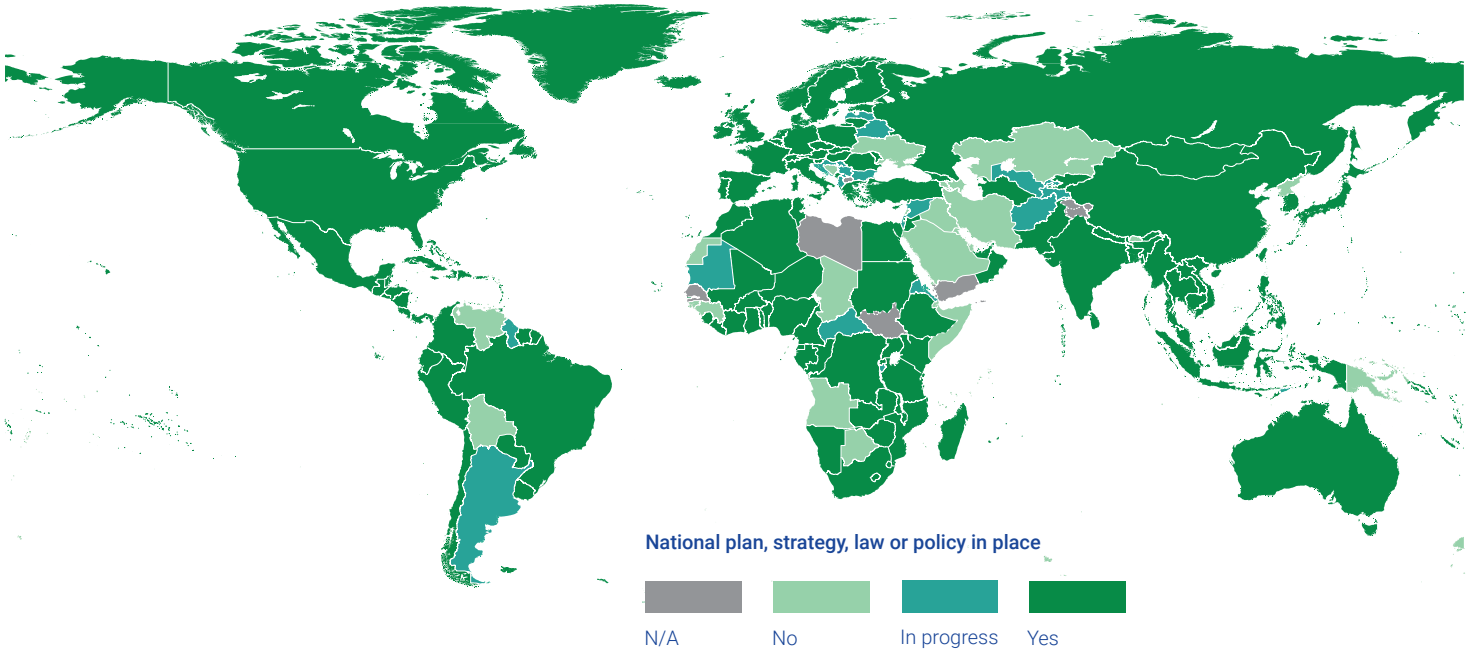


Figure 3.2. Progression of global adaptation planning since 2020

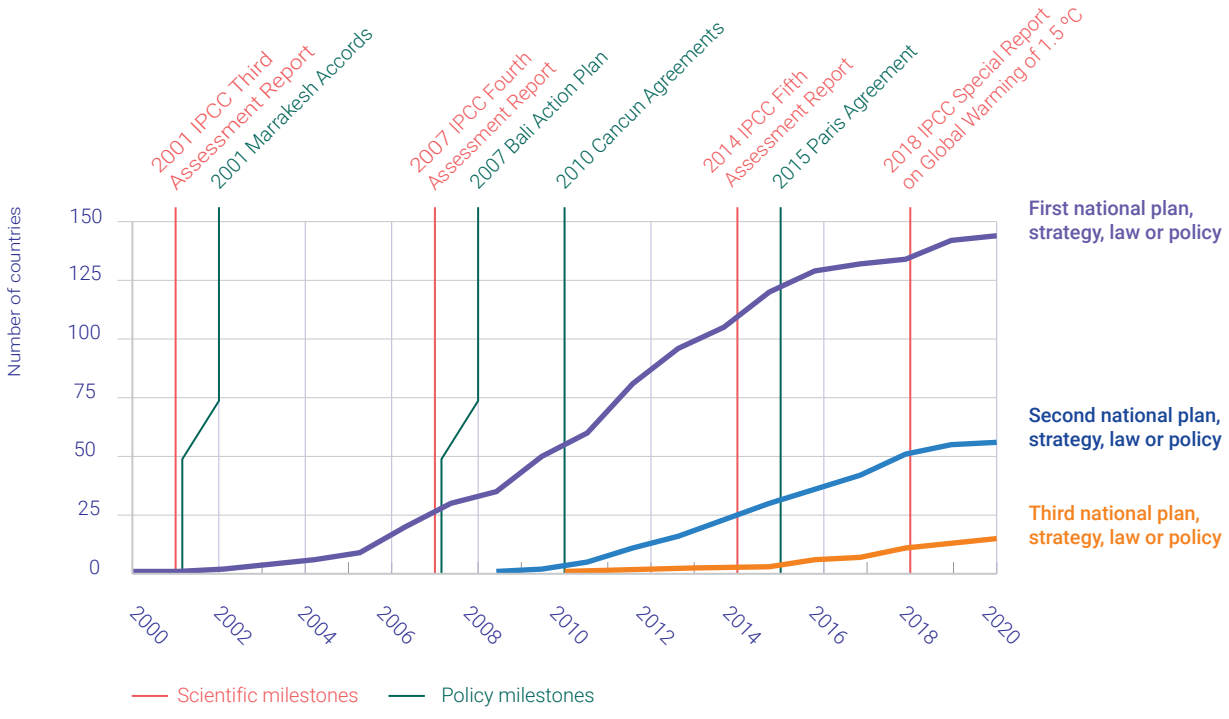
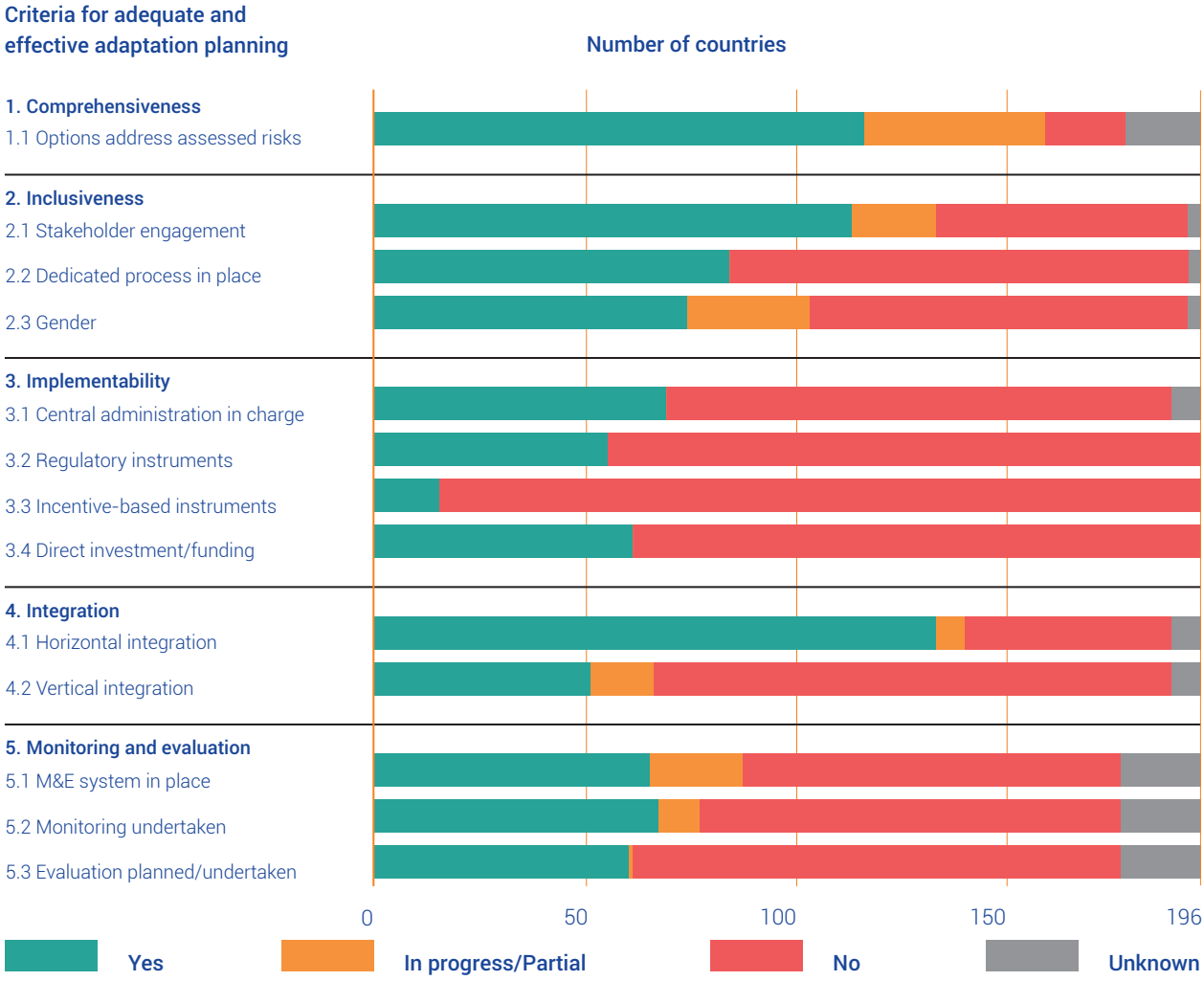


Figure 3.3. Assessing the adequacy and effectiveness of adaptation planning worldwide



3.3 Progress on adaptation planning

3.3.1 Status of adaptation planning

Most countries (72 per cent; 64 per cent of LDCs, 80 per cent of SIDS) address adaptation at the national level through a plan, strategy, policy or law, and several countries (9 per cent; 11 per cent of LDCs, 5 per cent of SIDS) that do not currently have such an instrument in place at the national level are in the process of developing one (see figure 3.1).[8] These instruments vary in scope and primary focus, with some focusing explicitly on adaptation measures and plans and some outlining a general approach to climate change that includes adaptation. The NAP process is one key mechanism to increase the focus on adaptation, with 125 developing countries having initiated and launched the process to formulate and implement NAPs as at 20 November 2020, 20 of which have already been submitted (UNFCCC 2020b).

These figures represent significant progress in national adaptation planning over the past two decades, during which the number of adaptation instruments in place at the national level has significantly increased (see figure 3.2).

While a small number of countries introduced national-level disaster risk management instruments in the twentieth century that, to some extent, facilitated adaptation, national adaptation planning began in earnest in the early twenty-first century. Indeed, the first national-level adaptation instrument identified in this analysis was established in the year 2000. Of the 72 per cent of countries identified as having a national-level adaptation

8 For the purposes of this analysis, this includes national plans, strategies, policies or laws that were explicitly and primarily focused on adaptation, or more broadly, on climate change. Other plans, strategies, policies or laws that were not primarily focused on these areas but that are nonetheless relevant for adaptation – such as national development plans, national environmental policies and national disaster risk management strategies – were therefore noted, but not included in this overall tally. National adaptation programmes of action were also considered separately from the overall tally due to their unique role as a tool for LDCs to identify and act on urgent priority adaptation activities, rather than an instrument to facilitate an overarching or holistic adaptation response.

planning instrument in place, 5 per cent (6 per cent of LDCs, 13 per cent of SIDS) introduced their first instrument from 2000–2005, 30 per cent (32 per cent of LDCs, 31 per cent of SIDS) from 2006–2010, 49 per cent (39 per cent of LDCs, 41 per cent of SIDS) from 2011–2015, and 16 per cent (23 per cent of LDCs, 16 per cent of SIDS) from 2016–2020. Moreover, of these 72 per cent of countries, 29 per cent (29 per cent of LDCs, 38 per cent of SIDS) have developed at least one additional national-level instrument, which serves to replace, update, or complement the initial adaptation plan, policy, strategy or law.

In addition to national plans, 58 per cent of countries (57 per cent of LDCs, 55 per cent of SIDS) have one or more standalone sectoral plans in place that address climate change adaptation, while at least 6 per cent of countries (9 per cent of LDCs, 5 per cent of SIDS) are developing such plans. While these figures are limited to standalone plans, in many cases, countries have also embedded sectoral plans within overarching national-level plans. Furthermore, 21 per cent of countries (11 per cent of LDCs, 0 per cent of SIDS) mention that there are one or more subnational plans in place, and an additional 9 per cent of countries (4 per cent of LDCs, 5 per cent of SIDS) noted that such plans are in progress. These figures likely underestimate the true number of subnational plans, as in some cases the development of such plans is linked with membership of international initiatives (for example, the C40 Cities Climate Leadership Group) rather than being part of a national process.

3.3.2 Adequacy and effectiveness of adaptation planning

Though most countries already have a national-level policy or planning instrument dealing with adaptation in place, this alone does not necessarily translate into achieving adaptation targets and objectives. This section attempts a partial and indirect assessment of the degree of achievement by evaluating countries against five key criteria and 13 corresponding indicators that can be expected to contribute to the outcomes of adaptation in terms of adequacy and effectiveness (see figure 3.3).

Comprehensiveness

Available reporting indicates that about 59 per cent of countries (62 per cent of LDCs, 75 per cent of SIDS) identified a set of adaptation options within their identified priority sectors while 22 per cent (21 per cent of LDCs, 22 per cent of SIDS) have adaptation measures that partially matched their identified priority sectors.[9] This might be due to lack of data, multi-causality, and the considerable degree of uncertainty associated with climate projections. A total of 15 per cent of countries (2 per cent of LDCs, 0 per cent of SIDS) either did not address adaptation options linked to key priorities within their assessments or did not address any at all in the documents reviewed. Information was unavailable for the remaining portion of countries, but this does not mean that this type of assessment was not carried out in those countries.

Box 3.2. Direct investments as part of Denmark's adaptation planning

Countries can facilitate the implementation of their adaptation plans by clearly identifying and/or allocating financial resources to support their plans. For example, Denmark's National Adaptation Strategy outlined several funding initiatives, including for technology development and demonstration; investments in wastewater; and for an innovation fund for the development and market preparation of new generic climate adaptation solutions for export. Furthermore, the 2018 budget allocated resources to support municipalities and property owners to develop coastal protection as part of climate adaptation action between 2018–2021. While the Danish Ministry of Environment and Food granted municipalities DKK 34.4 million in 2016 to undertake climate proofing, local adaptation projects dealing with watercourses in cities and by roads are most often financed directly by the water utility companies and municipalities.

Source: European Commission 2018b

Inclusiveness

More than half of the countries (58 per cent; 49 per cent of LDCs, 55 per cent of SIDS) have developed their adaptation plans through consultations with a broad range of stakeholders. The stakeholders involved included different levels of government, nongovernmental and sectoral organizations, research institutes and the private sector. Among these, 43 per cent of countries (36 per cent of LDCs, 59 per cent of SIDS) outlined the details of their stakeholder consultation process, by outlining the key stakeholders for each sector of interest and/or designating a body (most frequently the Department of the Environment) to continuously involve all relevant stakeholders in the process of assessing vulnerabilities, developing plans, and/or implementing adaptation measures and policies.

Additionally, several countries (52 per cent; 74 per cent of LDCs, 65 per cent of SIDS) highlighted the importance of integrating gender considerations into adaptation planning. It must be noted, however, that these figures may be nuanced by differing approaches to reflecting the extent of their inclusion of stakeholder participation and gender consideration in their adaptation planning (see box 3.1 for an example of one approach).

9 'Partial match' refers to plans that identified adaptation measures for some or most, but not all, the vulnerable/priority sectors that appeared in the documents reviewed.

Implementability

Only 35 per cent of countries (32 per cent of LDCs, 18 per cent of SIDS) report having put in place a central administrative body to oversee adaptation policymaking and implementation, with 61 per cent (62 per cent of LDCs, 82 per cent of SIDS) not having done so. Most countries have instead built institutional frameworks with different bodies holding primary responsibility for adaptation policymaking or implementation in different domains.

One-third of the countries (31 per cent; 36 per cent of LDCs, 35 per cent of SIDS) have set aside financial resources to support their identified adaptation options, including through direct funding or budget allocations (see box 3.2 for an example). While many developing countries have quantified the costs of their adaptation options and are investing significant domestic resources in adaptation, they lack sufficient resources to meet these costs and highlight the need to receive international support in the form of finance, technology transfer and capacity-building (UNFCCC 2019).

Finally, only one-quarter of the countries (28 per cent; 23 per cent of LDCs, 30 per cent of SIDS) currently make use of regulatory instruments such as standards and obligations, building codes, zoning and spatial planning and disclosure obligations, and even fewer (8 per cent; 4 per cent of LDCs, 5 per cent of SIDS) include incentives such as taxes or subsidies to encourage adaptation action. Employing these various policy instruments helps create an enabling environment for different actors to engage in adaptation planning and action.

Integration

According to the documents reviewed, 68 per cent of countries (72 per cent of LDCs, 65 per cent of SIDS) have horizontal coordination mechanisms in place (see box 3.3 for an example) and at least 4 per cent (0 per cent of LDCs, 5 per cent of SIDS) are in the process of establishing a horizontal coordination mechanism. Additionally, 26 per cent (23 per cent of LDCs, 10 per cent of SIDS) have vertical coordination mechanisms – such as a national committee, working group, or other body related to adaptation that includes representatives from different levels of governance – in place and at least 8 per cent (2 per cent of LDCs, 5 per cent of SIDS) are in the process of establishing vertical coordination mechanisms. Even among those with coordination mechanisms in place, several countries have noted that this area must be strengthened and highlight this as a priority going forward.

Monitoring and evaluation

According to the documents reviewed, 33 per cent of countries (30 per cent of LDCs, 22.5 per cent of SIDS) have put in place dedicated monitoring and evaluation systems for adaptation (see box 3.4 for an example) and a further 11 per cent (13 per cent of LDCs, 10 per cent of SIDS) are in the process of developing them. A total of 34 per cent of countries (30 per cent of LDCs, 22.5 per cent of SIDS) are monitoring their adaptation efforts to varying degrees while 31 per cent of countries (28 per cent of LDCs, 25 per cent of SIDS) are planning to undertake or have already undertaken an evaluation of their adaptation plans, with a few having already revised their plans. Many countries highlight the lack of financial, human and technical resources and capacities that hinders the development and use of effective monitoring and evaluation systems.

Conclusion and outlook

Since 2000, countries have made significant progress in establishing adaptation plans at the national level, and some progress at the sectoral and subnational levels. Whether these plans are adequate and effective in moving countries towards their adaptation objectives remains to be seen. This uncertainty is partially due to this chapter's methodology, which aimed to provide a broad analysis of 196 countries, rather than an in-depth analysis of the few countries for which sufficient data are available. Accordingly, this chapter sheds some light on the current limitations of global assessments of adaptation progress, particularly in relation to the concepts of adequacy and effectiveness, for which there remains no consensus around an appropriate assessment methodology. As countries are preparing their adaptation communications and biannual transparency reports under the Paris Agreement following common guidance, more consistent data will allow for more nuanced analyses in the future and, in turn, more insights into global progress on adaptation planning.

Box 3.3. Horizontal integration in Saint Lucia's adaptation planning

Saint Lucia's NAP is a good example of a systematic and detailed approach to horizontal integration. It highlights 40 cross-sectoral and 271 sectoral adaptation measures across eight key sectors: tourism, water, agriculture, fisheries, infrastructure and spatial planning, natural resource management, education and health. The NAP is complemented by sectoral adaptation strategies and action plans (SASAPs). The overarching NAP presents broad sectoral plans of action while the government works to secure funding to develop the more detailed SASAPs, which are intended to serve as the blueprints for sectoral adaptation. While the country is prioritizing these sectors at the outset, it will continue to identify other key sectors, as well as corresponding adaptation measures, through a cyclical, iterative NAP process.

Source: Saint Lucia, Department of Sustainable Development 2018

Box 3.4. Monitoring, review and evaluation in Germany's adaptation planning

A well-designed monitoring and evaluation framework is informative and linked to planning processes. In this spirit, Germany established a national-level monitoring and evaluation process for the German Strategy for Adaptation to Climate Change (DAS) to assess whether the strategy's instruments and measures move the country towards achieving its goal of reducing "vulnerability and the maintenance and improvement of the adaptability of natural, societal and economic systems to the unavoidable impacts of global climate change." The monitoring and evaluation system consists of three parts:

1. A **monitoring system** comprising 102 indicators organized across the 15 action fields of the DAS. Notably, the system makes provisions for cases where data are unavailable or of insufficient quality, allowing case studies or proxy indicators to be used instead until the required data become available.
2. A **national vulnerability assessment** that is conducted every seven years to monitor changes in vulnerability over time. It has been developed in close collaboration with stakeholders and academia and is based on sectoral impact chains.
3. An **evaluation report** that is published every five years to inform the process of updating the Adaptation Action Plan. The evaluation is based on additional information about experiences and progress made, considering qualitative information and stakeholder feedback beyond the indicators themselves.

The combination of these three parts provides for a well-informed review of the Adaptation Action Plan every five years.

Sources: Umweltbundesamt 2015; 2020

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