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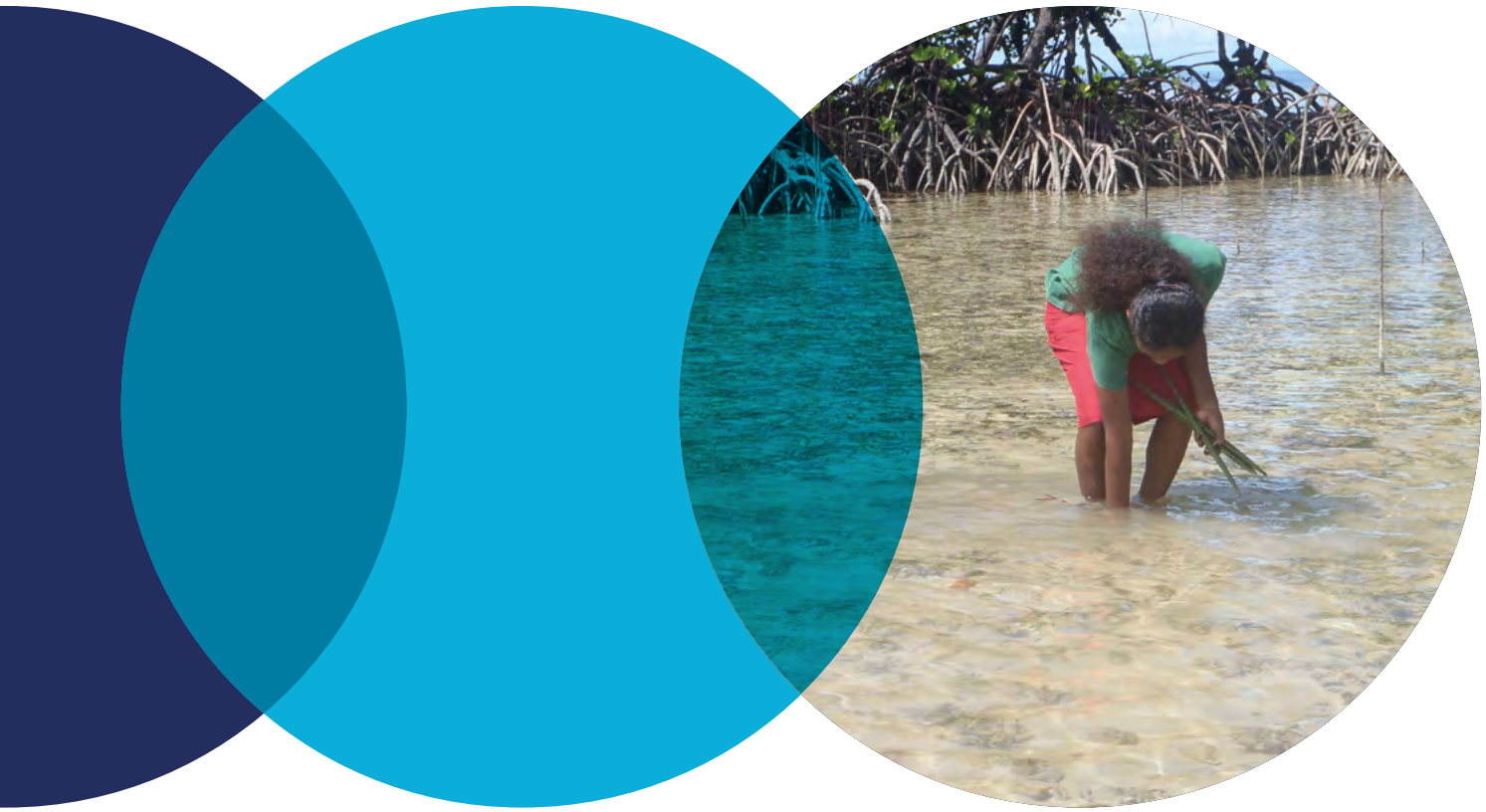

Technical paper

The Global Goal on Adaptation: a SIDS Perspective

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Executive summary

Defining a Global Goal on Adaptation (GGA) has come back onto the agenda in recent months, with COP26 on the horizon. Many Parties are keen to better understand the magnitude of countries' collective response on climate change adaptation and the nature of the adaptation gap to be filled. The GGA is only loosely defined in the Paris Agreement. However, the Global Stocktake requires Parties to report progress against the Paris Agreement's goals. Thus, to better understand countries' collective progress on the GGA, Parties are exploring whether a more precise definition of the GGA would be helpful – and how progress against it may be measured. Attaining a more refined global definition of the GGA and its measurement serves a purpose in international climate diplomacy and financing, as well as domestically. It would inform high-priority discussions on how high-income countries may address the significant global deficit in adaptation finance to low- and middle-income countries and Small Island Developing States (SIDS). This technical paper explores the critical issues in defining a GGA and proposes a way forward based on the principle and the desire of SIDS to see a country-driven process for defining and measuring the GGA at global level. For SIDS, the most critical issue is how progress on adaptation is measured. SIDS face distinct pressures from climate change and development challenges and need to be able to define their own targets. But for national adaptation needs and progress to be meaningfully represented in a GGA, a common framework is needed for (a) measuring climate risks in critical sectors; (b) identifying and prioritising adaptation options; (c) developing an investment and financing plan; and (d) setting targets and measuring progress. Standardised methodologies are needed for the GGA to become an aggregate of how well countries are doing in priority sectors and hence feed into the Global Stocktake.

1. Background

The Global Goal on Adaptation (GGA) was established in Article 7 of the Paris Agreement as a qualitative goal with the aim of 'enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change, with a view to contributing to sustainable development and ensuring an adequate adaptation response in the context of the global temperature goal'. It would ensure an adequate adaptation response in light of an inadequate mitigation ambition.[1] The current cost of adapting to climate change for developing countries is estimated to be in the order of $70 billion (rising to $140–300 billion by 2030 and $280–500 billion in 2050); and while it is difficult to compare adaptation costs and the finance available to cover them, evidence suggests the adaptation finance gap is growing.[2]

The GGA is also linked to the Global Stocktake, which has been set up as a platform to:

- recognise the adaptation efforts of developing country Parties
- enhance the implementation of adaptation action
- review the adequacy and effectiveness of adaptation and support provided for adaptation
- review the overall progress made in achieving the GGA.

The third point above, on the adequacy of support for adaptation (referred to as 'means of implementation' under the UNFCCC),[3] is particularly critical. Small Island Developing States (SIDS), which are considered 'a special case for sustainable development' due to their unique characteristics and needs,[4] have a particular stake in a more refined definition of the GGA and more precise metrics on its measurement. Such advances would enable Parties to articulate collective progress on adaptation and hence to better define the aggregated 'adaptation gap', and how much finance, capacity and technology transfer would be needed to fill it. Much of this support is expected to come from international actors and through cross-border flows, to supplement

Sustainability for Seychelles (S4S), an NGO working on sustainable living, conservation, research and education in Seychelles.
Photo: © UN Women

domestic resourcing. Increasing entreaties from SIDS and Least Developed Countries (LDCs), as well as from UNFCCC Executive Secretary Patricia Espinosa and United Nations Secretary-General Antonio Guterres, have drawn attention to the deficit in international flows of adaptation finance. This is underlined by the latest figures from the Organisation for Economic Co-operation and Development (OECD), which show that only 20% of climate finance goes to adaptation.[5]

At COP24 in Katowice, guidance on Adaptation Communications was provided in Decision 9/CMA.1 (the decision contains in an annex a list of potential elements that can be contained in Adaptation Communications), but there is no reference to the GGA, despite the efforts of developing countries to include it as one of the overarching goals of the Adaptation Communications. In Katowice, Parties also determined the modalities, procedures and guidelines for the Global Stocktake in Decision 19/CMA.1.

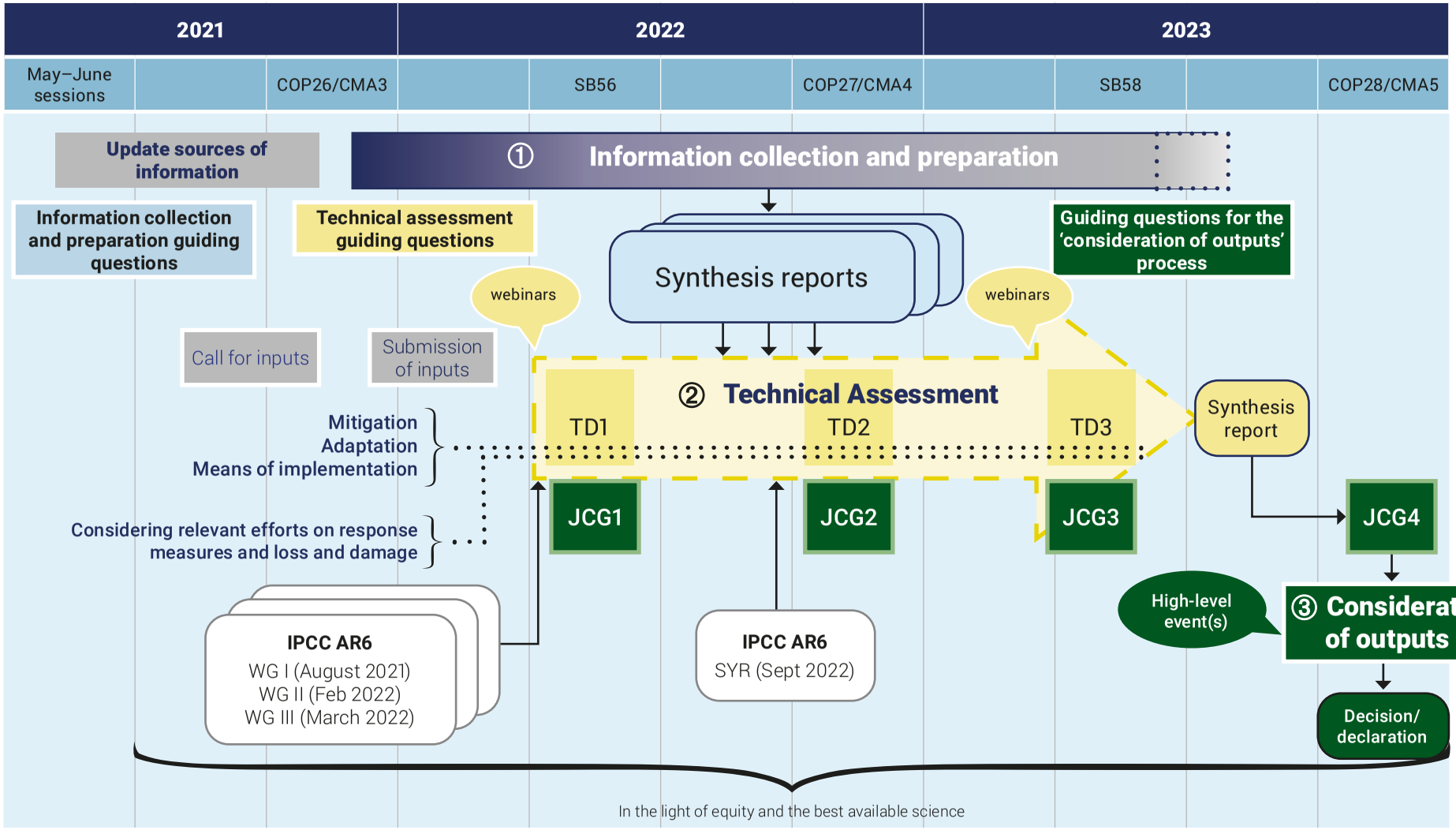
It was determined that the Global Stocktake will be conducted by a joint contact group under the Subsidiary Body for Implementation (SBI) and the Subsidiary Body for Scientific and Technological Advice (SBSTA) and supported by a technical dialogue. While it is clear that the Global Stocktake is a vehicle to assess progress towards the long-term goals of the Paris Agreement – alongside a set of reporting tools and methods, which are reviewed in this paper – it is unclear how it will assess progress towards the GGA specifically.

It is also unclear whether the GGA needs to be a quantifiable collective target for adaptation, in the same way as the 1.5°C temperature goal for 2050 is collective and quantifiable. There is not the same level of agreement regarding a desirable outcome of adaptation efforts for a 1.5°C world, nor the kinds of national-level targets needed to achieve such an outcome, if one could be agreed, in the way net zero greenhouse gas emissions targets can be set nationally.[6] In addition, there are valid concerns about setting up national reporting mechanisms that comply with an international standard and that would allow for comparable monitoring and evaluation of progress against nationally defined targets for adaptation. Even reporting on progress in implementing adaptation and resilience plans is costly and human-resource intensive, creating a huge burden for SIDS in particular.

Working Group II of the Intergovernmental Panel on Climate Change (IPCC), on Climate Change Impacts, Adaptation and Vulnerability, has furthermore been tasked with working with the UNFCCC's Adaptation Committee to prepare a 'technical paper on assessment of adaptation needs and their application, as well as the related gaps, good practices, lessons learned and guidelines' (CMA/2018/: 31) for publication by November 2022. It is anticipated that the IPCC's technical guidance will have seminal status for countries, much as its greenhouse gas emissions inventory guidance has had in the mitigation sphere. However, the timing of this publication is somewhat late in the process of the Global Stocktake (see Figure 1, from the UNFCCC, Global Stocktake); given that the information-gathering process is due to get under way imminently). This is, therefore, a timely moment for SIDS to consider the purpose of the GGA from their perspective – to inform their inputs, including Adaptation Communications, in the months ahead.

This paper further unpacks the GGA and its purpose from a SIDS perspective. Rather than revisiting points regarding the universal challenges in defining and measuring adaptation,[7] this paper describes what SIDS are already doing in relation to adaptation planning, target setting and reporting, as a starting point for identifying the kinds of aspirations that would make sense to include in a GGA; and it makes recommendations for how national targets and indicators could be aligned with a global goal.

Figure 1 Paris Agreement Global Stocktake process



Acronyms:
CMA3/CMA4/CMA5: Third, fourth and fifth meetings of the Parties to the Paris Agreement; **COP26/COP27/COP28**: 26th/27th/28th Conferences of the Parties of the United Nations Framework Convention on Climate Change; **IPCC AR6:** The Intergovernmental Panel on Climate Change's *Sixth Assessment Report* (see www.ipcc.ch for detailed publication dates), incorporating **WGI:** the report of Working Group I on the physical science of climate change; **WGI II:** the report of Working Group II on impacts, adaptation and vulnerability to climate change; and **WG III:** the report of Working Group III on mitigation of climate change; **JCG:** Joint Contact Group of the SBSTA and the SBI for the Global Stocktake; **SB56:** 56th meeting of the Subsidiary Bodies to the Convention: the Subsidiary Body for Implementation (SBI) and the Subsidiary Body for Scientific and Technical Advice (SBSTA); **TD:** Technical Dialogue on the Global Stocktake.

2. Methodology

This technical paper is based on analysis of all Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs) and Adaptation Communications that have been submitted by SIDS. This analysis was complemented by key informant interviews with representatives of the governments of Antigua and Barbuda, Dominica, Singapore, and Trinidad and Tobago, who are engaged in national adaptation and resilience planning. Stakeholders were asked three questions:

- What goals and targets are being (or will be) set for adaptation and resilience? What kinds of indicators?
- What national reporting processes and requirements are already in place (where adaptation and resilience progress is already being captured)?
- What issues do you foresee in collecting data and reporting on adaptation progress for NAPs, NDCs and other mechanisms?

Island of Kiribati is facing climate change.
Photo: © UN

3. Why could further defining the GGA be politically useful?

The Paris Agreement does not specify how the GGA should be operationalised, and there has not been, until now, a common understanding among Parties on specifics, beyond the objective of the GGA as defined in Article 7.1. Decision 1/CP.21 ,which allocated five tasks relevant to operationalising the GGA to the Adaptation Committee, along with the LDCs Expert Group and the Standing Committee on Finance. These relate to methodologies for assessing efforts, needs and costs in developing countries, reviewing adaptation-relevant institutional arrangements and the overall adequacy and effectiveness of action and support. These tasks are essential to make GGA concrete, ambitious and implementable.[8]

A vision and rationale for adaptation

The GGA was first proposed by the African Group of Negotiators during negotiations under the Ad-hoc Working Group on the Durban Platform for Enhanced Action (ADP) in 2013. The Independent Association of Latin America and the Caribbean (AILAC) also advocated for the establishment of a GGA. In its submission to the ADP in November 2014, AILAC maintained that a GGA would provide a vision for the global effort on adaptation. Specifically, it would:

- provide an overarching aspirational vision of a resilient planet
- establish a link between building resilience and the actual impacts of climate change
- establish a link between the impacts of climate change and temperature scenarios resulting from realised mitigation action
- establish a link between adaptation action at the local level and regional and/or global efforts to build resilience.

This overall aspirational vision is critical. The GGA has been described as a potential 'north star', providing the direction of travel and unifying work on adaptation, in conjunction with mitigation ambition.[9] It also serves the strategic purpose of increasing attention on adaptation, driving action in planning, implementation and cooperation. This is critical, given the challenge ahead.

Greater accountability

The GGA could also provide greater coherence in adaptation reporting and, therefore, improve accountability. However, adaptation reporting is not mandatory, as the Paris Agreement states that Parties 'should', as appropriate, submit and update an 'adaptation communication' (Article 7.10). Regular reporting on adaptation is, however, already being done, including via national communications. Many countries have included information on adaptation in their NDCs, but the kinds of information and ways in which it is reported are very diverse.

Improving climate finance effectiveness

In 2021, the first-ever report on the needs of developing countries, entitled 'Determination of Needs of Developing Country Parties to the Paris Agreement', will be released, as mandated by COP24. This report will include information and data on the financing, technology and capacity-building needs of developing countries. It will aim to synthesise existing information, focusing on official national reports to the UNFCCC, as well as other regional and global reports. The report will include four focus areas: **thematic** (adaption, mitigation), **sectoral**, **means of implementation** (finance, technology transfer, capacity-building) and **geographical** (Africa, Asia-Pacific, Latin America and Caribbean).

A complementary effort is under way to improve access to climate finance for vulnerable countries (including through a Taskforce on Access to Climate Finance).[10] This includes discussing the controversial topic of climate finance definitions, as well as setting new success criteria for access. A GGA could help signal what countries are doing, the tools they are using, and experiences in setting objectives for adaptation and measuring progress towards these. The GGA will help to improve understanding and agreement

around what counts as an adaptation investment (i.e. those measures that increase resilience to climate risks, see Section 4). At a technical stakeholder meeting of the Standing Committee on Finance (September 2021), the UNFCCC Secretariat presented a preliminary synthesis of the Determination of Needs of Developing Country Parties, which indicated that countries' public statements of need for adaptation finance were vastly inconsistent (e.g. in methodology used and assumptions made), rendering the results incomparable. In theory, a streamlining of needs assessments for adaptation measures and related costing would help facilitate understanding among potential finance recipients and international financiers.

Fisherman casts a net, Timor Leste. Photo: © UN

4. Defining adaptation and national-level adaptation targets

Definitions

The GGA has been defined in terms of components, namely:

- enhanced adaptive capacity
- strengthened resilience
- reduced vulnerability to climate change.[11]

Unfortunately, experts do not agree on definitions of these components or indicators for assessing them, bringing no further clarity to the issue of identifying an adaptation goal or measuring progress. Adaptive capacity is a quality or characteristic of an individual or group of individuals and the potential to adapt; but unless actual adaptations and beneficial outcomes can be observed as a result of that capacity, the concept has limited meaning (i.e. it needs ground-truthing with respect to climate risks). Resilience is often measured, particularly in the short term, in terms of capacities – adaptive, anticipatory, absorptive and transformative[12] – while vulnerability is used and measured in very different ways at different scales, from the intersectional vulnerabilities of people in society, through to the vulnerability of SIDS economies. Stipulating these components is not, therefore, particularly helpful in establishing the parameters of what a GGA might look like.

An alternative approach to defining a GGA is to look at what countries – and other units of governance, including intergovernmental organisations – are already defining as adaptation and adaptation goals. What are the broad objectives of their adaptation efforts? Countries are unlikely to agree on what constitutes adaptation – indeed, adaptation means something very different for coastal inundation in deltas than it does for increased rainfall variability in semi-arid areas[13] – but for the assessment of progress to mean anything, SIDS and other countries will need to have some kind of shared notion of adaptation.

The broadest, most accepted concept of adaptation is the process of changing a system towards a desired state.[14] Adaptation is, therefore, different from 'resilience', which describes the state of the system and can be considered an outcome of adaptation. According to the IPCC, climate change adaptation is a process that should aim to reduce the harm provoked by actual or expected climatic stimuli or their effects.[15] Moreover, adaptation '… is the result of a deliberate policy decision based on an awareness that conditions have changed or are about to change, and that action is required to return to, maintain or achieve a desired state'.[16] There are other interpretations of adaptation that include spontaneous and unplanned adaptations in response to environmental or market pressures,[17] but for the basis of defining a collective goal that Parties can sign up to and contribute to, deliberate actions are of greater relevance.

Adaptation objectives

The objectives of deliberate adaptation actions are often not well articulated in adaptation policies and plans, and also vary between countries, depending on how they are framing adaptation. In India, for example, adaptation is linked to development goals and the need to reduce poverty and food insecurity; while in the UK, adaptation is mainly about reducing economic risk.[18] Adaptation is generally multisectoral, so adaption policies often have other objectives and are integrated into the plans and activities of different government departments – a process known as mainstreaming.[19] One thing that often separates adaptation policies from other kinds of public policies is their explicit relationship to addressing climate change impacts, however these are estimated or measured. Hence, it is important to understand what the impacts of climate change will be on different sectors and develop adaptation and resilience targets in relation to these impacts – limiting or reducing the impacts. Thus, countries will likely start with a focus on *process* – the broader policies and plans, capacity development/training, awareness-raising and data collection that will be needed to address climate change risks – before moving on to considering *outcomes* of these combined processes.

Monitoring and evaluation systems

According to the UNEP 'Adaptation Gap Report', only 22.5% of SIDS have put in place dedicated monitoring and evaluation systems for adaptation, and a further 10% are in the process of developing them.[20] Thus, 22.5% of SIDS are monitoring their adaptation efforts to varying degrees. These percentages are lower than for all countries and for LDCs, suggesting that considerable technical assistance is required to help these countries identify adaptation targets and develop monitoring and reporting systems.

Scene from Kiribati, affected by climate change. Photo: © UN

5. Progress in identifying adaptation objectives in SIDS

The Paris Agreement recognises that adaptation reporting needs to avoid creating any additional burden for developing country Parties (Article 7.10).

Accountability within the Paris Agreement is based on reporting, stocktaking and shared learning between governments, but this assumes a level of consistency. Sharing of good practices requires some indicators that can be compared and synthesised across countries, while reporting and stocktaking require standardisation of reporting approaches.[21] This does not exist for adaptation, and there has been much debate over whether this would even be desirable given the diversity of reporting frameworks that already exist and how much variation there is in the extent to which countries report on them. For SIDS in particular, the costs and human resources required for reporting across these frameworks are very high.

Currently there are several vehicles (not frameworks) that Parties can use to report on their adaptation actions (Article 7):

- National Communications
- Adaptation Communications
- NAPs
- NDCs.

Most SIDS have process- and capacity-related goals, targets and indicators for measuring progress towards climate change adaptation, rather than outcome-related indicators. The majority of these process and capacity targets reflect SIDS' intentions to establish data collection and information systems to assess and understand climate risk and strategies, and plans to respond to climate risk and vulnerability.

Monitoring and evaluation of work against these targets and indicators will help countries and the global community to understand progress against the first part of Article 7 of the Paris Agreement, on adaptive capacity (i.e. the potential to adapt).

> Parties hereby establish the 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 an adequate adaptation response in the context of the temperature goal."
>
> **Paris Agreement, 2015.**

In the rest of this section, we review how the SIDS have reported their adaptation priorities and goals through these various vehicles.

Adaptation Communications

Adaptation Communications are meant to set out national priorities, implementation and support needs, plans and actions (Article 7.10). They could become an important document in advancing the GGA and informing the Global Stocktake, by communicating gaps and needs.[22] However, further guidance is needed on what information should be included in the 'monitoring and evaluation' section, and how this links to the adaption priorities, goals and actions being set.

The only SIDS country to have produced an Adaptation Communication is the Republic of Marshall Islands (RMI). The Government of the RMI outlines a set of dynamic adaptive pathways designed to cope with the uncertainty around the extent and rate of climate change. Rather than trying to predict the future (e.g. amount of sea-level rise over a certain time frame), adaptation pathways present a way of thinking about a range of possible options that could be implemented over time as changes occur. This retains flexibility, rather than prescribing a single solution.

Box 1 Elements of an Adaptation Communication

An Adaptation Communication may include information on the following elements:

(a) national circumstances, institutional arrangements and legal frameworks

(b) impacts, risks and vulnerabilities, as appropriate

(c) national adaptation priorities, strategies, policies, plans, goals and actions

(d) implementation and support for the needs of developing country Parties

(e) implementation of adaptation actions and plans, including:

- **(i)** progress and results achieved
- **(ii)** adaptation efforts of developing countries for recognition
- **(iii)** cooperation on enhancing adaptation at the national, regional and international level, as appropriate
- **(iv)** barriers, challenges and gaps related to the implementation of adaptation
- **(v)** good practices, lessons learned and information-sharing
- **(vi)** monitoring and evaluation

(f) adaptation actions and/or economic diversification plans, including those that result in mitigation co-benefits

(g) how adaptation actions contribute to other international frameworks and/or conventions

(h) gender-responsive adaptation action and traditional knowledge, knowledge of indigenous peoples and local knowledge systems related to adaptation, where appropriate

(i) any other information related to adaptation

Sources: Paris Agreement Article 7.10 and the new Adaptation Committee guidance: 'Draft Supplementary Guidance' (Sept 2021) https://unfccc.int/sites/default/files/resource/ac20_5b_adcomms.pdf

At the time of writing (June 2021), the RMI's use of these adaptation planning and communications instruments is somewhat different to that of other SIDS and developing countries (reflecting different preferences). Most countries submitted NAPs first before the Adaptation Communication, and are approaching the Adaptation Communication as a shorter, less comprehensive version of the NAP.

National Adaptation Plans

NAPs were established under the Cancun Adaptation Framework, offering a means of identifying medium- and long-term adaptation needs and developing and implementing strategies and programmes to address them. None of these reporting mechanisms, however, makes explicit reference to reporting on progress towards a GGA, and none requires governments to report at the outcome level on the results of their adaptation actions.

As of June 2021, only 22 NAPs from developing countries had been submitted to the UNFCCC. Of these,

seven are SIDS (according to the UN classification of SIDS): Fiji, Grenada, Kiribati, St Lucia, St Vincent and the Grenadines, Suriname and Timor-Leste. Analysis of these NAPs finds that they are economy-wide and cross-sectoral, and include important targets and indicators for sectors that have been identified as climate-vulnerable. Most are not just project/programme-based but more expansive, while recognising that there are other adaptation actions occurring that are not captured in the NAP.

A number of commonalities were found across indicators identified in the NAPs. The vast majority of indicators are measures of progress (human and institutional capacity for ongoing adaptation to climate variability and change), rather than socioeconomic, ecological, biological or physical resilience in the wake of climate and weather extremes (see Box 2). Many of the NAPs focus on adaptation pathways rather than outcomes. As one SIDS planning official noted: 'Adaptation changes constantly, with changes in science, models, and national development processes … so planning for longer term adaption comes with significant risks, including maladaptation. Our approach is to build resilience to climate risks in view of long-term adaptation.'

Box 2 Metrics for adaptation identified in SIDS' NAPs

Climate information/information systems. Comprehensive climate information centralised in a national meteorological agency/body, but the implication is that this intended outcome/indicator around climate information systems pertains to the gathering, compiling and analysis of observed data (St Lucia, Grenada, SVG, Kiribati, Fiji, Timor-Leste).

Hazard/vulnerability assessment and mapping. Climate-related hazard assessments and maps in place (St Lucia). Sector-by-sector vulnerability assessments undertaken and widely socialised in relevant machinery of government (Grenada, St Lucia, Suriname, Kiribati).

Mainstreaming in development plans. Evidence of adaptation measures mainstreamed into national development plans (St Lucia, Grenada, Kiribati). For some, this is seen as part of longer-term development planning, with adaptation and resilience needing to be integrated beyond the current decade (SVG and Suriname call for a longer time frame).

Climate risk screening. Evidence of climate risk screening tools, such as CCORAL, applied to project ideas at feasibility stage (St Lucia, Grenada).

Climate-related health surveillance. Systems in place, with regard to water-related disease vectors, as well as insect and other biological vectors (Kiribati, SVG, Suriname, Timor-Leste, Fiji).

Whole-of-government oversight. Evidence of highly active, well-informed (trained), cross-sectoral national climate change committee in place to oversee/advise government action on adaptation and resilience (St Lucia, Grenada, SVG).

Identify most climate-vulnerable sectors and institute action plans for them. Identification and prioritisation/ranking in place for most climate-vulnerable economic sectors; and strategies and plans in place for addressing those vulnerabilities and reducing risk (Grenada, SVG, St Lucia, Kiribati, Suriname). Evidence of climate information integrated in sectoral decision-making processes (all).

Gender responsiveness. Demonstrate that women are not differentially more affected by climate change impacts. Ensure that women are benefiting from equal leadership roles and opportunities to forge climate solutions (St Lucia, Grenada, SVG, Kiribati, Suriname, Fiji, Timor-Leste).

Box 2 continued

Climate-smart land-use planning. Climate change-informed land-use planning/spatial planning system in place (St Lucia, Grenada).

Ecosystem conservation and restoration. The intention is mainly to create plans for undertaking conservation and restoration (St Lucia, Grenada).

National technical capacity-building. Evidence in place of increased numbers of technically trained national personnel in skills related to climate change risk, adaptation (and mitigation) assessment and management (Kiribati, Fiji), including increased technical capacity for ecosystem-based adaptation specifically (Fiji, Timor-Leste).

Public education and awareness-raising. Ranging from implementation of updated, high-quality climate information in school curricula (Kiribati, Fiji) to public information campaigns on the benefits of rainwater harvesting as an 'indicative' output of the NAP (St Lucia), and increased community knowledge of water-saving techniques (Timor-Leste).

Climate finance. Various metrics around mobilisation of climate finance, ranging from evidence of securing Global Climate Fund readiness funds to the number of Global Climate Fund project proposals submitted (Grenada) and more general mobilisation targets (Fiji, Kiribati).

Climate tagging in public expenditure/national budgets implemented (SVG, Timor-Leste).

Improved early warning systems in place to give population adequate time to respond to extreme events (Timor-Leste).

Adequate climate information at subnational levels. Evidence of adequate, relevant climate information (observed, projected) at subnational levels of government and national–subnational integration (Fiji, Timor-Leste).

Other adaptation and resilience plans

NAPS are not the only planning tool used by SIDS to identify and prioritise actions for adaptation and resilience. In this technical paper, we were unable to review all planning documents in SIDS, but have looked in some detail at Dominica's Climate Resilience and Recovery Plan (CRRP), 2020–2030, as an ambitious document with targets that will help achieve the vision of becoming the world's first climate-resilient nation.

The CRRP sets out six cross-cutting climate resilience dimensions:

- strong communities
- a robust economy
- well-planned and durable infrastructure
- enhanced collective consciousness of all Dominicans
- protected and sustainably leveraged natural and other unique assets, and
- strengthened institutional systems.

Under each of these is a set of outcomes to be achieved by 2030 (see Box 3). The plan is intentionally ambitious, focusing on radically reducing losses from climate and weather events, and it requires significant external support to implement.

Box 3 Dominica's CRRP targets[23]

1. Zero fatalities from extreme weather events.
2. Communities able to operate independently for 15 days after an extreme weather event.
3. 90% of housing stock built or retrofitted to resilient building codes.
4. Individuals able to revert to basic living standards within four days.
5. 100% resettlement of individuals living in physically vulnerable locations.
6. Less than 5% of gross domestic product (GDP) in losses related to an extreme weather event.
7. Less than 50% agriculture and fisheries losses as a percentage of total losses.
8. 100% functioning of critical government and emergency services during and after an extreme climatic event.
9. Seaports and airports functioning within one week of an extreme weather event.
10. Sustained, sustainable and inclusive growth of a minimum of 5% achieved.
11. 100% of primary roads and bridges open within three days of an extreme weather event.
12. 60% of the population with access to water and sanitation within seven days of an extreme weather event.
13. 90% of the population with access to power within three days of a climatic event.
14. No more than 5% of schools and health care facilities severely damaged or destroyed by an extreme weather event.
15. 100% of telecommunications restored within three months of an extreme weather event.
16. 100% of national budgeting policies in place and enforced, and government performance measurement framework informed by resilience targets.
17. 90% of the population able to identify the pillars of resilience and at least one measure undertaken by the government, with specific focus on respect for people, planet and property; and law and order maintained following significant disasters.
18. 60% of agricultural land cultivated organically, supporting environmental protection and the sustainable development agenda.
19. 50% increase in healthy coral reef coverage to support increased fish stocks, and protect coastlines and the eco-tourism industry.
20. Becoming carbon neutral through 100% domestic renewable energy production, and an increase of protected forest areas to 67% of Dominica's land mass.

Singapore's Climate Action Plan is similarly ambitious and has clear output- and outcome-level targets, including an output to increase the height of reclaimed land platform levels to 4 m. For critical infrastructure, including ports and airports, the raised platforms will be 5 m above sea level. On food security, Singapore aims to meet 30% of food needs through diversification and increased local production by 2030 (currently, it imports more than 90% of its food supply). The Climate Action Plan focuses on six issues: protecting our coasts; managing our water and minimising floods; protecting our biodiversity and greenery; strengthening resilience in public health and our food supply; keeping our essential services running well; and keeping our buildings and infrastructure safe (see Box 4). Adaptation plans have been kept intentionally flexible, adopting a staged approach with different pathways that can accommodate future needs and the latest science.

Box 4 Singapore's Climate Adaptation Plan: summary of efforts and anticipated results[24]

Coastal protection

- set higher minimum reclamation levels
- build geo-bags and seawalls
- raise the height of some coastal roads
- produce a coastal adaptation study to identify options to better protect coasts over the long term

Water resources and drainage

- diversified water supply
- create a water conservation programme
- create a water efficiency scheme
- design a stormwater management system
- build a NEWater plant (highly treated, reclaimed wastewater) and two new desalination plants
- study the feasibility of an innovative underground drainage and reservoir system

Biodiversity and greenery

- set up a marine conservation area
- restore and conserve mangroves
- step up patrols at fire hotspots
- increase and intensify tree inspections
- develop a fire probability index
- improve habitat management and resolution

Public health and food security

- create a nationwide programme to supress mosquito vector population
- promote workplace safety and health guidelines to manage heat stress
- implement a food diversity strategy
- enhance local food production by raising productivity and capability of local farmers
- develop heat index and advisories for the public
- review current vector control regime
- continue to support local farmers

Network infrastructure

- install flood barriers at existing underground MRT stations in low-lying areas
- upgrade the existing airport drainage system
- review resilience of power stations, transport and telecommunications infrastructure against localised flooding and temperature changes
- build Changi Airport Terminal 5 at 5.5 m above mean sea level

Building, structure and infrastructure

- implement periodic structural inspections to ensure structural defects are detected and rectified
- study impact of climate change on buildings and structures
- study impact of climate change on slope stability and integrity

Adaptation metrics within SIDS' NDCs[25]

NDCs are climate actions plans that outline countries' contributions towards achieving the purposes of the Paris Agreement, while National Communications report on actions towards achieving the objectives of the Convention.

Many of the SIDS NDCs detail only their climate-related challenges and intended adaptation activities, rather than using the word 'targets' or 'goals', which imply both a deeper level of commitment and an intention to evaluate results against those targets. The variance in language used makes it difficult to compare the countries' NDCs, but some themes emerge. These include:

- agriculture and food security
- buildings, including housing
- climate knowledge and skills development
- coastal zone management and protection
- critical infrastructure, including transport
- data collection
- disaster risk reduction
- ecosystems and biodiversity
- energy (renewable)
- financing
- fisheries and related food security
- fresh water
- gender and social inclusion
- land-use planning, including urban planning
- public health
- solid waste management
- sovereignty
- tourism
- transboundary climate-related risks
- wastewater and stormwater management.

Box 5 summarises the quantitative, outcome-level targets that SIDS have identified in their NDCs.[26]

Box 5 Quantitative targets in SIDS' NDCs

Ecosystems and biodiversity

- A commitment to reverse the trend of habitat degradation, substantially improve biodiversity and water retention, strengthen soils, and restore forests and coastal wetlands by 2030; includes the detailed indicator to increase the area of coastal and marine protected sites (currently some 128,000 ha) by 50% by 2030 (Cabo Verde, 2020).
- Target to reduce indiscriminate and illegal felling of trees by 15% by 2030 (Sao Tome and Principe, 2015).
- Target for 30% of land to be used for agro-forestry or forestry by 2025 – to be achieved by planting 1 million trees by 2023 (Tonga, 2020).
- Increase the percentage of protected areas from 15% to 26% and ensure its management, and an effective implementation of the Forest Act and the moratorium to ban the felling and export of timber over the next five years (by 2020) (Guinea Bissau, 2015).
- Suriname has established 14% of its total land area under a national protection system and will continue to pursue the expansion of this system by increasing the percentage of forests and wetlands under protection to at least 17% of the terrestrial area by 2030. This will lead to the expansion of the national network of legally protected areas to accomplish 100% representation of all ecosystems and biological species (Suriname, 2020).

Box 5 continued

- Maintenance of the existing stocks of fish and other marine species – to be achieved by expanding Marine Protected Areas and Special Management Areas to make up 30% of Tonga's Exclusive Economic Zones (EEZs) (Tonga, 2020).
- Target to establish 30% of the country's EEZs as Marine Protected Areas and work towards 100% management of the EEZs by 2030 through the implementation of the National Ocean Policy (Fiji, 2020).
- Enhancing 30 ha of forest, marine and coastal habitats, and restoring ecological habitats in at least half of gardens, parks and streetscapes by 2030 (Singapore, 2020).

Territorial integrity

- Prevent any permanent loss of land to rising sea levels on Tonga's four main islands (i.e. Tongatapu, Ha'apai, Vava'u and 'Eua) – to be achieved by expanding Marine Protected Areas and Special Management Areas to make up 30% of Tonga's EEZs (Tonga, 2020).
- New critical infrastructure, such as the Tuas Port and Changi Airport Terminal 5, will have platforms raised to at least 5 m above Singapore Height Datum (SHD)[26] (Singapore, 2020).

Potable water and freshwater

- Achieve a 'sustainable and resilient water management system' by supplying 100% of households with access to a public water network, in the amount of 40 l/person/day with 5 l/person/day of drinking water for 2030 and at costs not exceeding 5% of family income. In the event that no connection to the household is provided, access to a water point should be at a maximum distance of 250 m (Cabo Verde, 2020).
- 100% of the population has access to potable water by 2030 compared to 66% in 2020 (Comoros).
- Reduce hydro-inefficiency through water losses in water supply systems and desalination plants from today (30%) to 10% in 2030 (Cabo Verde, 2020).
- By 2030, 100% of water-climate vulnerable rural communities in the six provinces are able to address water needs in normal and (climate, disaster and environmentally) stressed times (Vanuatu, 2020).
- By 2030, six climate-resilient water protection zones declared and sufficiently provide urban water supply needs in normal and (climate, disaster and environmentally) stressed times (Vanuatu, 2020).

Food and water security

- 10% of the total population (0.8 million beneficiaries, 25% women) have increased resilience of food and water security, health and well-being in Papua New Guinea (PNG, 2020).
- Meet 30% of nutritional needs with food produced in Singapore by supporting the local agri-food industry to adopt innovative solutions and raise productivity (Singapore, 2020).

Sewerage and wastewater, and solid waste

- By 2030, provide 100% waste disposal coverage such as septic tanks for households outside the network (Cabo Verde, 2020).
- Waste is managed according to strict hierarchy, and waste policy fully implemented; landfills in flood risk zones are decommissioned (Seychelles, 2015).

Agriculture

- Increase the amount of land irrigated by drip irrigation (17% in 2015) and adopt measures to irrigate from reused treated wastewater as a measure of resilience (Cabo Verde, 2020).

Box 5 continued

- By 2030, women take up 40% of employment in agriculture (Cabo Verde, 2020).
- 100% of farmers/agricultural producers use techniques and varieties adapted to climate variability and change; and 100% use a water management system that is climate-adaptive by 2030 (Comoros, 2016).
- Reduce the use of nitrogen fertilisers in agriculture by 2030 (Sao Tome and Principe, 2015).
- By 2022, 80% of agriculture SMEs and private sector operators are able to generate sufficient income to cover essential household needs and services in normal and (climate, disaster and environmentally) stressed times (Vanuatu, 2020: 21).

Fisheries

- By 2030, women will take up at least 40% of employment in the blue economy (Cabo Verde, 2020: 38–39).

Disaster risk reduction

- 100% of the population located in climate-vulnerable areas are relocated or benefit from early warning and disaster preparedness facilities protecting them from climatic hazards, particularly risk of submersion, by 2030 (Comoros, 2016).
- 6 million people (70% of the population) benefit from improved early warning information to respond to climate extremes (PNG, 2020).
- Improve response to wildfire and other environmental disasters (Sao Tome and Principe, 2015).

Knowledge and skills

- 100% of the climate-vulnerable population are sensitised to climate-related hazards and well informed about adaptation measures, by 2030 (Comoros, 2016).

Public health

- 100% of PNG's population to benefit from introduced health measures to respond to malaria and other climate-sensitive diseases (PNG, 2020).

Infrastructure, including transport, buildings and settlements

- $1.2 billion value of transport infrastructure and assets built/rehabilitated according to climate-resilient codes and standards by 2030 (PNG, 2020).
- $172 million value of building and utility infrastructure assets built/rehabilitated according to climate-resilient codes and standards by 2030 (PNG, 2020).
- All new builds to incorporate rainwater harvesting, solar PV and other sustainable building features (Seychelles, 2015).

Renewable energy (articulated in respect to adaptation and resilience)

- Target to generate electricity with 100% renewable energy by 2020, and increase energy efficiency on Funafuti (island) by 30%, both as a means to strengthen energy security and economic resilience and reduce fossil fuel dependency (Tuvalu, 2015).

6. Aggregation of SIDS goals

Setting a GGA and then assessing progress towards it through the Global Stocktake will require some level of aggregation or collation. The Adaptation Committee's technical paper on reporting on adaptation for the Global Stocktake suggests that: 'Framing the process of gathering and combining relevant information within the assessment of progress made towards the global goal on adaptation as an act of collation, rather than aggregation, may more effectively capture what is feasible and expedient for adaptation.'[28]

Whether aggregation or collation (which can be more of a qualitative process), some themes or types of indicators will need to be identified to organise what will likely be a vast amount of information. Given the similarities in types of indicators that are already being identified in SIDS' NAPs and NDCs, selecting themes for collation, comparison and potentially aggregation among this group of countries may not be as challenging as it first appeared. Indicators that have been developed to date reflect similar concerns around:

- agricultural production, fisheries and food security
- public health
- ecosystems
- infrastructure and housing
- water security
- waste management
- energy security
- disaster risk management.

In interviews with SIDS' government officials developing adaptation and resilience plans, tourism was also noted as a key sector and focus for adaptation.

The fact that SIDS have identified similar sectors for adaptation is a good starting point for developing an aggregate GGA. But for aggregation of national – and even regional – goals towards a GGA to be feasible, Parties will need to use common or standardised scientific methodologies. It is anticipated that the forthcoming IPCC guidance in 2022 will prove instrumental in this (cf. Decision CMA/2018/:31). In the meantime, the following approach is recommended.

(a) Assessing climate risks

The starting point for developing national adaptation actions and objectives is an assessment of potential impacts of climate change (i.e. vulnerabilities) on critical sectors. There are now tools available to do this. Climpact, for example, developed by the World Meteorological Organization, is an open-source package using meteorological data (daily minimum and maximum temperatures, as well as daily precipitation) that produces estimates of frequency, duration and magnitude of various climate extremes relevant to different sectors, based on historical data, which can be run under models to project indicators forward. Combined with vulnerability data, these projections can be used by governments to develop a climate science basis for adaptation actions. Green Climate Fund investments may in the future require this methodology to be used in the formulation of projects, so it makes sense for governments to collect vulnerability data and develop their adaptation objectives and actions using a similar approach.

The Warsaw International Mechanism has a strategic workstream underway to document comprehensive risk management approaches.[29] This includes "developing and/or disseminating guidance, as appropriate, for comprehensive risk profiles, and, where possible, comprehensive risk profiles developed for designing and implementing country-driven risk assessments at the national level, including for the preparation of asset inventories.[30]

This evolving work by the Warsaw International Mechanism's Technical Expert Group to document and articulate robust, achievable climate risk assessment and management practices by diverse countries could also, potentially, align with a Global Goal on Adaptation process to consolidate levels of adaptation ambition across countries (and measure progress against that ambition).[31]

The IPCC also developed 'Technical Guidelines for Assessing Climate Change Impacts and Adaptations',[32] which set out various integrated frameworks for assessing impacts, but these have not been updated since 1994 and are considered by many to be too

general to support detailed implementation of the Paris Agreement. Any updated technical guidelines by the IPCC could provide a set of common methods for assessing climate change impacts on different sectors. Importantly, these climate risk assessments should identify impacts for different temperature scenarios, so that alternative pathways and actions can then be developed.

(b) Identifying adaptation options

A longlist of adaptation options for climate impacts under different temperature scenarios should be based on national and local development priorities and goals, but well-established criteria can then be used to select and prioritise adaption actions. One example, based on NAP Technical Guidelines for NDCS,[33] identifies the following criteria:

- timing/urgency for action: divide into levels/phases of actions for which further delay could increase vulnerability or lead to increased costs at a later stage
- cost: human and other resource costs, and where relevant, economic costs and benefits
- co-benefits: negative or positive impacts on other sectors or systems
- efficacy: extent to which the measure is able to effectively reduce the risk – n.b. 'No regrets' solutions have a positive impact even if climate change impacts do not occur/have a high degree of uncertainty
- flexibility or robustness: measures that allow for adjustment or change in the future if climate change impacts are different from those anticipated

As for the assessment of climate risks, a common framework is needed for selection of adaptation options, which could be developed by the IPCC.

(c) Costing adaptation actions – developing an investment and financing plan

Another important step for developing a GGA is costing adaptation needs and identifying which are *unconditional* – can be implemented using national revenue sources – and which are *conditional* on receiving external assistance. This is particularly important for SIDS, many of which have very high debt burdens and limited fiscal space to finance adaptation and resilience plans.[34] Conditional adaptation actions can then be linked to support available for different geographies, sectors and different types of finance, which will help improve transparency in adaptation finance.[35] Standardised methods for costing adaptation actions at the national level are, therefore, needed, as well as for aggregating those costs (across NDCs and Adaptation Communications); and increased assistance to help SIDS identify suitable funding sources for different actions.

(d) Monitoring and evaluation system

National M&E systems for adaptation are critical to developing a meaningful GGA, allowing countries to understand how different sets of actions contribute to outcomes, and adjust their plans if progress or milestones are not met. Monitoring, evaluation and reporting place a significant burden on national and local authorities to collect data, and are resource-intensive.

For those SIDS that have already set up M&E systems and identified adaptation outcomes, there is a high degree of synergy with the Sustainable Development Goals and related targets (e.g. SDG 6, 'Ensure access to water and sanitation for all'). Aligning M&E frameworks for NAPs and other adaptation and resilience plans with SDG goals can certainly help reduce the reporting burden. Using the data collection and reporting process for the Sendai Framework on Disaster Risk Reduction might be useful,[36] as this requires countries to monitor disaster impacts (although for all disasters, not just those that are climate- and weather-related). A reduction in impacts related to extreme weather is certainly one measure of successful adaptation and resilience, but the impacts of slow-onset processes such as salt-water intrusion, soil erosion, coral bleaching and others would not be captured in reporting on disaster impacts. Objectives around reducing these impacts would be better captured in SDG 6 (access to water) and SDG 14 (oceans) and new international biodiversity goals.[37]

Across each of these activities in establishing adaption actions and targets, expert guidance and review is needed. Expert bodies could propose core indicators for specific domains for consideration by Parties. The IPCC will have a key role to play here, as well as regional intergovernmental organisations, which can provide overarching frameworks and guidance, facilitate policy coherence and alignment in setting adaptation objectives and indicators, and help attract resources to support Member States.

7. Options for formulating a GGA

The Paris Agreement is predicated on the principle of ratcheting ambition and no backsliding over successive cycles of NDC enhancement by Parties to the Agreement. Article 3 states:

> As nationally determined contributions to the global response to climate change, all Parties are to undertake and communicate ambitious efforts as defined in Articles 4 [mitigation], 7 [adaptation], 9 [finance], 10 [technology], 11 [capacity building] and 13 [transparency] with the view to achieving the purpose of this Agreement as set out in Article 2 [temperature goal]. The efforts of all Parties will represent a progression over time, while recognizing the need to support developing country Parties for the effective implementation of this Agreement."
>
> **Paris Agreement, 2015.**

The GGA does not require, per se, common metrics and reporting on outcomes. However, in calling for the achievement of 'strengthened resilience' and 'reduced vulnerability', it stresses the need for a 'country-driven, gender-responsive, participatory and fully transparent approach'. Article 7 paragraph 7 states: 'Parties should strengthen their cooperation on enhancing action on adaptation, taking into account the Cancun Adaptation Framework, including with regard to: Improving the effectiveness and durability of adaptation actions.'

This country-driven principle is critical to the formulation of a GGA and suggests that a GGA based on aggregation of national goals is preferable to a top-down definition of what countries should aspire to.

Measuring the effectiveness and durability of adaptation actions, particularly if this is tied to financing, will ultimately require an outcome-based M&E approach, which is still emergent among SIDS. It may, therefore, be more appropriate to expect SIDS to deliver predominantly against process- and capacity-related indicators in this current five-year cycle of NDCs, with increasing movement towards adding quantitative, outcome-based adaptation indicators in the ensuing five-year cycles (see Figure 2, overleaf).[38] This recommendation is not only based on SIDS' current institutions, policies and data availability; it is also based on the heavy reliance of SIDS on fiscal restructuring/debt cancellation to right their balance of payments; and/or external concessional financial support for adaptation actions. Many of the national-level goals, targets and intended measures are given as 'conditional' on external support.

Recommendation for a GGA

The GGA should be an aspirational collective goal to aim for; but countries will also need to be able to say where they are on their own aspirational trajectory, and if circumstances have changed (including as a result of alterations in emissions trajectories and levels of global warming that are higher/lower than expected), and what further measures are needed. A country-driven approach[39] is, therefore, recommended for the GGA, whereby governments set their own goals for adaptation – for example, by 2025-2030 and by 2030-2040 – and the GGA is a collation and aggregation of these. In a first iteration, the GGA for 2030 is a collation of process goals – i.e. plans developed, actions implemented, numbers of people being trained etc. across a specified number of priority sectors. The GGA could be for 100% of Parties to achieve these goals by 2030. It should be noted that the periodic review process for the Paris Agreement may also be a relevant pre-2030 milestone, to help Parties to calibrate their adaptation goals.[40]

A second iteration of the GGA for the period 2030–2040 should be outcome-focused and an aggregation of ratcheting of ambition in national goals which, in turn, are based on the use of standardised scientific methods to identify climate risks and adaptation actions – including transboundary adaptation action – and based on a better understanding of process. The GGA would be

for 100% of countries to have achieved their outcome-based adaptation goals for identified priority sectors.

One suggestion would be for countries to set adaptation outcomes that are defined in terms of (a) reducing impacts from extreme weather and climate events (which could draw on Sendai reporting) or (b) making progress towards the SDGs, despite the prevalence of increasing climate shocks and stresses (which could draw on SDG reporting).

Box 6 includes some suggestions for national adaptation targets, based on priority sectors highlighted in SIDS' NAPs and other adaption and resilience plans, and their NDCs.

The GGA can certainly provide a north star, enhancing commitment to adaptation globally and provisions for adaptation, guiding the allocation of climate finance; but to do so, it needs to signal a collective vision, built on the individual goals of all Parties.

Additional factors to consider in taking forward this country-driven approach towards developing an aggregate GGA include the following.

- SIDS will need substantial assistance to be able to apply common methodologies for assessing climate risks across key sectors, guidance for developing their adaptation objectives, and support to establish reporting frameworks and track progress. SIDS are eager to develop their own capacities and to be less reliant on external consultants: there is a strong demand for strengthening SIDS' domestic skill base, which is institutionalised through universities and professional development.
- Countries can then self-report on progress, providing qualitative and quantitative data in relation to process and outcome targets that have been set.
- An independent expert assessment will likely be needed to assess how well national goals are aligned with the vulnerability profile of each country. A common, transparent method for doing this assessment could be developed.
- Expert review will also likely be needed to check for consistency in reporting on outcomes. This could be done through peer review, using experts from other countries, and international and regional scientific bodies.

Based on the steps identified above, it should then be possible to aggregate national goals and assess progress towards the GGA in the Global Stocktake.

Box 6 Examples of 2025-2030 and 2030–2040 goals

Process-oriented targets for 2025-2030

1. Water-food-energy security

(b) costed/investment plan for achieving water security, where water security is defined as 'achieving universal and equitable access to safe and affordable drinking water for all (SDG 6.1), including during periods of extreme weather…'

3. Disaster risk management

(d) completed assessment of the percentage of the population covered by early warning systems for climate-related hazards

(e) costed plan for closing the gap and providing an early warning system to 100% of the population

6. Infrastructure and housing

(a) completed assessment of the percentage of settlements having a 1 in 100 or greater annual probability of flooding

(b) costed plan for investment in protective infrastructure, retrofitting and relocation of high-risk buildings and settlements

Outcome-oriented targets for beyond 2030

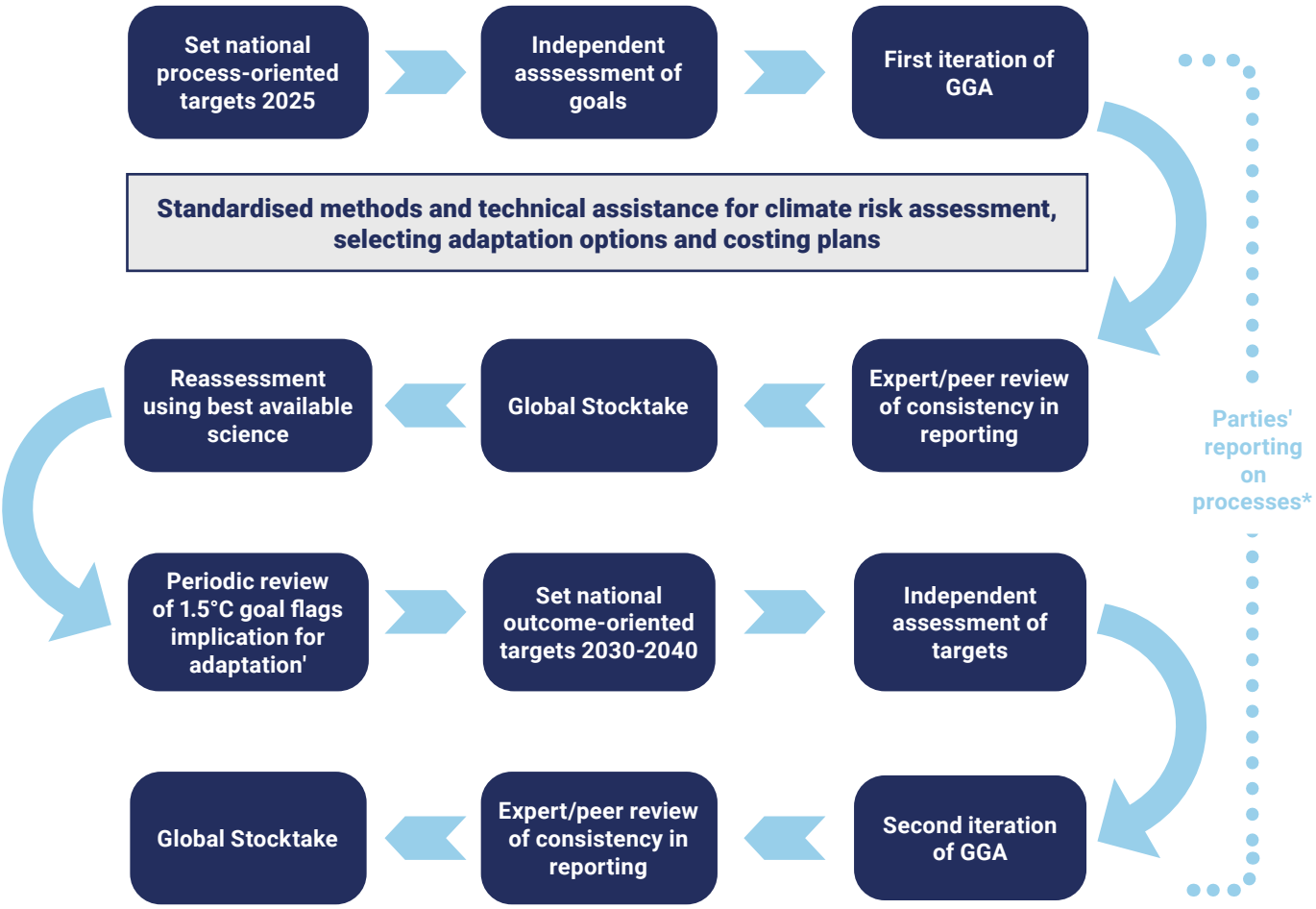
1. Water-food-energy security

(b) demonstrated achievement of food security defined as reliable access to a sufficient quantity of affordable, nutritious food (during climate extremes and stresses…) (i.e. aligning with SDG 2.4)

3. Infrastructure and housing

(a) 100% public infrastructure compliant with resilient building codes

Figure 2 Towards a Global Goal on Adaptation



* NDCs, Adaptation Communications, National Communications

** Periodic review of the viability of the long term temperature goal of the Paris Agreement, during the review period 2020–2023 will look at "Challenges and opportunities for achieving the long-term global goal". If the world is far off course to achieve the 1.5°C goal, this implies that needs for adaptation (and for addressing related losses and damages) will be far greater than at 1.5°C and adaptation goals and investments will need to be ratcheted up in parallel.

Annex: Policies reviewed

NDCs

Antigua and Barbuda, Intended Nationally Determined Contribution (2015)

Bahamas, Intended Nationally Determined Contribution (2015)

Bahrain, Intended Nationally Determined Contribution (u.d., posted to UNFCCC portal, 2016)

Barbados, Intended Nationally Determined Contribution (2015)

Belize, Nationally Determined Contribution (u.d., posted to UNFCCC portal, 2016)

Cabo Verde, Updated NDC (2020)

Comoros, Contributions Prévues Déterminées au niveau National (2016, in French)

Commonwealth of Dominica, Intended Nationally Determined Contribution (2015)

Dominican Republic, Contribución Nacionalmente Determinada (2020, in Spanish)

Fiji, Updated NDC (2020)

Grenada, Second NDC (2020)

Guinea Bissau, Intended Nationally Determined Contribution (2015)

Guyana, Revised Intended Nationally Determined Contribution (u.d., posted to UNFCCC portal, 2016)

Haiti, Contribution Prévue Déterminée au niveau National (2015, in French)

Jamaica, Updated NDC (2020)

Kiribati, Intended Nationally Determined Contribution (u.d., posted to UNFCCC portal, 2016)

Maldives, Updated NDC (2020)

Republic of the Marshall Islands, Update to NDC (2020) and Second NDC (2018)

Mauritius, First NDC (2015)

Federated States of Micronesia, Intended Nationally Determined Contribution (u.d., posted to UNFCCC portal, 2016) [no adaptation content, mitigation only]

Republic of Nauru, Intended Nationally Determined Contribution (2015)

Republic of Palau, Intended Nationally Determined Contribution (2015) [no adaptation content, mitigation only]

Papua New Guinea, Enhanced Nationally Determined Contribution (2020)

Samoa, Intended Nationally Determined contribution (2015)

Sao Tome and Principe, Intended Nationally Determined Contribution (2015)

St Kitts and Nevis, First NDC (2015)

St Lucia Updated First NDC (2020)

St Vincent and the Grenadines (SVG), Intended Nationally Determined Contribution (2015)

Seychelles, Intended Nationally Determined Contribution (2015)

Singapore, Updated NDC, 2020

Solomon Islands, Intended Nationally Determined Contribution (2015)

Republic of Suriname, Nationally Determined Contribution (2020)

Timor-Leste, Nationally Determined Contribution (2016)

Kingdom of Tonga, Second Nationally Determined Contribution (2020)

Trinidad and Tobago, Intended Nationally Determined Contribution (u.d., posted to UNFCCC portal, 2018) [no adaptation content, mitigation only]

Tuvalu, Intended Nationally Determined Contribution (2015)

Vanuatu, Updated Nationally Determined Contribution (2020)

Notes: St Lucia's NDC contains comparatively little detail on adaptation; more detail is contained in its published NAP; Suriname's NDC also heavily referred to its NAP for more detail.

NAPs

Fiji NAP: Government of Fiji (2018) Republic of Fiji National Adaptation Plan: A pathway towards climate resilience

Grenada NAP: Government of Grenada (2017) National Climate Change Adaptation Plan (NAP) for Grenada, Carriacou and Petite Martinique 2017–2021

Kiribati NAP: Government of Kiribati (2019) Kiribati Joint Implementation Plan for Climate Change and Disaster Risk Management (2019–2028)

St Lucia NAP: Government of Saint Lucia (2018) Saint Lucia's National Adaptation Plan (NAP) 2018–2028

St Vincent and the Grenadines NAP: Government of Saint Vincent and the Grenadines (2018) St Vincent and Grenadines National Adaptation Plan (2018–2030)

Suriname NAP: Government of Suriname (2019) Suriname National Adaptation Plan (NAP) 2019–2029.

Timor-Leste NAP: Government of Timor-Leste (2020) Timor-Leste's National Adaptation Plan: Addressing climate risks and building climate resilience

Other plans

Dominica's Climate Resilience and Recovery Plan 2020–2030 (CRRP)

Singapore's Climate Action Plan: A Climate-Resilient Singapore, For a Sustainable Future (2016–2030)

Endnotes

1. Ngwadla, X. and S. El-Bakri (2016) The Global Goal for Adaptation under the Paris Agreement: Putting ideas into action. https://cdkn.org/wp-content/uploads/2016/11/Global-adaptation-goals-paper.pdf.

2. UNEP (2021) United Nations Adaptation Gap Report, 2020. Nairobi: United Nations Environment Programme. https://www.unep.org/resources/adaptation-gap-report-2020.

3. Where the UNFCCC defines 'means of implementation' as finance, capacity and technology transfer.

4. Wilkinson, E., M. Scobie, C. Lindsay et al. (2021) Sustaining development in Small Island Developing States: a reform agenda. Policy brief. London: ODI. www.odi.org/en/sustaining-development-in-small-island-developing-states.

5. OECD (2021) Climate Finance Provided and Mobilised by Developed Countries: Aggregate Trends Updated with 2019 Data, Climate Finance and the USD 100 Billion Goal. Paris: OECD Publishing. https://doi.org/10.1787/03590fb7-en.

6. South Africa has proposed a GGA of increasing the resilience of the global population by 50% by 2030 and by at least 90% by 2050, but this has already prompted controversy, as many experts note there is no universal metric to assess resilience to climate impacts. These challenges are discussed further in this paper.

7. See, for example, Adaptation Committee (2021) Approaches to reviewing the overall progress made in achieving the global goal on adaptation. Technical Paper. AC/2021/TP/GGA; Craft, B. and S. Fisher (2018) Measuring the adaptation goal in the global stocktake of the Paris Agreement. Climate Policy 18(9): 1203–1209; Dupuis, J. and R. Biesbroek (2013) Comparing apples and oranges: The dependent variable problem in comparing and evaluating climate change adaptation policies. Global Environmental Change 23(6): 1476–1487.

8. Action Aid, WWF and CARE (2016). Global Goal on Adaptation: From Concept to Practice. https://careclimatechange.org/wp-content/uploads/2019/06/Global-Goal-on-Adaptation-From-Concept-to-Practice-v2-DesktopPrint-NoCrops-1.pdf.

9. Ibid.

10. At the Climate and Development Ministerial on 31 March 2021, participants recognised the need to streamline access to climate finance, with greater individual and collective action required both before and following COP26. The Chair's summary reflected the call for a Taskforce on Access to Climate Finance to address the urgent need for coherent and effective support for developing countries' efforts to decarbonise their economies, adapt to climate change and establish green growth pathways.

11. Adaptation Committee (2021) Approaches to reviewing the overall progress made in achieving the global goal on adaptation. Technical Paper. AC/2021/TP/GGA.

12. Bahadur, A., K. Peters, E. Wilkinson et al. (2015) The 3As: Tracking Resilience across BRACED. ODI Working Paper. London: ODI; Béné, C., D. Headey, L. Haddad and K. von Grebmer (2016) Is resilience a useful concept in the context of food security and nutrition programmes? Some conceptual and practical considerations, Food Security 8, 123–138; Schipper, L.F. and L. Langston (2015) A comparative overview of resilience measurement frameworks analysing indicators and approaches. ODI Working Paper. London: ODI.

13. Tompkins, E.L., K. Vincent, R.J. Nicholls et al. (2018) Documenting the state of adaptation for the global stocktake of the Paris Agreement, WIREs Climate Change 9(5): 1–9.

14. Hinkel, J. (2011) Indicators of vulnerability and adaptive capacity: towards a clarification of the science-policy interface, Global Environmental Change 21, 198–208.

15. IPCC (2001) Glossary of terms used in the IPCC third assessment report. In: McCarthy, J.J. et al. (eds.), Climate Change 2001: Impacts, Adaptation, and Vulnerability, 365. Cambridge: Cambridge University Press.

16. IPCC (2007) Glossary of terms used in the IPCC Fourth Assessment Report (WGII). In: Parry, M.L. et al. (eds.), Climate Change 2007: Impacts, Adaptation and Vulnerability, 869. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge: Cambridge University Press.

17. Lim, B., I. Burton, E. Spanger-Siegfried et al. (2005) Adaptation Policy Frameworks for Climate Change: Developing Strategies, Policies, and Measures. New York: United Nations.

18. Haug, C., T. Rayner, A. Jordan et al. (2010) Navigating the dilemmas of climate policy in Europe: evidence from policy evaluation studies, Climatic Change 101, 427–445.

19. Biesbroek, G.R., R.J. Swart, T.R. Carter et al. (2010) Europe adapts to climate change: comparing national adaptation strategies, Global Environmental Change 20, 440–450.

20. UNEP (2021) United Nations Adaptation Gap Report, 2020. Nairobi: United Nations Environment Programme. https://www.unep.org/resources/adaptation-gap-report-2020.

21. Berrang-Ford, L., F.M. Wang, A. Lesnikowski et al. (2017) Towards the assessment of adaptation progress at the global level. In: Olhoff, A., H. Neufeldt, P. Naswa et al. (eds), The Adaptation Gap Report: Towards Global Assessment, 35–48. Nairobi: United Nations Environment Programme.

22. Co-chairs' summary of the Presidencies' first informal workshop on the GGA (LatAM RCW).

23. Dominica's Climate Resilience and Recovery Plan (CRRP), 2020–2030.

24. A climate resilient Singapore for a sustainable future (2016) https://www.nccs.gov.sg/docs/default-source/publications/a-climate-resilient-singapore-for-a-sustainable-future.pdf

25. This exercise comes with a heavy caveat. The vast majority of the NDCs studied are now more than five years old: they were the intended Nationally Determined Contributions or first NDCs submitted by Parties to the UNFCCC in 2015, in the run-up to the Paris Agreement. Since 2015, SIDS have experienced more weather and climate extremes, and the very considerable economic shock(s) associated with the Covid-19 pandemic, all of which may have changed governments' calculus as to the ambition and achievability of their national adaptation targets and plans. Furthermore, we acknowledge that national climate laws and policies have progressed since the 2015 cycle of NDCs were submitted, reflecting SIDS' climate ambitions. It will be of immense benefit to review countries' updated NDCs in the next cycle, when they become available.

26. It should be noted that mitigation indicators have been put forward separately, with SIDS articulating some of the boldest, 1.5°C-compatible mitigation targets of all Parties to the Paris Agreement. The mitigation targets are not mentioned here unless there is a specific, articulated joint target with adaptation.

27. The Singapore Height Datum is defined as the mean sea level determined at Victoria Dock, Singapore, between 1935 and 1937.

28. Adaptation Committee (2021) Approaches to reviewing the overall progress made in achieving the global goal on adaptation. Technical Paper. AC/2021/TP/GGA, 12.

29. https://unfccc.int/wim-excom/areas-of-work/crm-approaches

30. This quote describes activity 5(a) of the WIM's comprehensive risk management workstream, as cited in the Technical Expert Group's Comprehensie Risk Management Plan, https://unfccc.int/sites/default/files/resource/TEG-CRM%20Plan%20of%20Action_Approved%20version.pdf

31. This WIM comprehensive risk management workstream was mandated by Decision 2/CMA2 (https://unfccc.int/sites/default/files/resource/cma2019_06a01E.pdf) at COP25 in Katowice, which "invites Parties to promote coherence in approaches to averting, minimizing and addressing loss and damage when formulating and implementing relevant national plans, strategies and frameworks, and creating enabling environments, including by considering future climate risk, reducing exposure and vulnerability, increasing resilience and coordinated action, and monitoring progress."

32. Carter, T.R., M.L. Parry, H. Harasawa and S. Nishioka (1994) IPCC Technical Guidelines for Assessing Climate Change Impacts and Adaptations. https://www.ipcc.ch/report/ipcc-technical-guidelines-for-assessing-climate-change-impacts-and-adaptations-2/.

33. LDC Expert Group (2012) Least Developed Countries National Adaptation Plans: Technical guidelines for the national adaptation plan process. UNFCCC. https://unfccc.int/files/adaptation/cancun_adaptation_framework/application/pdf/naptechguidelines_eng_high__res.pdf.

34. Bouhia, R. and E. Wilkinson (2021) 'Small island developing states need urgent support to avoid debt defaults'. https://odi.org/en/insights/small-island-developing-states-need-urgent-support-to-avoid-debt-defaults/

35. Ngwadla, X. and S. El-Bakri (2016) The Global Goal for Adaptation under the Paris Agreement: Putting ideas into action. https://cdkn.org/wp-content/uploads/2016/11/Global-adaptation-goals-paper.pdf.

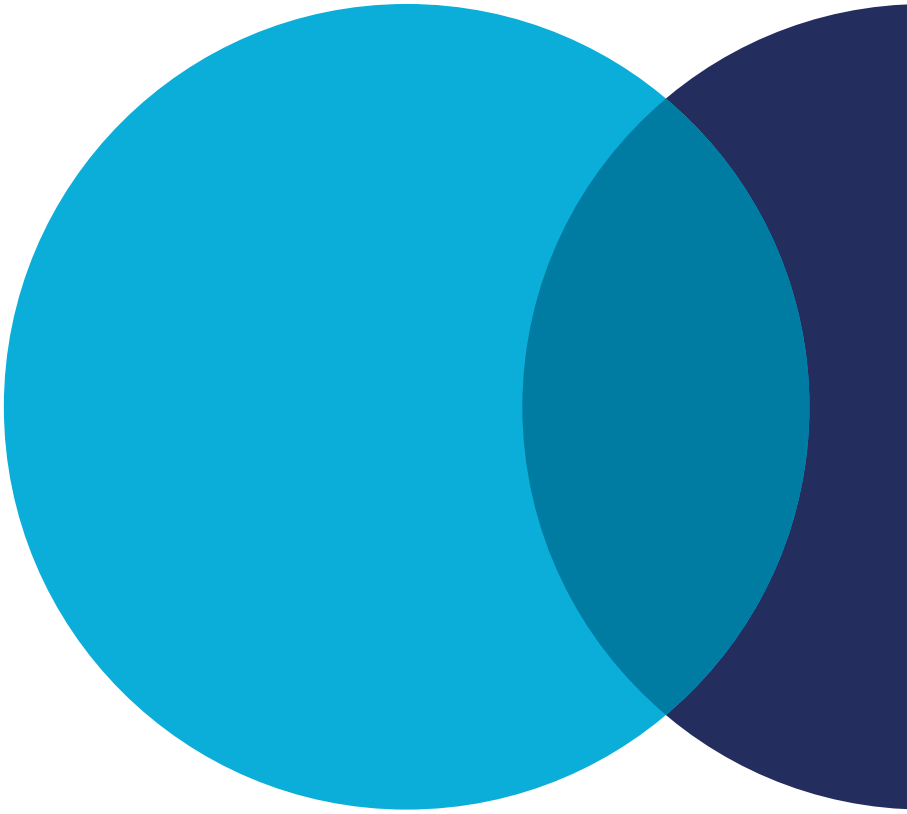
36. Kato, T. and J. Ellis (2016), Communicating progress in national and global adaptation to climate change, OECD/IEA Climate Change Expert Group Papers, No. 2016/01, OECD Publishing, Paris, https://doi.org/10.1787/5jlww009v1hj-en

37. UNEP (2021) Convention on Biological Diversity. First Draft of the Post-2020 Global Biodiversity Framework. CBD/WG2020/3/3. Nairobi: United Nations Environment Programme. https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf.

38. The NAPs that have been formulated so far by SIDS generally run for 10 years but start and finish in different years.

39. Berrang-Ford, L., F.M. Wang, A. Lesnikowski et al. (2017) Towards the assessment of adaptation progress at the global level. In: Olhoff, A., H. Neufeldt, P. Naswa et al. (eds), The Adaptation Gap Report: Towards Global Assessment, 35–48. Nairobi: United Nations Environment Programme.

40. See https://unfccc.int/topics/science/workstreams/periodic-review#eq-2 - This could either be by expanding the scope of the periodic review to include adaptation under the Paris Agreement, or creating a second periodic review with its own structured expert dialogues.



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