

**Methodologies for reviewing the adequacy and effectiveness
of adaptation and support**

Summary

By decision 1/CP.21, para 45(b), the COP requested the Adaptation Committee (AC) and the Least Developed Countries Expert Group (LEG), to, jointly with the Standing Committee on Finance (SCF) and other relevant institutions, develop methodologies and make recommendations on reviewing the adequacy and effectiveness of adaptation and support referred to in Art 7.14(c), of the Paris Agreement. Building on earlier work of the AC and the LEG as well as on subsequent decisions by the CMA, this paper presents available approaches to reviewing the adequacy and effectiveness of both adaptation action and its financial, technological and capacity-building support at different levels. Following a general description of the possible purpose and scope of reviewing adequacy and effectiveness, it presents examples of available methodologies. It describes their general approach, focus areas, criteria and indicators applied, stakeholders involved as well as sources of data and information used. The paper summarizes lessons learned as well as gaps and challenges in applying the methodologies and presents options and opportunities for the global stocktake.

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1. Introduction and background

1. The Conference of the Parties (COP) at its twenty-first session requested the Adaptation Committee (AC) and the Least Developed Countries Expert Group (LEG) to undertake three tasks in order to assist in the implementation of the Paris Agreement, with outputs to be considered by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA) at its first session.¹ One of the requests was to, jointly with the Standing Committee on Finance (SCF) and other relevant institutions, develop methodologies and make recommendations on reviewing the adequacy and effectiveness of adaptation and support referred to in Article 7, paragraph 14 (c), of the Paris Agreement.

2. In order to address this mandate, the AC and LEG collected information through a desk review, submissions from Parties and other stakeholders, including from the SCF, and events organized on the margins of United Nations climate change conferences.² Based on the information the AC and the LEG provided recommendations to the CMA through their respective reports.³

3. The CMA, at its first session, considered the recommendations, noted that the current state of knowledge was not sufficient to address the mandate and invited Parties, academia and other stakeholders to undertake further technical work, building on the existing work of the AC, LEG and SCF. It further invited the AC and the LEG, in collaboration with the SCF, and relevant experts to contribute to the technical work by continuing to compile existing methodologies. It also invited Parties, United Nations entities and other relevant organizations, as well as bilateral and multilateral agencies, to submit information on gaps, challenges, opportunities and options associated with methodologies for reviewing the adequacy and effectiveness of adaptation and support, including in the areas of adaptation needs, plans and strategies; enabling environments and policy frameworks; frameworks used for assessing the effectiveness of adaptation efforts; efforts and systems to monitor and evaluate the effectiveness of adaptation efforts; support through all instruments and channels, including domestic, international, public and private sources and progress towards the implementation and achievement of adaptation goals, plans and strategies.⁴

4. This paper presents available approaches for reviewing the adequacy and effectiveness of adaptation and support based on previous and ongoing work of the AC and the LEG in the context of this mandate, subsequent decisions by the CMA and the information contained in the submissions received in response to decision 11/CMA.1, para. 36.⁵ The methodologies described for reviewing the adequacy and effectiveness of adaptation are based mostly on the information provided through the submissions and regarded as the most suitable methodologies. In contrast, the methodologies for reviewing the adequacy and effectiveness of support are mostly drawn from other technical sources and offer possible approaches without prejudging their suitability. Given the postponement of the 2020 COP/CMA and SB sessions, further submissions might be forthcoming and if so, will be considered in any iterations of this paper.

2. Context and purpose

5. The development of methodologies for reviewing the adequacy and effectiveness of adaptation and support, including finance, technology and capacity-building, requires the consideration of the envisioned purpose of the review as well as other related mandates and ongoing activities under the Paris Agreement in order to achieve best possible coherence and avoid duplication of efforts by Parties.

¹ Decision 1/CP.21, paragraphs 41, 45 (a) and 45 (b).

² Further information on this work is available at <https://unfccc.int/topics/adaptation-and-resilience/groups-committees/adaptation-committee/joint-ac-and-leg-mandates-in-support-of-the-paris-agreement>.

³ FCCC/SB/2017/2, FCCC/SBI/2017/14 and FCCC/SB/2017/2/Add.1 – FCCC/SBI/2017/14/Add.1.

⁴ Decision 11/CMA.1, paragraphs 34 – 36.

⁵ As of 20 October 2020, submissions were received from: Parties: European Union, Indonesia; other organization: Local Climate Adaptive Living (LoCAL) facility of the UN Capital Development Fund; and bilateral agency: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH; in response to the call for submissions referred to in paragraph 3 of this paper. The paper also takes into account information from Parties and other stakeholders submitted in 2017 in response to an earlier call for submissions in the context of this mandate.

2.1. Purpose and principles

6. As the review of the adequacy and effectiveness of adaptation and support provided for adaptation will contribute information to the global stocktake (GST) as defined in Article 14 of the Paris Agreement and elaborated in decision 19/CMA.1, it should assist the GST in:

- a) Reviewing the collective progress towards achieving goals enshrined in Article 2, paragraph 1 (b), and Article 7 of the Paris Agreement, as they relate to adaptation and support provided for adaptation;
- b) Informing Parties in updating and enhancing, in a nationally determined manner, their adaptation actions and support as well as in enhancing international cooperation for adaptation action, also taking into account the outcomes from the other adaptation components and the support component of the GST.

7. Considering the principles outlined for the GST, these may also guide the development of methodologies for reviewing the adequacy and effectiveness of adaptation and support. The methodologies should therefore enable the review to:

- a) Be comprehensive and facilitative;
- b) Avoid the duplication of efforts and take into account the results of relevant work conducted under the Paris Agreement, the Convention and the Kyoto Protocol; and
- c) Facilitate a summary of the opportunities and challenges for enhancing action and support in the light of equity and the best available science, as well as lessons learned and good practices.⁶

8. Based on the deliberations previously held by the AC, the LEG and relevant stakeholders under this mandate,⁷ the methodologies should further:

- a) Apply to all Parties;
- b) Enable separate assessments of the adequacy and effectiveness as well as the consideration of their relationship;
- c) Evolve over time;
- d) Use quantitative and qualitative information/data/metrics;
- e) Give a voice to intended beneficiaries;
- f) Inform on and enhance the understanding of progress and facilitate learning and knowledge-sharing; and
- g) Build on existing processes and frameworks (e.g. Review of the Financial Mechanism under the Convention, Sustainable Development Goals, Sendai Framework, aid effectiveness agenda, transparency system of the Paris Agreement) to the extent possible.

9. Taking due account of the purpose and principles of the review will enhance coherence and synergies of the components of the GST and ensure that useful information is being provided to undertake the various assessments which will ultimately enable mutual learning and further progress towards achieving the goals of the Paris Agreement.

⁶ Decision 19/CMA.1, paragraph 13.

⁷ See <https://unfccc.int/topics/adaptation-and-resilience/groups-committees/adaptation-committee/joint-ac-and-leg-mandates-in-support-of-the-paris-agreement>.

2.2. Linkages with other mandates of the AC and the LEG

10. The development of methodologies for the review needs to take into account the agreed modalities for the GST,⁸ the thematic areas and related types of information that the GST will consider,⁹ and the sources of input that have been decided to deliver such information.¹⁰ The AC and the LEG have been contributing to the design and the modalities of several of the adaptation-related components of the GST and associated sources of input through work under individual or joint mandates.

11. Examples of this work include the AC and the LEG's development of modalities to recognize the adaptation efforts of developing country Parties¹¹ and, in collaboration with the Standing Committee on Finance, the development of methodologies on taking the necessary steps to facilitate the mobilization of support for adaptation in developing countries in the context of the limit to global average temperature increase referred to in Article 2 of the Agreement.¹² In addition, the AC, in collaboration with the LEG, partner organizations of the Nairobi work programme, users and developers of relevant methodologies, is in the process of developing and regularly updating an inventory of relevant methodologies for assessing adaptation needs with a view to assisting developing countries in identifying such needs.¹³

12. With regard to the sources of input for the GST the AC is developing draft supplementary guidance for voluntary use by Parties in communicating information in accordance with the elements contained in the annex to decision 9/CMA.1 (*Adaptation Communications*).¹⁴ In addition, the AC has been tasked to consider approaches to reviewing the overall progress made in achieving the global goal on adaptation which will form another important component under the GST.¹⁵ Work under both mandates is closely related to the work on developing methodologies for the review of adequacy and effectiveness of adaptation and support.

3. Reviewing the adequacy and effectiveness of adaptation and support – general considerations

3.1. Defining adequacy and effectiveness in the context of adaptation and its support

13. The review of the effectiveness of adaptation requires the assessment of whether the adaptation action is successful in addressing identified adaptation needs, in other words, assessing “what works in delivering long-term resilience”.¹⁶ The focus of such a review lies on identifying whether the measures that are being implemented achieve, over time, the intended outcomes and do not lead to unintended and negative side effects (i.e. maladaptation), e.g. on certain social groups or geographical regions. Thereby, the review may assess the more immediate outputs, such as the number of beneficiaries; the outcomes, such as the increase in institutional capacity or the availability and use of climate data or the impacts of adaptation efforts in terms of e.g. an increase in societal wellbeing or the maintenance thereof despite the effects of climate change. It might as well review a combination or all of these aspects and thereby focus either on the

⁸ Decision 19/CMA.1, part I. For a short overview of the modalities see the AC Draft technical paper on approaches to reviewing the overall progress made in achieving the global goal on adaptation (AC/2020/3), box 1.

⁹ Decision 19/CMA.1, part I. For a short overview of the modalities see the AC Draft technical paper on approaches to reviewing the overall progress made in achieving the global goal on adaptation (AC/2020/3), box 1.

¹⁰ Decision 19/CMA.1, paragraph 37.

¹¹ Decision 11/CMA.1, section II.

¹² Decision 11/CMA.1, section IV.

¹³ Decision 11/CMA.1, paragraph 15.

¹⁴ Decision 9/CMA.1, paragraph 15.

¹⁵ Decision 1/CMA.2, paragraph 14.

¹⁶ LDC Climate Change. 2019. Delivering Out Climate-Resilient Future: Lessons from a Global Evidence Review. LDC Initiative for Effective Adaptation and Resilience (LIFE-AR). Available at http://www ldc-climate.org/wp-content/uploads/2019/09/web_LDCevidencereview.pdf.

adaptation process (policies, institutions, capacities, plans) or its ultimate outcomes on development or on both.¹⁷

14. Reviewing the effectiveness of adaptation support requires the assessment of an additional dimension which relates to, the pre-conditions for and the process of the delivery and receipt of support. This may include on the one hand aspects related to the delivery of support in accordance with the guidance provided by the COP to the operating entities of the financial mechanism (e.g. request to the GCF to expedite support to the developing countries for NAPs – decision 1/CP.21, para. 46), constituted bodies and other entities; and on the other hand, aspects covered by the Paris Declaration on Aid Effectiveness¹⁸, such as country ownership, alignment, harmonization, results and mutual accountability. It may also include features of the support process such as enabling environments, transparency, reaching the most vulnerable and an intervention's ability to leverage finance or to be scaled-up and sustainable.¹⁹

15. The aim of reviewing the adequacy of adaptation and its support is to determine whether enough has been done.²⁰ Assessing the adequacy of adaptation thus requires the determination of whether the implemented measures are sufficient or proportional vis-à-vis the identified needs. This assessment may on the one hand assist in identifying whether the measures are sufficient in terms of e.g. covering all aspects of required adaptation at all geographical dimensions. On the other hand, it may also allow for identifying thresholds at which adaptation efforts are enough so as to also save resources to achieve other national priorities.²¹

16. Assessing the adequacy of adaptation support adds the dimension of evaluating its scope and accessibility. It may include, for example, the determination, in quantitative or qualitative terms, of whether provided support meets globally agreed goals (e.g. significant share of the 100bn USD to adaptation over time²²) and other COP provisions or whether it meets individually or globally identified support areas and needs. It may also assess whether access to support is granted to all those in need for it. Similar to the review of the adequacy of adaptation, the assessment of the adequacy of support may also include the identification of thresholds at which support is indeed sufficient and, in some cases, may even provide information on whether outcomes of a particular adaptation action could be achieved with fewer resources in the future or in other geographical regions.

17. Adequacy and effectiveness are related insofar as adaptation and its support need to be both, adequate and effective, in order to achieve intended adaptation outcomes. In some cases, adequacy is even considered as a criterion of effectiveness, as adaptation measures cannot effectively lead to intended outcomes if they or their support are not sufficient. Their relationship becomes even more apparent when asking whether more support could have led to better results in an adaptation situation since this raises the question whether available support had been used effectively in the first place.

18. Ultimately, the definitions of adequacy and effectiveness and the criteria to review them depend on the perspective and objectives of the respective stakeholders and may also change over time which the various methodologies presented in this paper will illustrate. Thereby, the methodologies used to evaluate them also depend on the scope and purpose of the intended review.

¹⁷ Craft, B and Fisher, S. 2016. Measuring effective and adequate adaptation. IIED, London. Available at <https://pubs.iied.org/pdfs/10171IIED.pdf>.

¹⁸ <http://www.oecd.org/dac/effectiveness/45827300.pdf>.

¹⁹ Ellis, J., Caruso, R. and S. Ockenden. 2013. Exploring Climate Finance Effectiveness. OECD. Climate Change Expert Group. Paper No. 2013 (4). Available at <https://www.oecd.org/dac/evaluation/climatechange.htm>.

²⁰ Ibid.

²¹ Ibid.

²² Decision 1/CP.18, paragraphs 64-66.

3.2. Scope, purpose and requirements of a process to review the adequacy and effectiveness of adaptation and support²³

3.2.1. Scope

19. The review of adequacy and effectiveness is usually part of wider evaluations of adaptation processes or outcomes, which also take into account aspects like “relevance”, “coherence”, “efficiency”, “impact” and “sustainability” of the activities in question. The paper describes only those aspects of the overall evaluation approaches that relate to adequacy and effectiveness.

20. The overall evaluations, or the monitoring and evaluation (M&E) systems behind them, may focus on the project or programme level, the national level, transboundary or portfolio level or the global level. Activities and their support at each of these levels have different objectives and, while consisting of similar components, the evaluation process and the methodologies applied need to be adapted accordingly.

3.2.2. Purpose

21. The purpose of reviewing or evaluating adaptation and its support may be to inform the management and implementation of the adaptation action (e.g. comparing milestones with actual progress of an adaptation project or plan), facilitate learning (e.g. whether and why or why not vulnerabilities have been reduced or resilience increased as a result of the adaptation activity undertaken or the type of support provided) or demonstrate accountability (e.g. reporting on results of a project or portfolio of adaptation actions towards e.g. the donor, the beneficiaries or the international community).

22. Consequently, the methodology applied for the evaluation will differ according to the respective purpose. For instance, quantitative methods might be sufficient for accountability purposes while qualitative approaches are required to facilitate learning. Today, most of the evaluations of development, including adaptation interventions, combine several or all the purposes and therefore use a combination of methods.

3.2.3. Requirements

23. The scope and purpose of the review define which resources in terms of data and information, know-how, time and finance are required in order to undertake the assessments and to meet the needs or requests of the intended target audience. On the other hand, the degree of availability of these resources may also influence the definition of the scope and purpose.

24. As the monitoring of and reporting on the implementation of adaptation activities is the primary source of data and information for their review, monitoring, reporting and evaluation systems are often set up in conjunction and are jointly referred to as “M&E systems.” The quantity and quality of monitoring and reporting greatly influences the quality of a review. In order to reduce monitoring and reporting burdens of countries, the set-up of a new M&E system requires the consideration of potential synergies and linkages with existing systems.

4. Methodologies for reviewing the adequacy and effectiveness of adaptation

25. As the concepts of adequacy and effectiveness pertain primarily to the results or outcomes of an action, those M&E approaches which focus on outcomes instead of processes may be the most appropriate to inform the review of the adequacy and effectiveness of adaptation.²⁴

²³ A review is defined by the OECD DAC as “an assessment of the performance of an intervention, periodically or on an ad hoc basis”. It notes that while the terms evaluation and review are sometimes used as synonyms, “evaluation” usually refers to a more comprehensive/in-depth assessment and reviews tend to emphasize operational aspects. This paper uses both terms interchangeably according to the respective context.

²⁴ The GIZ has developed an M&E Navigator which outlines a list of specific adaptation M&E purposes and matches them to relevant M&E approaches at the project, portfolio or national level, including a classification of whether these focus on processes or outcomes. The M&E Navigator as well as detailed descriptions of the M&E approaches and further

26. The purpose of outcome-based approaches is primarily learning but can also assist in demonstrating accountability. Their scope can range from project or programme level to the national level or assess the collective results of a portfolio of adaptation actions, e.g. understanding the collective impact of a climate fund in several countries. Insights from these approaches can thus inform on the adequacy and effectiveness of adaptation. Many of the approaches resemble those that are discussed by the Adaptation Committee in its work on considering approaches to reviewing the overall progress made in achieving the global goal on adaptation or otherwise may contribute to this work.²⁵

4.1. Monitoring climate risk/vulnerability over time

27. Monitoring the level of climate risks/vulnerabilities over time through repeated assessments and analysing whether any changes can be linked to the adaptation measure is one way of assessing effectiveness of adaptation. This approach can be applied at any level if the following conditions are fulfilled: (i) the method used for the initial climate risk/vulnerability assessment is exactly replicated over time using the same data and assessment procedures; (ii) the climate risk/vulnerability assessment includes variables that are relevant and directly related to the adaptation measure; and (iii) a sufficient period of time lies between the assessments as some adaptation measures require time to unfold their benefits. Particular attention by such assessments may be paid to the poorest and most vulnerable communities of a country or region as a litmus test for assessing overall adequacy and effectiveness of the adaptation measure.

28. The GIZ Vulnerability Sourcebook and its Risk Supplement provide a conceptual framework and a step-by-step guideline for standardized vulnerability assessments, covering a broad range of sectors and topics as well as various spatial levels and time horizons.²⁶ The PROVIA Guidance on assessing vulnerability, impacts and adaptation to climate change updates and improves existing guidance for assessing climate change vulnerability, impacts and adaptation, covering the range of available approaches, methods and tools.²⁷ The “Impact and Vulnerability Analysis of Vital Infrastructures and built-up Areas” (IVAVIA) methodology is another guideline to conduct vulnerability assessment, particularly of urban areas and their infrastructure. It was developed in the framework of the European project “Climate Resilient Cities and Infrastructures” (RESIN) and helps users to map, analyse and communicate the impact of climate trends and weather events on key elements of the city’s physical, social and economic fabric.²⁸

29. Practical examples of monitoring risk at the national level include those from Canada and New Zealand. In 2018, an expert panel convened by the Council of Canadian Academies was tasked to identify the top climate change risks facing both Canada and the federal government, their relative significance and those that have the most potential to be minimized by adaptation measures. The panel identified 12 major areas of risk facing Canada over the next 20 years and confirmed that structured, well-resourced, inclusive, and regularly repeated national (and regional) climate change risk assessments could allow greater precision in the estimation of the risks’ potential consequences and likelihoods.²⁹

30. In 2019, New Zealand conducted its first National Climate Change Risk Assessment (NCCRA) and identified 43 priority risk, of which 10 are most significant. It also conducted consequence and urgency ratings and revealed research priorities associated with these risks. The findings of the assessment will be used to develop a national adaptation plan (NAP) that will respond to the most significant risks, opportunities and knowledge gaps. The Climate Change Response (Zero Carbon) Amendment Act 2019

guidance material are available at <https://www.adaptationcommunity.net/monitoring-evaluation/multi-level-adaptation-me/>

²⁵ Decision 1/CMA.2, paragraph 14. A draft technical paper has been prepared for AC 17. A revised version of the paper is currently under preparation (AC/2020/3).

²⁶ GIZ & Adelphi (2014a). *The vulnerability sourcebook: concept and guidelines for standardised vulnerability assessments*. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. Available at: <https://www.adaptationcommunity.net/vulnerability-assessment/vulnerability-sourcebook/>.

²⁷ PROVIA. 2013. *Guidance on assessing vulnerability, impacts and adaptation to climate change*. Summary. United Nations Environment Programme, Nairobi.

²⁸ http://www.resin-cities.eu/fileadmin/user_upload/IVAVIA_Guideline_v3_final_web.compressed.pdf.

²⁹ Council of Canadian Academies. 2019. *Canada’s Top Climate Change Risks*. Ottawa, Canada: Expert Panel on Climate Change Risks and Adaptation Potential, Council of Canadian Academies. Available at <https://cca-reports.ca/reports/prioritizing-climate-change-risks/>.

commits New Zealand to identify future risks and opportunities by producing an NCCRA every six years. In response to each NCCRA, the Minister for Climate Change must prepare a national adaptation plan.³⁰

31. All of the described risk/vulnerability assessments need to be accompanied by an analysis of the way the adaptation measures have caused or contributed to the reduction or stabilisation of climate risk/vulnerability, which can be undertaken using a theory of change. This approach is explained in the next section.

4.2. Applying a theory of change to illustrate and assess the adaptation process

32. A theory of change explains how adaptation is assumed to take place and can help to identify suitable adaptation measures. Comparing the theory of change and its underlying assumptions to the actual situation can then inform the effectiveness of adaptation. The design of the theory of change as well as the assessment of adaptation effectiveness typically require a participatory approach including the intended beneficiaries of the adaptation measure to ensure that social risk factors are included and the assumptions about people's behaviour are correct. Theories of change are well suited to dynamic change processes and can be adjusted over time, if participatory monitoring indicates that assumptions have been incorrect. This method contributes to a shared understanding of adaptation actions and their intended benefits among stakeholders and may also be accompanied by using indicators for various stages of the change process, once such joint understanding has been achieved.³¹ This method lends itself to assess outcomes of adaptation efforts ranging from improved institutional capacity to increased societal wellbeing.

4.3. Asking beneficiaries

33. Given the local contextualization of climate impacts, adaptation and the assessment of its effectiveness lend themselves well for local stakeholder consultation and other participatory processes. Asking beneficiaries about whether implemented actions have enabled them to better deal with climate impacts provides reliable information about adaptation effectiveness and at the same time can enhance ownership of the actions. Furthermore, these subjective measurements reveal insights beyond what traditional indicator-based approaches are able to deliver.³² For example, they enable a direct understanding of the wider adaptation environment, including barriers and enablers, from the perspective of the beneficiaries which includes factors and relationships that are not foreseeable by outsiders.³³ They also reduce the burden of choosing various proxy indicators. In order to overcome their limitations regarding comparability across groups, personality traits and cognitive biases, they need to be carefully designed. The BRACED programme, funded by the Department for International Development (DFID), has developed a how-to-guide that illustrates how subjective evaluations can be collected in a robust way, using the Subjectively Evaluated Resilience Score (SERS) approach.³⁴ Such evaluations are often designed around resilience, as

³⁰ New Zealand Ministry for the Environment. 2020. *National Climate Change Risk Assessment for New Zealand*. Wellington, New Zealand: Ministry for the Environment. Available at <https://www.mfe.govt.nz/publications/climate-change/national-climate-change-risk-assessment-new-zealand-main-report>.

³¹ Further information and guidance on the design and application of theories of change can be found in GIZ's guidebook "Adaptation made to measure" for the development of project-specific adaptation M&E systems (GIZ (2013b). *Adaptation made to measure: a guidebook to the design and results-based monitoring of climate change adaptation projects* (second edition). Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. <https://www.adaptationcommunity.net/monitoring-evaluation/project-level-adaptation-me>.

³² Jones, L. (2019a). Resilience isn't the same for all: Comparing subjective and objective approaches to resilience measurement. *Wiley Interdisciplinary Reviews Climate Change*, 10(1), 1-19. Open access:

<https://www.onlinelibrary.wiley.com/doi/10.1002/wcc.552>; Clare, A., Graber, R., Conway, D., & Jones, L. (2017).

Subjective measures of climate resilience: What is the added value for policy and programming? *Global Environmental Change*, 46, 17-22.

³³ Jones, L., Samman, E., Vinck, P. (2018). Subjective measures of household resilience to climate variability and change: insights from a nationally representative survey of Tanzania. *Ecology and Society*, 23(1). Open access: <https://www.ecologyandsociety.org/issues/article.php/9840>.

³⁴ Jones, L. (2019b). *A how-to guide for subjective evaluations of resilience*. BRACED Resilience Intel. <https://www.braced.org/resources/i/A-how-to%20guide-for-subjective-evaluations-of-resilience/>.

suggested by GIZ and UNU³⁵, and the questions that beneficiaries are asked can be tailored to the intended M&E purpose.

34. Conducting surveys via mobile phones provides the opportunity to generate real-time and high-frequency monitoring results as opposed to information obtained through traditional household surveys which are time-consuming and expensive and therefore conducted on much lower frequencies. As mobile phones are widespread in most countries, this method is able to reach a large number of beneficiaries. A how-to-guide on mobile phone surveys in situations of post-disaster recovery has been developed by von Engelhardt & Jones.³⁶

4.4. Applying country-specific adaptation M&E systems

35. As an increasing number of countries is developing national adaptation policies and plans, it is relevant for them to understand the degree of implementation and effectiveness of these plans as well as the overall national preparedness to the expected impacts of climate change. The initial guidelines for the formulation of national adaptation plans under the UNFCCC therefore request Parties under element D “Reporting, monitoring and review” “to monitor and review the efforts undertaken, and provide information in their national communications on the progress made and the effectiveness of the national adaptation plan process.”³⁷ So far, more than 50 countries have begun developing country-specific M&E systems, which vary according to national context, governance system, M&E purpose, scope and data used due to the different adaptation contexts and climate vulnerabilities (see figure 1 for an overview of the development stages of national adaptation M&E systems in different countries).³⁸

Figure 1. Development stages of adaptation M&E systems with country examples

Beginning		Fully operational		
	Monitoring			Evaluation
Development stage of the M&E system	Initial steps	Advanced stage, but not completely operational yet	Fully operational and regularly reporting	Explicit evaluations of national adaptation progress
Examples	Argentina, Australia, Albania, Brazil, Cameroon, Costa Rica, Grenada, Lithuania, Mozambique, Slovakia, Sri Lanka, Thailand, Togo	Burkina Faso, Cambodia, Colombia, Kenya, Moldova, Netherlands, Philippines, South Africa, Uganda	Austria, Belgium, Finland, France, Germany, Morocco (sub-national level), Spain, Switzerland, United Kingdom	Chile, Finland, Switzerland, United Kingdom

Source: UNEP 2017. The Adaptation Gap Report 2017. United Nations Environment Programme (UNEP), Nairobi, Kenya.

Note: The table is based on available literature but may not be exhaustive. Some countries may be missing, in particular those recently working on adaptation M&E as part of their NAP process and those that have not yet reached the stage of submitting their NAP to the UNFCCC.

³⁵ GIZ & UNU (2014). *Assessing and Monitoring Climate Resilience from Theoretical Considerations to Practically Applicable Tools – A Discussion Paper*. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. Available at: https://www.adaptationcommunity.net/?wpfb_dl=233.

³⁶ Von Engelhardt, J., & Jones, L. (2020). *Using mobile phone surveys to track resilience and post-disaster recovery: a how-to guide*. BRACED. <https://www.braced.org/resources/i/using-mobile-phone-surveys-to-track-resilience>.

³⁷ Decision 5/CP.17, annex.

³⁸ GIZ & IISD (2014a). *Monitoring and evaluating adaptation at aggregated levels: a comparative analysis of ten systems*. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. Available at: <https://www.adaptationcommunity.net/monitoring-evaluation/national-level-adaptation/>; <https://www.adaptationcommunity.net/monitoring-evaluation/national-level-adaptation/examples-of-national-me-systems/>.

36. In 2015, the LEG published the PEG M&E tool for monitoring and assessing progress, effectiveness and gaps under the process to formulate and implement National Adaptation Plans.³⁹ The tool, in its current version, provides a set of generic metrics to monitor and identify gaps in the NAP process, but future extensions are planned to guide the assessment of adaptation outcomes.

37. In general, national adaptation M&E systems are more diverse and complex than methods used for project M&E since their purposes range from monitoring vulnerability over time to tracking the collective performance of a portfolio of adaptation projects. A guidebook on national adaptation M&E systems has been developed by GIZ and the International Institute for Sustainable Development (IISD) in cooperation with the Adaptation Committee and the LEG that outlines four building blocks of such systems: (i) Context (mandate for the M&E system, national climate policy landscape, climate risks (including transboundary)); (ii) Content (Purpose of the M&E, M&E approach, indicators (if any)); (iii) Institutional arrangements (how the M&E system is operated and by whom) and (iv) Communication (how M&E findings are being communicated).⁴⁰

38. The International Institute for Environment and Development (IIED) has developed the tool “Tracking adaptation and measuring development (TAMD)” which aims to help countries assess the expected and actual returns of their adaptation investments and whether adaptation is keeping development on track and adaptation costs as well as benefits are distributed equitably. It can be applied at national, sub-national or even at transboundary levels and uses vulnerability and development indicators to assess whether development outcomes bring better local climate resilience, and whether that aggregates at larger scales to contribute to climate-resilient development. Scorecards are used to tailor indicators to the respective context.⁴¹

39. Information from these national M&E systems can help countries in domestic planning and decision-making as well as in reporting under the Paris Agreement.⁴² However, such systems need to be carefully designed and need to enjoy ownership among relevant agencies in order to be useful. As their development requires a large number of stakeholders to agree on purpose, methods and institutional arrangements including for data collection, it is a time- and resource-intensive endeavour.

4.5. Lessons learned

40. Lessons learned from applying outcome-based M&E methodologies and using them to gain insights into the adequacy and effectiveness of adaptation include:

- a) Adequacy and effectiveness of adaptation are very context-specific and can therefore not be measured by a generic set of indicators. Instead, the assessment method must be carefully fitted to the assessment purpose;
- b) Assessments of effectiveness require a plausible cause-and-effect relationship between an adaptation action and its measured results which can be established by e.g. a theory of change approach, but not through indicators alone;
- c) Input metrics, such as amount of adaptation finance, are not suitable as indicators for the effectiveness of adaptation since they do not provide information on the actual use and effect of the resources invested;

³⁹ LEG (2015). Monitoring and assessing progress, effectiveness and gaps under the process to formulate and implement National Adaptation Plans: The PEG M&E tool. Available at https://unfccc.int/files/adaptation/application/pdf/50301_04_unfccc_monitoring_tool.pdf.

⁴⁰ GIZ & IISD (2015). *Developing national adaptation monitoring and evaluation systems: a guidebook*. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. Available at: <https://www.adaptationcommunity.net/monitoring-evaluation/national-level-adaptation/>.

⁴¹ IIED (2014). *Tracking Adaptation and Measuring Development: a step-by-step guide*. International Institute for Environment and Development (IIED). <https://pubs.iied.org/10100IIED/>; IIED (2019). *Framing and tracking 21st century climate adaptation Monitoring, evaluation and learning for Paris, the SDGs and beyond*. International Institute for Environment and Development (IIED). <https://pubs.iied.org/10202IIED/>.

⁴² Leiter, T., et al. (2017). Country-specific assessments of adaptation progress. In: UNEP: *The Adaptation Gap Report 2017: Towards Global Assessment* (pp. 23-33). United Nations Environment Programme (UNEP), Nairobi, Kenya.

- d) Distributional aspects need to be accounted for when assessing adequacy and effectiveness in order to determine whether a measure has had any negative (maladaptive) side effects on any group or society, including the consideration of global connections between countries in terms of transboundary ecosystems, global trade or value chains.

41. With regard to using indicators as a way of measuring effectiveness of adaptation, the following specific lessons have been learned:

- a) A comprehensive understanding of adequacy and effectiveness of adaptation cannot be based on indicators alone since they do not explain why and how change has occurred which are essential aspects of learning from specific measures;
- b) If using indicators, the following aspects need to be taken into account:
 - i) Before designing any indicators, a joint understanding of the specific adaptation context and the intended outcome of any measure by all stakeholders needs to be established;
 - ii) A variety of different adaptation indicators can be used for different purposes and their application should be balanced for any particular adaptation context while being manageable in total number;
 - iii) The indicators need to be tailored to the specific M&E purpose and context and they must be scrutinized for their ability to demonstrate the adequacy and effectiveness of the adaptation measure instead of demonstrating adaptation (given that the adequacy and effectiveness might be different in different contexts or for different social groups) or other influencing factors;⁴³
 - iv) The indicators must be designed so as to inform on outcomes (= what has changed) instead of on outputs (= what has been done);
 - v) They need to be drawn from strong, sound data sources and provide data that can easily be converted into information and knowledge that suits the assessment's use.
- c) The practice of designing indices by combining multiple indicators into a single number, e.g. vulnerability indices to rank countries according to their level of vulnerability, makes the interpretation of the resulting figure for the purpose of assessing effectiveness or the appropriate level of funding very difficult and therefore does not seem to be a suitable approach in this regard;
- d) In general, indicators provide a data and information base for evaluations, but it is the interpretation and critical analysis of that data, at best through participatory approaches like the exchange with beneficiaries on why the values of indicators have changed over time, that results in information, knowledge and learning which can ultimately provide feedback for policy-making.⁴⁴

42. The described outcome-based approaches offer suitable ways of determining adequacy and effectiveness of adaptation, either applied separately or in combination, at various levels. A more widespread application of these approaches by all actors that promote, implement and fund adaptation could lead to a better understanding of how adaptation works which could in turn inform and improve the practice of future adaptation actions.

⁴³ A repository of adaptation indicators is contained in GIZ & IISD (2014b). *Repository of Adaptation Indicators: real case examples from national Monitoring and Evaluation Systems*. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. Available at: <https://www.adaptationcommunity.net/monitoring-evaluation/national-level-adaptation/> which is part of the GIZ Adaptation M&E Toolbox available at <https://www.adaptationcommunity.net/monitoring-evaluation/>.

⁴⁴ The community of practice Earth-Eval has developed the "Good Practice Study on Principles for Indicator Development, Selection, and Use in Climate Change Adaptation Monitoring and Evaluation" which documents good practices and related principles for the development, selection, and use of indicators used in M&E of adaptation interventions. The study also presents a good overview on commonly used frameworks and approaches to M&E of adaptation. It is available at <https://eartheval.org/sites/ceval/files/studies/Good-Practice-Study.pdf>.

4.6. Gaps and challenges

43. As highlighted in the submissions, assessing the adequacy and effectiveness of adaptation poses methodological challenges given that:

- a) There are close interlinkages between adaptation actions and actions taken to achieve sustainable development, making it difficult to exactly define the climate adaptation part;
- b) Adaptation happens in complex and dynamic settings in which many other factors may contribute to adaptive socio-economic behaviour, making it difficult to identify the share that an adaptation measure has had of any specific outcome;
- c) Different assumptions may be made regarding the counterfactual (hypothetical scenario on what would have happened without the adaptive measure) leading to different evaluations of effectiveness;
- d) The adequacy and effectiveness of a measure need to be calibrated against the actual level of climate risk, which might change during the lifetime of the measure or after its completion due to unpredictable socio-economic developments and uncertain future hazards;
- e) Different societies or groups of people have diverse risk preferences and therefore evaluate the effectiveness of a measure differently;
- f) The same measure might be effective in one location (e.g. extracting more water from a river upstream), but have negative impacts on another (e.g. communities downstream or even in locations across national borders) either in the short-term or even after years;
- g) Adaptation actions may take different forms and have different effects subject to the geographical level at which they are taken;
- h) Some adaptation measures take a long time to unfold their full benefits.⁴⁵

44. In addition to methodological challenges, the following practical challenges aggravate the assessment of adequacy and effectiveness of adaptation:

- a) Lack of a widespread application of M&E approaches and methods to all adaptation activities across levels;
- b) Lack of (high-resolution) socio-economic and climate data availability, consistency, completeness, accuracy or willingness to share;
- c) Limited support for and ownership of monitoring and evaluation (M&E) after a project's lifetime leaving the long-term adaptation outcomes, including adaptive capacity built, unassessed;
- d) Lack of capacity (skills, expertise and experience, time) and coordination (e.g. among participating ministries and institutions) to undertake proper M&E leading to unreliable findings and missed chances to learn;
- e) Lack of disclosure of M&E findings to the public and cessation of project websites impeding learning.

⁴⁵ A more detailed discussion of the methodological challenges of assessing the adequacy and effectiveness of adaptation is available in GIZ & WRI (2011). *Making Adaptation Count. Concepts and Options for Monitoring and Evaluation of Climate Change Adaptation*. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. Available at: <https://star-www.giz.de/dokumente/bib-2011/giz2011-0219en-monitoring-evaluation-climate-change.pdf>; Bours, D., McGinn, C., and Pringle, P. (2014a). Guidance note 1: twelve reasons why climate change adaptation M&E is challenging. SEA Change CoP and UKCIP, available at: <https://www.ukcip.org.uk/wp-content/PDFs/MandE-Guidance-Note1.pdf>; Dinshaw, A., Fisher, S., McGray, H., Rai, N., & Schaar, J. (2014). *Monitoring and Evaluation of Climate Change Adaptation: Methodological Approaches*. OECD Environment Working Papers, No. 74, OECD. Available at: https://www.oecd-ilibrary.org/environment/monitoring-and-evaluation-of-climate-change-adaptation_5jxrclr0ntjd-en; Ford, J., & Berrang-Ford, L. (2016). The 4Cs of adaptation tracking: consistency, comparability, comprehensiveness, coherency. *Mitigation and Adaptation Strategies for Global Change*, 21, 839–859. Open access: <https://link.springer.com/content/pdf/10.1007%2Fs11027-014-9627-7.pdf>.

5. Methodologies for reviewing the adequacy and effectiveness of adaptation support (finance, technology, capacity-building)

45. Methodologies for reviewing adequacy and effectiveness of support have primarily been applied at the global level in the form of reviews of support mechanisms or frameworks under the Convention as well as at the fund or portfolio level by individual providers of support. Some approaches have been suggested by individual organizations.

46. Given the multidimensional definitions of the three types of support for adaptation and the fact that finance is involved in any of the three types, they are deeply entangled and, as this paper will allude to, are often an explicit component of the respective other support mechanisms. In consequence, and particularly regarding effectiveness, the review of any of the three types of support cannot be strictly separated from the respective others, but often automatically falls under the scrutiny of their review mechanisms.

5.1. Reviewing the effectiveness of adaptation support

47. Experience regarding the review of the effectiveness of adaptation support primarily stems from reviews under the Convention as well as from international funds and programmes. Some of these reviews, particularly those under the Convention, take a holistic approach and cover support provided for mitigation. However, the paper attempts to describe particularly those aspects that are relevant for evaluating the effectiveness of adaptation support.

5.1.1. Effectiveness of financial support

48. This section introduces various mechanisms, funds and programmes that undertake reviews of the effectiveness of financial support for adaptation. It describes their overall objectives and the methodologies applied for the respective review including the overall approach, areas of focus, criteria/indicators used, stakeholders involved, and the sources and types of data and information included. A detailed listing of the focus areas, criteria/indicators and sources used under each of these reviews is contained in annex I.

5.1.1.1. Financial Mechanism of the Convention

49. The objective of the Financial Mechanism (FM) of the Convention is to “provide financial resources on a grant or concessional basis, including for the transfer of technology, [...]”⁴⁶ with the ultimate aim of enabling developing countries to implement the provisions of the Convention.

50. The FM is subject to a review every four years. The review is undertaken according to agreed guidelines which have been amended over the years to take into account new developments, such as the establishment of the Green Climate Fund (GCF) as an additional operating entity, as well as new focus areas and criteria. The guidelines include provisions for the review of the effectiveness of the FM which relate to the following areas: (i) the conformity of the activities funded under the FM with Article 11 of the Convention and relevant policies, programme priorities and eligibility criteria established by the COP,⁴⁷ (ii) the provision of resources to developing country Parties under Article 4.3 of the Convention;⁴⁸ (iii) the consistency in financing activities and the complementarity of the FM with other sources of investment and financial flows⁴⁹ as well as between the operating entities⁵⁰ and (iv) access modalities for developing countries to the FM.⁵¹

51. Based on these objectives the guidelines contain certain criteria to review the effectiveness of the FM which relate to the effectiveness of the way financing is provided (e.g. the organizational effectiveness of the operating entities and their responsiveness to COP guidance) as well as to the effectiveness of the actual outcomes of the supported activities in terms of their contribution to the objectives of the Convention. It is interesting to note that the adequacy, predictability and timely disbursement of funds for activities in

⁴⁶ Article 11, paragraph 1 of the Convention.

⁴⁷ Article 11, paragraph 3 (a) of the Convention.

⁴⁸ Guidelines for the review of the financial mechanism contained in the annex of decision 3/CP.4.

⁴⁹ Decision 6/CP.13, annex.

⁵⁰ Decision 12/CP.22, annex.

⁵¹ Ibid.

developing country Parties is regarded as a component of the FM's effectiveness. The way adequacy is evaluated under the review is described in section 5.2.1.1. below.

52. The review of the FM draws on a variety of different sources. These include primarily the reports from Parties, including national communications, technology needs assessments, national adaptation programmes of action, and biennial reports as well as on reports and documents from the operating entities and other relevant organizations, and from the constituted bodies under the Convention.

53. While the Subsidiary Body for Implementation assisted the COP in undertaking the first four reviews, subsequent and future reviews were and will be undertaken based on expert input provided by the Standing Committee on Finance (SCF). In addition, the secretariat can be requested to prepare technical papers and reports regarding particular areas of interest. The SCF, in providing its expert input, submits quantitative as well as qualitative data and thereby draws on information from the following additional sources: (i) information from the secretariats of the operating entities of the FM; (ii) information from other constituted bodies of the Convention, including their submissions; and (iii) information from an appropriate sample of recipient countries to complement aspects where information is not fully available through sources and literature listed in the guidelines.⁵²

54. As such, the SCF, while undertaking research in preparing its expert input to the review of the FM, assesses the entire spectrum of sources and channels of climate finance including evaluations that these sources and channels conduct themselves or mandate to independent reviewers, as described in the following sections.

5.1.1.2. Least Developed Countries Fund (LDCF) and Special Climate Change Fund (SCCF) of the Global Environment Facility (GEF)

55. The Global Environment Facility (GEF) is one of the operating entities of the financial mechanism of the Convention and operates, among others, two funds that have been particularly established to support adaptation. The Least Developed Countries Fund (LDCF) has the mandate to provide support to Least Developed Countries' climate change adaptation efforts, including the preparation and implementation national adaptation programs of action (NAPAs), and the preparation of the national adaptation plan (NAP) process. The Special Climate Change Fund (SCCF)'s objective is to finance climate change activities that are complementary to other existing funds in the areas of adaptation and transfer of technologies, among others. This fund is particularly directed at developing countries that are not least developed countries. Both funds are managed according to their joint programming strategy and the related results framework.⁵³

56. In order to evaluate the effectiveness of the activities supported by the LDCF and the SCCF the GEF applies a multidimensional approach consisting of evaluations at various levels and time intervals (see figure 2). For all these evaluations it defines effectiveness as "the extent to which the intervention achieved, or expects to achieve, results (outputs, outcomes and impacts, including global environmental benefits) taking into account the key factors influencing the results."⁵⁴

57. At the project or programme level, full-sized projects and programmes are expected to deliver **midterm reviews and terminal evaluations** based on the LDCF/SCCF results-based management (RBM) framework. Through these evaluations, GEF agencies are expected to report on pre-defined indicators relating to outputs and outcomes of the activities. These include core indicators, which have been reported on over a long period of time to the LDCF/SCCF Council and thus enable continuity in reporting and important insights into the delivery of the adaptation programme as a whole. In addition, they include outcome indicators that reflect the latest LDCF/SCCF adaptation programming strategy (for a list of these indicators refer to annex I). Apart from reporting on the indicators, these reviews are expected to deliver qualitative information such as on the impact of climate risk mainstreaming in policies and plans and on the

⁵² SCF/TP/2017/1.

⁵³ Available at

https://www.thegef.org/sites/default/files/documents/EN_GEF.LDCF_SCCF_24.03_Programming_Strategy_and_Operational_Policy_2.pdf.

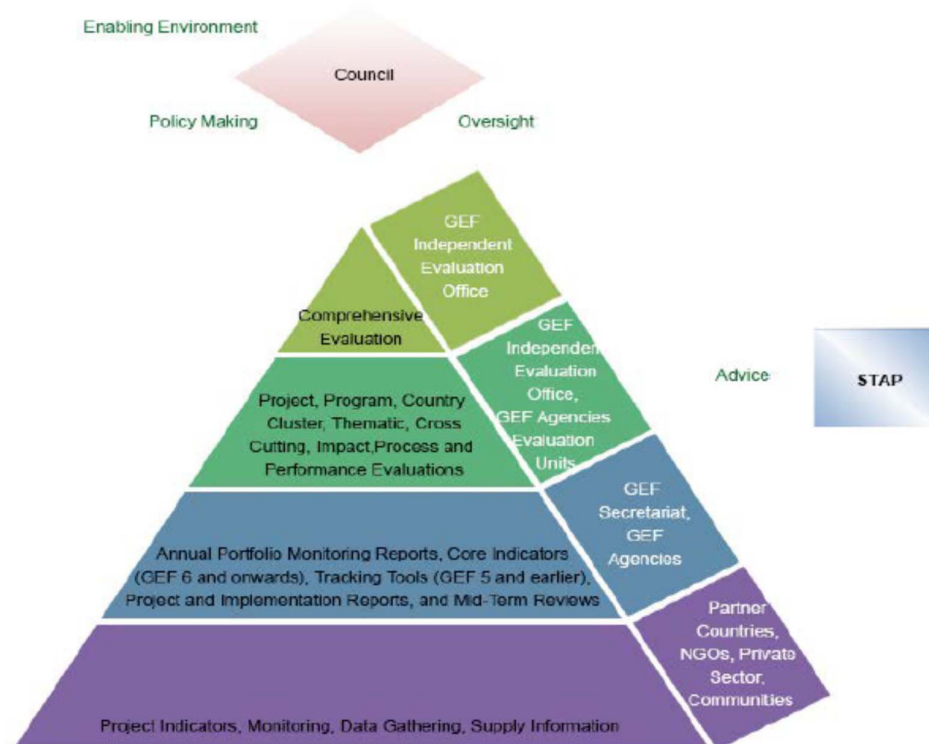
⁵⁴ GEF Independent Evaluation Office. 2019. The GEF Evaluation Policy. Available at

https://www.gefio.org/sites/default/files/ieo/evaluations/files/gef-me-policy-2019_2.pdf.

catalytic impact of LDCF/SCCF support in leveraging finance for scale-up and replication.⁵⁵ This information is expected to be more meaningful in providing lessons learned,

58. At the portfolio level, the GEF secretariat prepares and submits to the LDCF/SCCF Council the **Annual Monitoring Review (AMR)**⁵⁶ of the LDCF and the SCCF. This is the principal tool for capturing, analysing and reporting on portfolio-level performance, actual results and lessons learned and is based on the information received from the GEF agencies on individual projects and programmes. It describes in quantitative and qualitative terms (i) the performance and results of, as well as lessons learned from, the portfolio of projects and programmes financed under the LDCF and the SCCF for the respective fiscal year, and (ii) information on management effectiveness and efficiency as it relates to the two funds.

Figure 2. Monitoring and Evaluation levels and responsible agencies in the GEF



Source: GEF Independent Evaluation Office. 2019. The GEF Evaluation Policy. Available at https://www.gef.io/sites/default/files/ieo/evaluations/files/gef-me-policy-2019_2.pdf

59. In addition to these regular reviews, the Independent Evaluation Office (IEO) of the GEF⁵⁷ undertakes periodic (every few years) **Program Evaluations** of both the LDCF and the SCCF with the objective of providing evaluative evidence on the progress towards their objectives (including GEF Strategic Objectives and Pillars), major achievements (e.g. in reducing vulnerability and integrating adaptation into policies and processes) and lessons learned since the Funds' establishment. In undertaking the evaluations, the IEO develops a theory of change for the respective fund based on which it develops evaluative questions, methods and portfolio analysis protocols. It considers both quantitative and qualitative information from relevant project and portfolio documents as well as information from field visits and interviews with key

⁵⁵ For further details refer to GEF/LDCF.SCCF.25/Inf.05.

⁵⁶ GEF/LDCF.SCCF.26/04.

⁵⁷ The IEO is directly accountable to the GEF Council and has the mandate to report on the performance and effectiveness of GEF projects and programmes.

stakeholders. Besides the effectiveness of the funds the evaluation also includes a review of the relevance, the efficiency and the sustainability of the funded activities.⁵⁸

60. Besides these direct evaluations of individual adaptation projects and the LDCF/SCCF programmes, conclusions and evaluative evidence on adaptation is also generated through other evaluation streams conducted by the IEO or other GEF stakeholders, each having their specific perspective and focus. These include *country level evaluations, performance evaluations, thematic evaluations or Overall Performance Studies of the GEF*.⁵⁹

61. Through these various forms of evaluations, the effectiveness of adaptation support provided by the GEF is looked at from different angles, including not only the actual adaptation outcomes and impacts of the funded projects and programmes but also the performance of the GEF regarding its adaptation strategies, programming principles and procedures as steered by COP guidance, including with regard to the enhancement of country ownership, specific country and/or thematic allocations, gender equality or the complementarity of SCCF/LDCF funds with other funds inside and outside the GEF, among others.

5.1.1.3. Adaptation Fund

62. The Adaptation Fund (AF) has been established to finance concrete adaptation projects and programmes in developing country Parties to the Kyoto Protocol that are particularly vulnerable to the adverse effects of climate change. The evaluation of effectiveness under the AF refers to the question whether or not actual project outcomes are commensurate with the original or modified project objectives and whether or not this is a result of adaptive management.

63. The process to review the effectiveness of support provided through the AF is similar to that of the GEF LDCF/SCCF.

64. At the project/programme level implementing entities (IEs) of the AF are required to submit to the Adaptation Fund Board (AFB) an *annual project/programme performance report (PPR)* and a *final project completion report*. As part of these reports they submit quantitative as well as qualitative information on outputs and outcomes which are aligned with the Fund's Strategic Results Framework.⁶⁰ Similar to the approach of the GEF LDCF/SCCF they are required to report on core indicators, outcome indicators and qualitative information, for example, with regard to the effects of taking into account gender issues or the way effective resilience measures could be scaled up (see annex I).

65. In addition to these progress reports, IEs are required to submit a *mid-term evaluation* (for projects with more than four years of implementation) and a *final evaluation*, both conducted by an independent team of consultants that the IE selects. The final evaluations provide a comprehensive and systematic description of the performance of a completed project or programme by evaluating, among others, the achievement of its intended outcomes and objectives according to the criteria "relevance", "effectiveness" and "efficiency" and providing respective ratings. The methodology applied should involve the generation of qualitative information obtained through field visits and interviews putting particular emphasis on assessing the perspectives of the various relevant stakeholders and beneficiaries.

66. Based on the information provided by IEs on individual projects/programmes the AF secretariat publishes an *Annual Performance Report*. This report presents the Fund's core indicators aggregated for the portfolio and by region. It also illustrates advances in the four areas of the Adaptation Fund Level Effectiveness and Efficiency Results Framework which relate to the management of the fund.⁶¹ In addition, it reports both quantitative and qualitative information on activities and achievements under the cross-

⁵⁸ See, for example, GEF/LDCF.SCCF.22/ME/02; GEF. Independent Evaluation Office. 2016. Program Evaluation of the Least Developed Countries Fund. Available at <https://www.gefio.org/sites/default/files/ieo/evaluations/files/ldcf-2016.pdf> and GEF. Independent Evaluation Office. 2020. Update of the Program Evaluation of the Least Developed Countries Fund. (forthcoming). Available at <https://www.gefio.org/evaluations/2020-update-program-evaluation-least-developed-countries-fund-ldcf>.

⁵⁹ https://www.gefio.org/sites/default/files/ieo/evaluations/files/gef-me-policy-2019_2.pdf.

⁶⁰ Review of the Strategic Results Framework and the Adaptation Fund Level Effectiveness and Efficiency Results Framework. AFB/EFC.24/4/Rev.1.

⁶¹ See annex I and for further details on the framework refer to document AFB/EFC.24/4/Rev.1.

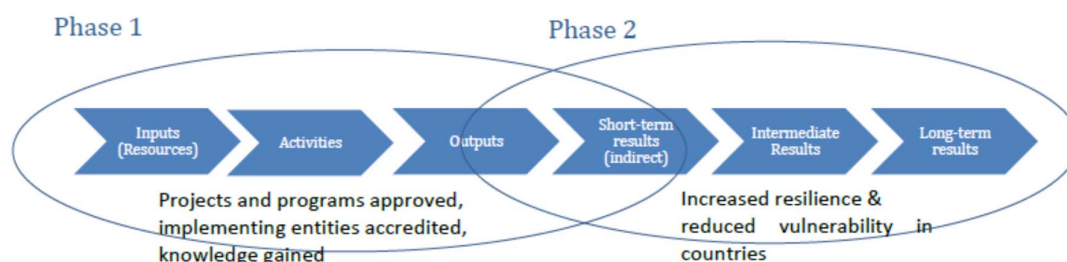
cutting themes of the respective medium-term strategy (MTS). Advances under these themes also shed light on the effectiveness of the Fund to reach its objectives.

67. Since 2012 the AF applies an additional approach to collect insights and lessons learned from the activities it funds in various countries. This approach is called **Portfolio Monitoring Missions (PMMs)** and consists of learning missions to various project sites in different countries with the aim of collecting tangible results and experience. These are then systemized to serve as valuable lessons for the Fund’s Knowledge Management Strategy, partners and beneficiaries as well as practical guidance for implementing entities to enhance their project effectiveness. Collecting such lessons and best practices forms part of the “Learning and Sharing” pillar which is one of the strategic priorities of the AF’s Mid Term Strategy.

68. Finally, one **overall evaluation** has been conducted by an independent group of consultants in order to evaluate the overall Adaptation Fund’s performance. The evaluation was split into two phases due to the immaturity of the fund at the beginning of the evaluation. The first phase focused on the AF’s operational performance against the Fund’s design and implicit logic (institutional design and processes)⁶² and the second on the long-term outcomes and impacts of the AF’s interventions (see figure 3).⁶³ Both applied the OECD-DAC evaluation criteria⁶⁴ of relevance, efficiency, effectiveness and sustainability and developed a theory of change to arrive at their evaluation matrix. Areas of focus and respective criteria to evaluate effectiveness are provided in annex I.

69. Both evaluations applied a mixed-method approach to collect data for their assessments including a structured literature review of internal and external documents (e.g. project performance reports, evaluation reports), stakeholder interviews and focus group discussions as well as evaluation missions or field studies. The phase I evaluation also conducted a survey.

Figure 3. Phase I and Phase II of the Overall Evaluation of the Adaptation Fund



Source: Adaptation Fund. 2015. Evaluation of the Fund (Stage I). AFB/EFC.17/3. Available at <https://www.adaptation-fund.org/wp-content/uploads/2015/09/AFB.EFC.17.3-Evaluation-of-the-Fund-stage-I.pdf>.

5.1.1.4. Pilot Programme for Climate Resilience⁶⁵

70. The Pilot Programme for Climate Resilience (PPCR) is one of the programmes of the Climate Investment Fund (CIF). It supports developing countries and regions in building resilience to the impacts of climate change through the development and implementation of a country-wide Strategic Programme for Climate Resilience (SPCR) composed of several individual projects or programmes.⁶⁶ The CIF tracks the

⁶² Available at <https://www.adaptation-fund.org/wp-content/uploads/2015/09/AFB.EFC.17.3-Evaluation-of-the-Fund-stage-I.pdf>.

⁶³ Available at <https://www.adaptation-fund.org/wp-content/uploads/2018/03/AFB.EFC.22.9-Evaluation-of-the-Fund-Phase-II.pdf>.

⁶⁴ OECD. 2002. Glossary of Key Terms in Evaluation and Results Based Management, Paris: OECD Publishing. Available at <http://www.oecd.org/dac/evaluation/2754804.pdf>.

⁶⁵ Information in this section is based on the following sources: CIF. 2018. PPCR Monitoring and Reporting Toolkit. Available at: https://www.climateinvestmentfunds.org/cif_enc/sites/cif_enc/files/knowledge-documents/ppcr_en_monitoringreporting_toolkit.pdf and the website of the CIF’s Evaluation & Learning Initiative (https://www.climateinvestmentfunds.org/cif_enc/evaluation-and-learning).

⁶⁶ <https://www.climateinvestmentfunds.org/topics/climate-resilience>.

performance of the PPCR with a focus on learning as much as on tracking programme results. It also uses a multi-level approach.

71. Based on the PPCR results framework, every PPCR country that implements a Strategic Programme for Climate Resilience is required to report annually on five core indicators which are meant to reflect the expected transformation process taking place in PPCR countries. The core indicators reflect national-level results but may be aggregated from project-level results for some indicators. They range from the number of beneficiaries, over the degree of mainstreaming and use of PPCR-supported tools to evidence of strengthened government capacity (for a detailed list of the indicators refer to annex I).

72. Subject to whether the indicator is qualitative or quantitative in nature, data is collected by using either scorecards or tables, respectively. Annual scoring workshops are conducted by the PPCR country to assess SPCR progress against the five core indicators with the participation of representatives from all levels of government, the private sector and civil society. These stakeholders assist in establishing country-specific scoring criteria and subsequently in evaluating SPCR performance based on information and data provided by the PPCR country focal point and individual project managers. As each country agrees on its own individual scoring criteria, the monitoring and reporting (M&R) system respects differences in the way countries aim at reaching their target outcomes. Results of the scoring workshop on all five indicators, complemented by narrative descriptions, are then submitted as an **annual country results report** to the CIF Administrative Unit.

73. This stream of annual data collection and reporting is complemented by another which is undertaken by the Multilateral Development Bank (MDB) supporting the respective PPCR process. MDBs are required to provide annual, more granular project-level results and data collected and reported using its own implementation status or equivalent reports. This complementary reporting is intended to provide a more comprehensive picture of PPCR performance throughout the programme cycle.⁶⁷

74. Country reporting from all PPCR countries is aggregated by the CIF Administrative Unit and, together with the MDB reporting, included in the synthesis **PPCR annual operation and results report** submitted to the PPCR Sub-Committee. Besides the cumulative achievements of the PPCR portfolio, including how it addressed the most vulnerable and the poor, these reports include information on PPCR management effectiveness.

75. Through the scoring workshops, this M&R process ensures country-ownership and promotes participation, capacity-building, and information sharing. It further encourages the use of mixed methods by combining quantitative and qualitative methods to collect and analyse data.

76. Results and lessons from the PPCR programme regularly feed into or are included in activities and studies under the CIF's Evaluation & Learning Initiative which aims at providing strategic and demand-driven information for the CIF and the wider climate finance sector. These evaluations are conducted by independent reviewers and include document analysis, interviews, surveys and field visits. The priority learning themes, and the way PPCR outcomes have been considered under each of them, are included in annex I.

5.1.2. Effectiveness of support provided in the form of technology development and transfer

77. Adaptation technologies are defined by the UNFCCC as "the application of technology in order to reduce the vulnerability, or enhance the resilience, of a natural or human system to the impacts of climate change."⁶⁸ Further to this overall definition, it has become common to distinguish adaptation technologies into the following three categories: (i) hardware (capital goods and equipment), software (capacity and

⁶⁷ Apart from the required annual country and MDB reports, countries and MDBs develop their own results frameworks for each individual project and/or the PPCR process as a whole using their pre-existing M&E systems.

⁶⁸ UNFCCC (2010). Report of the Conference of the Parties on its Sixteenth Session, held at Cancun from 29 November to 10 December 2010, Addendum, Part Two: Action taken by the Conference of the Parties.

processes involved in the use of technology such as knowledge, training and awareness-raising) and orgware (ownership and institutional arrangements).⁶⁹

78. Given this broad definition, it is apparent that the review of effectiveness of adaptation support provided in the form of technology development and transfer cannot be strictly separated from the reviews of the two other means of implementation and is often covered by them. However, two types of reviews under the Convention focus specifically on the effectiveness of technology support, including for adaptation.

5.1.2.1. Activities in relation to Article 4, paragraph 5 of the Convention

79. Article 4, paragraph 5, of the Convention calls on developed country Parties and other developed Parties included in Annex II to “take all practical steps to promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies and know-how to other Parties, particularly developing country Parties, to enable them to implement the provisions of the Convention. [...]”

80. To give further effect to this article, Parties to the UNFCCC established the framework for meaningful and effective actions to enhance the implementation of Article 4, paragraph 5, of the Convention (the technology transfer framework).⁷⁰ The framework covers the following key themes: (i) technology needs and needs assessments; (ii) technology information; (iii) enabling environments; (iv) capacity-building; and (v) mechanisms for technology transfer. At a later stage, the framework was enhanced through an additional set of actions.⁷¹

81. In 2010 the secretariat undertook a review and assessment of the effectiveness of the implementation of Article 4, paragraph 5, based on the following two inputs:

- a) Draft terms of reference for the review and assessment of the effectiveness of the implementation of Article 4, paragraph 5, prepared by the Chair of the SBI in 2008 which covered, among others, the following topics: (i) the extent to which the actions and activities under Article 4, paragraph 5 and the technology transfer framework had been implemented, including the adequacy and timeliness of financial support provided; (ii) lessons learned from, and good practices in, the implementation of that Article and decisions regarding the framework; and (iii) the challenges faced and the remaining gaps identified in their implementation;
- b) A set of 40, primarily quantitative, performance indicators, developed by the then Expert Group on Technology Transfer (EGTT), which covered both the component themes of the technology transfer framework as well as the financial flows provided for technology transfer.⁷²

82. As part of the review, the secretariat was tasked to undertake the following activities:

- a) Review the extent to which actions have promoted and supported institutional systems and regulatory and legislative frameworks needed to scale up development and transfer of technologies;
- b) Review the range of practical actions taken and identify possible actions to promote innovative public and/or private partnerships and cooperation with the private sector, and consider steps that governments, the business sector and academia can take to facilitate effective participation by the private sector;
- c) Review the mechanisms and processes developed to enhance cooperation with relevant intergovernmental processes;
- d) Review efforts to promote collaborative research on, and development and deployment of, technologies for mitigation and adaptation;

⁶⁹ UNEP. 2014. The Adaptation Gap Report. A Preliminary Assessment Report. Available at <https://www.unenvironment.org/resources/adaptation-gap-report>.

⁷⁰ Decision 4/CP.7.

⁷¹ Decisions 3 and 4/CP.13.

⁷² The set of indicators is contained in annex II and the full report is available in FCCC/SB/2009/4. The report on the indicators also included an overview on the selection and testing process, a description of the data required for each indicator and valuable lessons learned and recommendations.

- e) Review the adequacy and timeliness of the financial support provided, within the context of Article 4, paragraphs 1(c) and 5, for the purposes of development and transfer of technologies, the related activities and their results.

83. The secretariat assessed the practical steps taken by Parties and relevant organizations in the process of the development and transfer of technologies in these areas and identified lessons learned, good practices, challenges faced and remaining gaps. It based its assessment on an analysis of various information sources, partly guided by the performance indicators, and an online survey as well as a written questionnaire.⁷³

84. The efforts undertaken to review the implementation of Article 4, paragraph 5 and the technology transfer framework also informed negotiations under the AWG-LCA which, at the end of its work in 2010/2011, established the new Technology Mechanism composed of the Technology Executive Committee (TEC) and the Climate Technology Centre and Network (CTCN), both of which succeeded previous institutional arrangements related to the implementation of Article 4, paragraph 5 and the technology transfer framework under the Convention.

5.1.2.2. Technology mechanism

85. With the creation of the Technology Mechanism, new forms of reporting and review have been established. For example, both the TEC and the CTCN are requested to submit a joint annual report to the COP, based on which the COP, through the SBI regularly assesses progress made towards their set targets.⁷⁴

86. In addition, the terms of reference for the CTCN include a request to the secretariat, to periodically commission an independent review of the effective implementation of the CTCN.⁷⁵ The first independent review of the CTCN was undertaken in 2017 and included a quantitative and qualitative assessment of the effectiveness of the implementation of its core services relating to knowledge management, peer learning, capacity-building, technical assistance and networking. The review of effectiveness was based on a series of sub-questions and on a literature review as well as stakeholder interviews and surveys with national designated entities, network members and beneficiaries. However, given the recent establishment of the CTCN, the review focused on outputs (e.g. extent to which requests for technical assistance related to both mitigation and adaptation technologies were responded to in due time) and not yet on outcomes or impacts of its work.⁷⁶

87. By decision 1/CP.21, paragraph 69, the COP decided “to undertake a periodic assessment of the effectiveness and adequacy of the support provided to the Technology Mechanism in supporting the implementation of the Paris Agreement on matters relating to technology development and transfer”. The SBI, in elaborating the scope of and modalities for the assessment, took into account the review of the CTCN, the modalities for the global stocktake, the work on the transparency of action and support as referred to in Article 13 and the elaboration of the technology framework established under Article 10, paragraph 4, of the Paris Agreement. The CMA adopted the scope and modalities for the periodic assessment at its first session⁷⁷ and decided that its outcomes should serve as an input to the global stocktake.⁷⁸ According to this decision, the scope of the assessment will cover the effectiveness of the Technology Mechanism and the adequacy of support provided to it as two separate elements. The assessment of the effectiveness will cover the impact, outputs and outcomes of the TM.

5.1.3. Effectiveness of capacity-building support

88. Similar to the review of support in the form of technology development and transfer, capacity-building support is frequently provided and thus reviewed in conjunction with the two other means of implementation. However, the Convention has established one specific review mechanism that focuses on

⁷³ The report of the review is contained in document FCCC/SBI/2010/INF.4.

⁷⁴ Decision 1/CP.16, paragraph 117.

⁷⁵ Decision 2/CP.17, annex VII, paragraph 20.

⁷⁶ The sub-questions as well as indicators and data sources for the review of effectiveness are contained in annex IV of document FCCC/CP/2017/3.

⁷⁷ Decision 16/CMA.1, annex.

⁷⁸ Decision 16/CMA.1, paragraph 4.

the effectiveness of capacity-building support. The following section summarizes the mechanism, whereby more detailed information is provided in annex III.

5.1.3.1. Framework for capacity-building in developing countries

89. The framework for capacity-building in developing countries (CB framework) has been established by Parties to the UNFCCC to guide capacity-building activities related to the implementation of the Convention and effective participation in the Kyoto Protocol process.⁷⁹ The scope of capacity-building needs and areas that are to be addressed under the framework include several that relate to the implementation of adaptation activities, ranging from institutional capacity building and reporting to more concrete capacities regarding vulnerability and adaptation assessments and adaptation implementation. In addition, they include specific areas for capacity-building in least developed countries, of which several also relate to adaptation.

90. The implementation of the framework is to be driven by contributions of both developing and developed country Parties. Developing country Parties are asked to identify and clearly communicate their needs, promote South-South cooperation and stakeholder participation, including from the private sector, and promote the sustainability of the activities undertaken. Developed country Parties are requested to provide additional financial and technical resources and to respond to the communicated needs, with particular attention to least developed countries and small island developing States. The operating entities of the financial mechanism as well as other organizations and the private sector are requested to support the implementation of the framework, including through the provision of financial resources.

91. The COP, through the SBI, regularly (every 5 years) monitors and reviews the progress in the implementation of the framework and the effectiveness of the capacity-building activities,⁸⁰

92. Based on successional decisions regarding the monitoring and evaluation of the CB framework and lessons from previous reviews, the scope of sources that is taken into account has been gradually expanded and includes information from Parties, including from NAPAs and NAPs, synthesis reports on the implementation of the framework prepared by the secretariat, reports from the operating entities of the FM and other organizations, reports from CB meetings and workshops and findings of previous reviews.⁸¹ It also takes into account information generated through interviews, surveys and focussed discussions with relevant national focal points.

93. Based on these sources of information the secretariat prepares comprehensive reports as inputs to the reviews providing primarily qualitative information, including lessons learned, successes and challenges, on, for instance, on factors that influence the effectiveness of CB activities as well as on capacity-building provided regarding specific adaptation activities.

94. Over time, the COP/SBI, in undertaking the reviews, enhanced its understanding of the key factors that contribute to effective CB and subsequently used these factors as indicators for effective CB in subsequent reviews (the list of key factors is contained in annex IV). In addition, after the first comprehensive review, it initiated a process to develop a monitoring and evaluation framework for capacity-building. The process was based on CB indicators developed by UNDP/GEF⁸² and subsequently involved a series of papers, submissions, workshops and expert meetings to discuss the use of and experience with performance indicators for the M&E of capacity-building at various levels, including regarding capacity-building for adaptation.⁸³ However, so far, the SBI/COP have not been in a position to conclude on general performance indicators but rather noted that the M&E needs to be context-specific.

⁷⁹ Decision 2/CP.7. Note that decision 3/CP.7 established a capacity-building framework particularly for countries with economies in transition. However, this framework will not be addressed in this paper as the aspects focusing on adaptation are similar.

⁸⁰ Decision 2/CP.7.

⁸¹ For a full list of sources refer to annex III.

⁸² United Nations Development Programme/Global Environment Facility. Capacity Development Indicators. UNDP/GEF Resource Kit (No. 4). November 2003 and summarized in document FCCC/SBI/2009/5.

⁸³ A synthesis of the information generated through these events is contained in document FCCC/SBI/2009/5.

95. In 2011 the Durban Forum was established to provide an additional input to the reviews of the implementation of the CB framework.⁸⁴ It is an annual in-session event aiming at further enhancing the monitoring and review of the effectiveness of capacity-building and bringing together a large spectrum of stakeholders that discusses and shares experiences. So far, several of the Durban Forum's themes have implicitly or explicitly covered capacity-building for adaptation, including, for example, "Building capacity to mitigate and adapt to climate change - success stories and innovative approaches" and "Enhancing capacities for adaptation in the context of National Adaptation Plans (NAPs) and Nationally Determined Contributions (NDCs)".

96. In 2015, the COP established the Paris Committee on Capacity-building whose aim will be to address gaps and needs, both current and emerging, in implementing capacity-building in developing country Parties and further enhancing capacity-building efforts, including with regard to coherence and coordination in capacity-building activities under the Convention.⁸⁵ It also requested the Committee to annually focus on an area or theme related to enhanced technical exchange on capacity-building, with the purpose of maintaining up-to-date knowledge on the successes and challenges in building capacity effectively in a particular area.⁸⁶ Outcomes of the comprehensive reviews of the implementation of the capacity-building framework will, among others, provide input to the work of the Committee which will prepare annual technical progress reports on its work, including on its annual focus area.⁸⁷

5.2. Reviewing the adequacy of adaptation support

97. Several approaches exist to assess the adequacy of adaptation support which compare needs with the availability of support. By nature, these differ in substance and scope subject to whether support is provided in the form of finance, technology development and transfer, or capacity-building

5.2.1. Adequacy of financial support

98. Existing approaches to review the adequacy of financial support for adaptation include the following:

5.2.1.1. Financial Mechanism of the Convention

99. In the early years of the financial mechanism the adequacy of funding required by developing countries to implement the provisions of the Convention was determined by the COP by comparing funding needs (based on information from national communications and country programming on mitigation and adaptation) with the funding available via the operating entities. Ever since methodologies to determine climate, including adaptation, finance needs and actual finance flows to allow for an evaluation of the adequacy of financial support have gradually been refined.

100. In terms of determining climate finance needs, for example, in preparation of the third and fourth review of the financial mechanism (FM), the secretariat was requested by the COP to prepare a report and a technical paper, respectively, on experiences of international funds and multilateral financial institutions relevant to the current and future investment needs of developing countries in meeting their commitments under the Convention, including on financial flows from private sector sources.⁸⁸ In addition, as part of its consideration of the fourth review, the SBI requested the secretariat "to provide, upon request, information to non-Annex I Parties on the assessment of financing needs to implement mitigation and adaptation measures."⁸⁹ In response, the secretariat developed the National Economic, Environment and Development Study (NEEDS) for Climate Change Project to identify key sectors for mitigation and adaptation measures, corresponding finance needed and received as well as appropriate financial and regulatory instruments to support these measures in eleven participating countries.⁹⁰ The methodology used was based on the

⁸⁴ Decision 2/CP.17, paragraph 144.

⁸⁵ Decision 1/CP.21, paragraph 71.

⁸⁶ Decision 1/CP.21, paragraph 74.

⁸⁷ Decision 1/CP.21, paragraph 79 and

⁸⁸ FCCC/SBI/2005/INF.7 and FCCC/TP/2007/4.

⁸⁹ FCCC/SBI/2008/8.

⁹⁰ For further information on the NEEDS project, refer to <https://unfccc.int/topics/climate-finance/workstreams/determination-of-the-needs-of-developing-country-parties-related-to-implementing-the-convention-and/national-economic-environment-and-development-study-needs-for-climate-change-project>.

objective to promote country ownership and included extensive consultations with national-level and sector-level stakeholders and experts.

101. As part of negotiations on long-term finance, in 2017, the secretariat was requested, “in collaboration with the operating entities of the Financial Mechanism, United Nations agencies and bilateral, regional and other multilateral channels, to explore ways and means to assist developing country Parties in assessing their needs and priorities, in a country-driven manner, including technological and capacity-building needs, and in translating climate finance needs into action.”⁹¹ In response, the secretariat launched the Needs-based Finance (NBF) project with the objective of facilitating access and mobilization of climate finance for the implementation of priority mitigation and adaptation projects to address the needs identified by developing countries which was subsequently implemented as regional and national projects in over 100 countries.⁹² The methodology applied to identify climate finance needs and priorities included a review of official national reports and other relevant documents (e.g. Biennial Update Reports, NAPs, NAPAs, National Communications, NDCs, TNAs, country programmes of climate funds and MDBs, climate strategies), as well as relevant national and regional documents and the engagement with representatives from national climate/environment and finance ministries, as well as regional climate finance institutions, relevant stakeholders and experts for consultation and validation.

102. In 2018, the SCF was requested by the COP to prepare, every four years, a report on the determination of the needs, including but not limited to financial needs, of developing country Parties related to implementing the Convention and the Paris Agreement, for consideration by the COP and the CMA, starting in 2020, and in collaboration, as appropriate, with the operating entities of the FM, the subsidiary and constituted bodies, multilateral and bilateral channels, and observer organizations.⁹³ The SCF has developed a workplan for the finalization of the first report which includes desk reviews, the involvement of a wide range of stakeholders that are expected to provide data, information and experience and specific outreach events such as webinars, technical expert meetings and a call for evidence to gather inputs from stakeholders that have undertaken work on the determination of needs, covering data availability and gaps, and information on methodologies and approaches.⁹⁴

103. Also in 2018, “the AC, in collaboration with the LEG, partner organizations of the Nairobi work programme, users and developers of relevant methodologies, including academia and the private sector, was requested by the CMA to develop by June 2020 and to regularly update an inventory of relevant methodologies for assessing adaptation needs, including needs related to action, finance, capacity-building and technological support in the context of national adaptation planning and implementation, and to make the information available on the adaptation knowledge portal.⁹⁵ Although not directly mandated in the context of the review of the FM, the work under this mandate will contribute to the identification of adaptation finance needs of developing countries and may therefore assist in reviewing the adequacy of adaptation support. A pilot inventory is available on the Adaptation Knowledge Portal⁹⁶ which is currently being finalized and will be updated regularly.

104. In terms of determining the **availability of climate finance**, the Biennial Assessment and Overview of Climate Finance Flows (BA), which has been prepared every two years by the SCF since 2014, now represents the most comprehensive assessment under the Convention. The COP had initially requested the SCF to prepare the report based on available sources of information, and including information on the geographical and thematic balance of flows.⁹⁷ Subsequently, the mandate was expanded to also consider relevant work by other bodies and entities of the measurement, reporting and verification (MRV) of support and the tracking of climate finance,⁹⁸ ways of strengthening methodologies for the reporting,⁹⁹ and ongoing technical work on operational definitions of climate finance, including private finance mobilized by public

⁹¹ Decision 6/CP.23, paragraph 10.

⁹² For further information on the NBF project, refer to https://unfccc.int/NBF_Project.

⁹³ Decision 4/CP.24, paragraph 13 and 14.

⁹⁴ https://unfccc.int/sites/default/files/resource/Workplan_2020NeedsReport.pdf.

⁹⁵ Decision 11/CMA.1, paragraph 15.

⁹⁶ <https://www4.unfccc.int/sites/NWPStaging/Pages/SearchAsses.aspx>

⁹⁷ Decision 2/CP.17, paragraph 121 (f).

⁹⁸ Decision 1/CP.18, paragraph 71.

⁹⁹ Decision 5/CP.18, paragraph 11.

interventions, to assess how adaptation and mitigation needs can most effectively be met by climate finance.¹⁰⁰ In response, the SCF now bases the preparation of the BA report not only on an extensive review of climate finance data sources, but also organizes technical meetings and other forms of consultation with experts in the field in order to assess and support the constant efforts of improving reporting and tracking methods as well as approaches to identify the full scope of finance that supports mitigation and adaptation efforts and to harmonize existing data sets.¹⁰¹

105. The Biennial Assessment report now includes information on global total climate finance flows, including private and public, international and domestic, and South-South cooperation on climate finance as well as flows from developed to developing countries, including multilateral and bilateral. For the former, sources include e.g. the Global Landscape of Climate Finance by the Climate Policy Initiative and for the latter, sources include primarily the reports from the operating entities of the FM, the common tabular format (CTF) tables of the biennial reports, and Annex I National Communications, complemented by reports from MDBs and other multilateral climate funds attributable to Annex II Parties, such as the Adaptation Fund, data from the OECD-DAC Creditor Reporting System, and the International Development Finance Club (IDFC) as well as information on mobilized private finance flows in developing countries from MDBs, IDFC and OECD.¹⁰²

5.2.1.2. UNEP Adaptation Finance Gap Report¹⁰³

106. The 2016 UNEP Adaptation Finance Gap Report explores the costs of meeting adaptation needs in developing countries and assesses the funding that is available for doing so in order to identify a potential gap between the two and thus the adequacy or inadequacy of financial support. It bases its methodology on the conceptual framework developed for the 2014 Adaptation Gap Report,¹⁰⁴ which assumed that an adaptation goal can be established for each area of interest (finance, technology, knowledge) and subsequently identified whether there exist a gap between the adaptation levels that would be consistent with the goal at a given point in time and the actual levels achieved through the implementation of adaptation measures. In case of adaptation finance, the framework sets out to assess the costs of reaching a societally set adaptation target or goal and the amount of finance available. Thereby, the target or goal would reflect nationally determined needs related to climate change impacts, as well as resource limitations and competing priorities.¹⁰⁵

107. With regard to estimating the **costs to meet adaptation needs** in developing countries, the report is based on existing literature. It reviews global-level model estimates (top-down estimates), which calculate costs by relating total impacts with impact damages, at the global level and on the basis of a sectoral breakdown of cost elements,¹⁰⁶ and national-level estimates (bottom-up studies) which calculate costs by adding up the costs of each of the measures in a specific, pre-determined portfolio of adaptation actions. Thereby, particular attention is paid to the bottom-up estimates, since the global, top-down studies arrive at very different estimates due to a lack of empirical evidence on the relationship between greenhouse-gas

¹⁰⁰ Decision 3/CP.19, paragraph 11.

¹⁰¹ UNFCCC Standing Committee on Finance. 2018. Biennial Assessment and Overview of Climate Finance Flows. Technical Report. Available at <https://unfccc.int/sites/default/files/resource/2018%20BA%20Technical%20Report%20Final%20Feb%202019.pdf>. Information on the work of the SCF on MRV of support beyond the BAs is available at <https://unfccc.int/process/bodies/constituted-bodies/standing-committee-on-finance-scf/activities-of-the-scf/work-by-the-standing-committee-on-finance-on-measurement-reporting-and-verification-of-support>.

¹⁰². An overview of relevant sources is available at <https://unfccc.int/topics/climate-finance/resources/biennial-assessment-of-climate-finance>.

¹⁰³ UNEP 2016. The Adaptation Finance Gap Report 2016. United Nations Environment Programme (UNEP), Nairobi, Kenya. Available at <https://unepdtu.org/publications/the-adaptation-finance-gap-report/>.

¹⁰⁴ UNEP 2014. The Adaptation Gap Report 2014. United Nations Environment Programme (UNEP), Nairobi. Available at <https://www.unenvironment.org/resources/adaptation-gap-report-2014>.

¹⁰⁵ UNEP (2015). The adaptation finance gap update: with insights from the INDCs. United Nations Environment Programme (UNEP). Nairobi, Kenya. Available at http://web.unep.org/sites/default/files/gapreport/UNEP_Adaptation_Finance_Gap_Update.pdf.

¹⁰⁶ An example for this approach is the global scenario-based aggregated sectoral impact assessment approach applied by the World Bank in the following study: World Bank. 2010. The economics of adaptation to climate change: A Synthesis Report. The World Bank Group. Washington, DC., United States.

emissions, impacts and the effectiveness of adaptation as well as a lack of experience in determining the values of the model parameters. The bottom-up estimates are based on a number of multi-country initiatives on adaptation needs and related costs¹⁰⁷ and a growing number of individual- country or sector studies, including information from several nationally determined contributions (NDCs).

108. The determination of **available adaptation finance** focuses on public financial flows, primarily from developed to developing countries, committed through the following providers: (i) development finance institutions (multi-lateral, bilateral, national and sub-national development banks); (ii) governments and their bilateral aid agencies, as recorded in the creditor reporting system, administered by the OECD's Development Assistance Committee (DAC) and dedicated climate change funds.¹⁰⁸ The report draws on the estimates presented in the Climate Policy Initiative's Global Landscape of Climate Finance¹⁰⁹ and on OECD databases. Neither public sector budgets for domestic adaptation action nor domestic or international private sector financing are included in the global quantitative estimates in this report since no systematic tracking on such flows had been available. However, the report states that particularly private adaptation finance will be and potentially already is essential to meeting the costs of adaptation needs and describes some evidence about private sector financing for adaptation in developing countries as well as financial and non-financial tools that can be used to mobilize private sector financing for adaptation in such countries.

109. Based on the estimation of adaptation costs and the determination of available international public adaptation finance, the report estimates the adaptation finance gap for three different points in time: now, 2030 and 2050. For now, the report assesses how the estimated adaptation costs compare to the actual levels of international public adaptation finance. For 2030 and 2050, it assesses how the estimated adaptation costs compare to the commitment by developed country Parties of mobilizing US\$100 billion per year for mitigation and adaptation from 2020, assuming the intended equal split between the two and an increase in this commitment from 2025 onwards.¹¹⁰

5.2.2. Adequacy of support provided in the form of technology development and transfer

5.2.2.1. Reviews under the Convention

110. The adequacy of technology support, including for adaptation, was assessed in 2008/2009 via the review of existing and potential new financing resources in supporting the development, deployment, diffusion and transfer of environmentally sound technologies in developing countries. The Expert Group on Technology Transfer was tasked to identify and analyse such resources and relevant vehicles and to assess gaps and barriers to the use of and access to these resources in order to provide information to Parties to consider their adequacy and predictability.¹¹¹ For this assessment it was requested to take into account the following criteria:

- a) The implementation of TNAs;
- b) Joint research and development programmes and activities in the development of new technologies;

¹⁰⁷ These include, for example, the NEEDS project mentioned in section 5.2.1.1, the "Economics of adaptation to climate change – country studies" (see footnote 103) and the 2011 "Assessment of investment and financial flows to address climate change – country summaries" by UNDP (Available at : <http://www.undpcc.org/en/financial-analysis/results>).

¹⁰⁸ These include the Pilot Programme for Climate Resilience (PPCR), the Least Developed Countries Fund (LDCF), the Adaptation Fund (AF), the Adaptation for Smallholder Agriculture Programme (ASAP), the Special Climate Change Fund (SCCF) and the MDG Achievement Fund.

¹⁰⁹ Buchner B. et al. 2015. Global Landscape of Climate Finance 2015: A CPI Report. Climate Policy Initiative. Venice, Italy. Available at: <http://climatepolicyinitiative.org/publication/globallandscape-of-climate-finance-2015/>. The methodology used in this report relies on the tracking standards and reporting approaches used by the members of the OECD's DAC, the group of multi-lateral banks that report jointly on climate change finance volumes, the members of the International Development Finance Club, and the various funds dedicated to climate change.

¹¹⁰ Through decision 1/CP.21, paragraph 53 Parties have decided that, in accordance with Article 9, paragraph 3, of the Agreement, developed countries intend to continue their existing collective mobilization goal through 2025 [...]; and that prior to 2025 the CMA shall set a new collective quantified goal from a floor of USD 100 billion per year [...].

¹¹¹ Decision 3/CP.13, annex II, paragraphs (f) (i) and (ii).

- c) Demonstration projects;
- d) Enabling environments for technology transfer;
- e) Incentives for the private sector;
- f) North-South and South-South cooperation;
- g) Endogenous capacities and technologies;
- h) Issues associated with meeting the agreed full incremental costs;
- i) Licences to support the access to and transfer of low-carbon technologies and know-how;
- j) A window for, inter alia, a venture capital fund related to or possibly located in a multilateral financial institution.

111. Further, systematic reviews have not been undertaken under the Convention so far, although sources to identify technology needs and respective support provided are available in the form of, for instance, technology needs assessments, national adaptation plans, and nationally determined contributions as well as biennial reports.

112. However, as mentioned in section 5.1.2.2 above, the COP has decided “to undertake a periodic assessment of the effectiveness and adequacy of the support provided to the Technology Mechanism in supporting the implementation of the Paris Agreement on matters relating to technology development and transfer”.¹¹² The adequacy of the support provided to the TM will be reviewed based on the assessment of (i) the recipients of the support provided (TEC and CTCN, including the national designated entities) (ii) the sources of support provided; (iii) the types of support provided; (iv) how the support provided was used, taking into account actions at the different stages of the technology cycle (mitigation actions; adaptation actions, cross-cutting actions) (v) the level of support provided and whether it has changed over time; (vi) the extent to which the support has met the budgets and plans of the Technology Mechanism.¹¹³

5.2.2.2. UNEP Adaptation Gap Report

113. As mentioned in section 5.2.1.2, for its Adaptation Gap Report 2014,¹¹⁴ UNEP has developed a conceptual framework which assumes that an adaptation goal can be established for each area of interest (finance, technology, knowledge) and subsequently identified whether there exist a gap between the adaptation levels that would be consistent with the goal at a given point in time and the actual levels achieved through the implementation of adaptation measures. In case of technology development and transfer the goal would be a societally set target for implementation of technologies for adaptation which would be assessed against the adaptation technologies actually implemented. However, from the outset, the report admits that a clear definition of technology targets, based on needs, and those implemented, which would allow for a measurement or quantification of the technology gap, is not possible due to the multidimensional definition of technologies for adaptation and their frequent overlaps with overall adaptation activities. Measuring the transfer, diffusion and deployment of technologies via financial flows would only be one (limited) proxy for the comparison over time, but other measurements or quantifications at an aggregate level are impossible.

114. Instead, it proposes that the gap could be described as perceived by the countries based on an analysis of their technology needs assessments (TNAs), and requests to technology support mechanisms such as the Climate Technology Centre and Network (CTCN). For that, it uses analyses of TNAs, National Adaptation Programmes of Action (NAPAs) and various support requests in order to derive the following aspects of perceived gaps:

- a) The distribution of priority technology components (hardware, software or orgware) in different sectors (e.g. agriculture, water, coastal zones, disaster risk management);

¹¹² Decision 1/CP.21, paragraph 69.

¹¹³ Decision 16/CMA.1, annex.

¹¹⁴ UNEP. 2014. The Adaptation Gap Report. A Preliminary Assessment Report. Available at <https://www.unenvironment.org/resources/adaptation-gap-report>.

- b) The type of gaps in terms of transfer, diffusion or innovation implicitly derived from the nature of the identified technology needs (e.g. whether a country as a whole needs a specific type of technology (=transfer) or only a certain region which had not yet have access (=diffusion));
- c) Level of maturity (traditional, modern, high, or future) of prioritized technologies by sector and a comparison of the size of the gaps identified under each level of maturity over time (e.g. there seems to be a shift in demand from traditional towards more modern technologies); and
- d) Categories of different barriers to technology development and transfer and their respective weight (e.g. challenges often relate to the local adoption and diffusion of technologies rather than to their availability).

115. Based on this rather qualitative description of gaps in or inadequacy of technology development and transfer, the report describes how targets in this regard could be defined, for instance, by identifying cases in which international transfer of technologies is critical and those where the focus should lie on accelerating the diffusion and uptake of existing technologies instead of their transfer.

5.2.3. Adequacy of capacity-building support

116. The adequacy of capacity-building support is regularly assessed as part of the comprehensive reviews of the capacity-building framework under the Convention.

117. Similar to the review of the adequacy of technology support, a quantification of the adequacy of capacity-building support is not possible due to its multidimensional definition and overlaps with other adaptation activities and their support. However, the assessment of possible gaps between the provisions of decision 2/CP.7 regarding the scope and areas of the capacity-building framework (see section 5.1.3.1 above) and the implementation of capacity-building activities is an explicit objective of the comprehensive reviews of the CB framework and is undertaken in qualitative terms by considering, for example, the following aspects:

- a) Degree to which the areas of the CB framework align with current CB needs identified by developing countries in their national communications, NAPAs, national capacity self-assessment (NCSA) reports, national poverty reduction strategy papers (PRSPs) and national sustainable development strategies;
- b) Degree to which Annex II Parties and other providers of support have covered the priority issues identified in the CB framework and by individual countries;
- c) Distribution of support provided for the three levels of CB – systemic (enabling environments such as economic and regulatory policies), institutional, and individual;
- d) Key remaining needs under different areas of the CB framework.

118. Outcomes of these reviews are requested to feed into the work of the Paris Committee on Capacity-building whose workplan for the period 2016-2020 includes the identification of capacity gaps and needs and the recommendation of ways to address them.¹¹⁵

5.3. Findings and lessons learned

119. The following general and specific findings and lessons can be drawn from the methodologies to review the adequacy and effectiveness of adaptation support:

- a) Given the fact that adaptation support, just like adaptation itself, is multidimensional and cross-cutting in nature, the review of its adequacy and effectiveness requires:
 - i) Evaluations at different geographical and temporal scales to capture outcomes that have cross-boundary effects and/or evolve over time;
 - ii) Well-functioning monitoring and reporting systems which supply required data and information;

¹¹⁵ Decision 1/CP.21, paragraph 73 (b).

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- iii) A mixed method approach and the triangulation of data, including both quantitative and qualitative, from a wide variety of sources to adequately understand, evaluate and explain outcomes and to make up for potential data gaps in standard sources;
 - iv) The participation of all relevant stakeholders, including the providers of support, the beneficiaries as well as independent reviewers in order to capture all relevant perspectives;
 - v) Both continuity and flexibility in successive reviews with continuity referring to a repetitive assessment of the same aspects in order to capture developments over time and flexibility referring to the need to take into account new developments, trends and values when establishing assessment criteria since these influence the way adequacy and effectiveness are evaluated (e.g. the role of gender, private sector involvement, country ownership, or complementarity of international funds which successively have been added to the catalogue of criteria to assess effectiveness of adaptation support);
 - b) Although adequacy and effectiveness require different methodologies to be assessed, both concepts are closely linked and sometimes being seen as components of each other and as such need to be considered jointly, and, where relevant, in conjunction with other aspects such as relevance, coherence, efficiency, impact and sustainability, in order to ultimately evaluate outcomes of adaptation and its support;
 - c) Even if there are no apparent global standards or indicators to review the adequacy and effectiveness of adaptation support due to its context-specific nature, common assessment criteria can be developed over time through the collection of experience and findings from successive reviews that incorporate a broad range of information sources (e.g. as in the case of the key factors influencing effectiveness of capacity-building identified through consecutive reviews of the capacity-building framework – see annex IV);
 - d) In the case of effectiveness, while there are different views on what exactly counts towards it subject to the individual objective of the support provided, the ultimate indicator should be whether a supported intervention actually increases resilience on the ground and for this to assess, the evaluation needs to be sufficiently complex;
 - e) The review of the effectiveness of adaptation support requires both the assessment of the final outcome of the supported adaptation activity as well as the assessment of the way the support is provided (e.g. organizational or management effectiveness);
 - f) Periodic and standard performance evaluations can be complemented by thematic evaluations in order to review effectiveness, such as in the case of the CIF's Evaluation & Learning Initiative that focuses on learning about effectiveness through thematic studies instead of annual programme performance evaluations;
 - g) The evaluation of the adequacy of support requires an assessment of the present ratio of support needed and support provided (reflecting the present adaptation gap or deficit) as well as an estimation of future needs as well as types and sources of support, e.g. up to a certain point in time;
 - h) In order to avoid double counting of support needs or support provided, given the close interlinkages of financial, technology and capacity-building needs, needs assessments and reports on support provided should include a sufficient amount of qualitative information;
 - i) Increased and improved reporting is essential for the future review of adequacy and effectiveness of adaptation support and developing countries need to be supported in this regard through the streamlining of reporting requirements as well as through financial and technical assistance as well as through awareness-raising on the value of M&R in order to increase demand and ownership and thus sustainability of the respective systems;
 - j) A range of review systems and methodologies to assess the adequacy and effectiveness of adaptation support at all levels exists, including under the Convention, that the methodologies to be developed for the global stocktake can build on and link to.

5.4. Gaps and challenges

120. The following gaps and challenges have been identified with regard to methodologies to review the adequacy and effectiveness of adaptation support:

- a) Gaps in the definitions of adaptation finance, technology and capacity-building as well as their close interlinkages impede a clear distinction of their respective contributions to resilience building and hence an evaluation of their adequacy and effectiveness;
- b) Evaluating to what extent better adaptation results can be achieved through more support compared to other influencing factors, such as enabling environments is often challenging;
- c) Moving from the prevailing focus on short-term and quantifiable outputs and outcomes of adaptation support to the long-term non-quantifiable impacts in order to assess the adequacy and effectiveness of adaptation support is also challenging;
- d) Uncertainties associated with data sources persist that are due to different approaches of collecting and reporting data and information, limiting the scope of comparability;
- e) Gaps in data coverage and reporting lead to underestimations of support needs and support provided;
- f) Lack of institutional capacity, decreasing scope for capacity-building for monitoring and reporting and inefficient reporting processes in developing countries lead to a gap in the continuous and consistent collection and reporting of data and information;
- g) There are specific challenges which hamper the assessment of the adequacy of financial support since they stand in the way of obtaining a full picture of adaptation finance needs and flows. These relate to:
 - i) a general lack of an agreed assessment of the financing needs of developing countries at the level of the Convention although improvements have been achieved by the efforts described in section 5.2.1.1;
 - ii) a widespread approach of basing the estimation of adaptation costs on planned public adaptation and the estimation of available finance on public international finance, since both are easier to track, omitting autonomous and private adaptation costs as well as public domestic and private finance, which might increase estimates of costs and available finance significantly;
 - iii) close interlinkages between adaptation and development finance which impedes a clear identification and classification of investments; and related to that
 - iv) a likely underestimation of international public finance flows for adaptation due to a lack of a methodology available to capture financing for activities that do not have adaptation as their primary goal but do lead to adaptation co-benefits, such as mitigation, disaster risk reduction or ecosystem-based services projects.

121. The gaps and challenges summarized in this section and in section 4.6, underline that there are clear limits on how, and to what effect, the adequacy and effectiveness of adaptation and support can be reviewed. They emphasize that there is no one size fits all approach to assessing such adequacy and effectiveness. Similarly, it is not possible to add up information on the adequacy and effectiveness of adaptation action around the globe to a single figure or to represent it through a globally applicable metric in a scientifically sound manner as in the case for mitigation. Instead, they point to the need to carefully design an approach to synthesize and learn from information generated through various context-specific assessments around the globe which could inform the global stocktake and facilitate further action.

6. Opportunities and options in applying the methodologies

122. Iteratively applying the described methodologies of reviewing the adequacy and effectiveness of adaptation and support at various levels and for various purposes provides several opportunities and options.

123. First, it enhances **learning** at all levels. Participatory reviews at the project, programme, portfolio or global level provide valuable information for all stakeholders for future adaptation planning and support. At the global level, the information that developed and developing Parties and non-Party stakeholders (international organizations, academia, international cooperation) make available on diverse implemented adaptation actions, the support provided and received and the respective outcomes as well as lessons learned, good practices, gaps and needs facilitate mutual learning on what works, what does not work and what could be innovative approaches for the future regarding the reduction of vulnerability and the enhancement of resilience.

124. Second, the provision of such information can lead to a **shared understanding** of the “state of the art” of adaptation planning, actions and support at the international level and the progress made in reducing vulnerability and building resilience to climate change. Viewed in conjunction with IPCC reports and information from the Essential Climate Variables (ECVs) on the state of the climate system, the information shared by Parties through their country reporting (e.g. under the Enhanced Transparency Framework as well as through adaptation communications, NDCs and NAPs) and by constituted bodies, operating entities of the financial mechanism, UN agencies and other international organizations provides opportunities to inform the global stocktake. Outcomes of the GST could subsequently guide Parties in increasing adaptation actions and efforts as well as the provision of support in geographical and thematic areas, where gaps have been identified, through both domestic and international cooperation. This, in turn, can ultimately inform progress towards the global goal on adaptation.

125. Third, the iterative application of these tools, methodologies and frameworks and related knowledge generation and exchange with other global efforts e.g. under the Sustainable Development Goals process and the Sendai Framework,¹¹⁶ could assist **in defining, over time, consistent types of information** relevant for the review of the adequacy and effectiveness of adaptation and support, which could subsequently guide reporting requirements as well as their streamlining. With regard to adaptation support, the paper has pointed to several efforts in this regard which could be a useful starting point. These include the core indicators and other common indicators used by climate funds, the performance indicators to measure the effectiveness of the implementation of the technology transfer framework, and key factors that contribute to effective climate change capacity-building identified through the reviews of the capacity-building framework. Further efforts that have been undertaken to increase the consistency of the information collected for assessing adaptation projects and their outputs and outcomes include:

- a) The LDC Initiative for Effective Adaptation and Resilience (LIFE-AR), which reviewed about 95 resilience initiatives across LDCs in order to identify “what works” in delivering long-term resilience, and to encourage cross-country learning and knowledge transfer;¹¹⁷
- b) The Inter-Sectoral Impact Model Intercomparison Project (ISIMIP), which is a scientific community-driven climate-impacts modelling initiative that has developed a framework for consistently projecting the impacts of climate change across affected sectors and spatial scales, including associated uncertainties. The main goal is to contribute to the comprehensive understanding of impacts of scientifically and politically relevant climate-change scenarios;¹¹⁸
- c) The Multilateral Development Banks (MDBs) jointly developed a Framework and Principles for Climate Resilience Metrics in Financing Operations, applicable across financial institutions, including both development and commercial, with the view to align financing flows with the

¹¹⁶ For an overview of methodologies and indicators used by these frameworks, see the AC draft technical paper on approaches for the review of the collective progress towards the global goal on adaptation (AC/2020/3).

¹¹⁷ LDC Climate Change. 2019. Delivering Out Climate-Resilient Future: Lessons from a Global Evidence Review. LDC Initiative for Effective Adaptation and Resilience (LIFE-AR). Available at http://www ldc-climate.org/wp-content/uploads/2019/09/web_LDCevidencereview.pdf.

¹¹⁸ <https://www.isimip.org/>.

climate resilience goals of the Paris Agreement and assess how they have contributed to climate resilience objectives;¹¹⁹

- d) The International Organization for Standardization has developed the ISO 14090 standard “Adaptation to climate change”, a framework for how organizations can develop measures and report and assess strategies and plans, which increase resilience against climate impacts. The standard also sets out how organizations can prioritize measures that will increase resilience against future climate shocks;¹²⁰
- e) The Task Force on Climate-related Financial Disclosures (TCFD) develops recommendations on climate-related financial risk disclosures to help companies provide information to investors, lenders, insurers and other stakeholders on physical, liability and transition risks associated with climate change;¹²¹
- f) Gigi Owen from the University of Arizona, has undertaken an extensive literature review of 110 adaptation initiatives around the globe and their outcomes, resulting in the understanding of common attributes of adaptation initiatives reported to be effective.¹²²

126. In terms of data and information collection and sharing for the assessments, **innovative sources of information and data**, such as big data, satellite observation and mobile technology, as well as **innovative reporting systems**, could be beneficial in further refining and populating existing or new tools and methodologies and in reducing reporting burden. These allow for higher frequencies and lower costs of data collection and sharing and provide important alternatives or additions to more traditional methods based on household surveys, national statistics, and paper-based reports.

127. Experiences in the applications of the tools, methodologies and frameworks mentioned above are still somewhat limited and new tools and methodologies will **continuously be developed and improved over time**, at best in close collaboration with the scientific community. In this regard, countries should be encouraged to use the formulation and implementation of NAPs, the communication of NDCs and reporting under the enhanced transparency framework (ETF) and on support provided and received to regularly apply the methodologies to review the adequacy and effectiveness of adaptation and support and thereby collaborate with all those stakeholders that have already gained experience in this regard. This would enable the global community to collectively improve the applied methodologies, including in light of new values and trends. In this context, the global stocktake is seen as one important venue to both learn from existing knowledge and experiences, as well as to inform the further refinement of such applications as well as on geographical and thematic areas not yet covered by them.

7. Conclusions and next steps

128. Despite inherent challenges involved in assessing the adequacy and effectiveness of adaptation and support, a range of methodologies exist that can provide a way forward in undertaking such a review at various levels and in diverse adaptation contexts. Iterative application of such methodologies and reporting of the respective outcomes provide important opportunities with regard to mutual learning at all levels, the creation of a shared understanding of the global “state of the art” of adaptation planning, actions and support, and the definition, over time, of consistent types of information relevant in the review of the adequacy and effectiveness of adaptation and support. This can ultimately contribute to the assessment of the collective progress made in achieving the global goal on adaptation. The global stocktake can serve as one important venue to both learn from existing knowledge and experiences as well as to inform the further refinement of the methodologies.

129. Based on the information contained in this paper, the AC and the LEG, in collaboration with the SCF, may wish to:

¹¹⁹https://publications.iadb.org/publications/english/document/A_Framework_and_Principles_for_Climate_Resilience_Metrics_in_Financing_Operations_en.pdf.

¹²⁰ www.iso.org/news/ref2405.html.

¹²¹ <https://www.fsb-tcfd.org>.

¹²² Owen, G. 2020. What makes climate change adaptation effective? A systematic review of the literature. *Global Environmental Change* 62 (2020) 102071.

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- a) Compile methodologies on reviewing adequacy and effectiveness of support as a contribution to this work in the context of decision 11/CMA.1, para 35, as part of the Adaptation Knowledge Platform;
 - b) Recommend approaches to reviewing the adequacy and effectiveness of adaptation and support under the global stocktake, taking into account the agreed modalities of the GST, the thematic areas and related types of information that the GST will consider, and the sources of input that have been decided to deliver such information, as well as ongoing work related to these issues;
 - c) Recommend the types of information that would be needed from Parties, non-Party stakeholders and constituted bodies under the Convention to review the adequacy and effectiveness of adaptation and support under the GST, including, for example, the following:
 - i) For the review of effectiveness:
 - a. M&E systems applied at different levels and in different adaptation contexts, including information on the purpose, scope and methodology used (general approach, focus areas, aspects/criteria/indicators that deliver information on effectiveness, stakeholders involved and sources of evidence);
 - b. Findings of the M&E process including information on inputs (e.g. financial, technology and capacity-building support supplied/received), outputs, outcomes and, particularly, impacts;
 - c. Lessons learned, gaps and challenges in applying the M&E systems and in reaching intended adaptation outcomes and impacts;
 - d. Similarities and changes in the methodology applied compared to previous reports and reasons for changing or not changing the M&E approach;
 - e. Thematic and geographical areas not yet covered by review/M&E mechanisms.
 - ii) For the review of adequacy:
 - a. Adaptation and support needs, including for meeting planned, autonomous and private adaptation costs;
 - b. Financial, technology and capacity-building support provided, including from public international, public domestic and private sources.
 - d) Consider implications of the outcomes of this work for the focus of the synthesis reports of the AC, the LEG, and the SCF to serve as input to the GST as mandated through decision 19/CMA.1, paragraph 24.

Annex I: Review of the effectiveness of financial support for adaptation under the Convention and different funding institutions – focus areas, criteria and sources

Financial Mechanism of the Convention (based on guidelines for the review) ¹		
Focus areas	Aspects/Criteria/Indicators	Sources
<p>1) The conformity of the activities funded under the FM with Article 11 of the Convention and relevant policies, programme priorities and eligibility criteria established by the COP;²</p> <p>2) The provision of resources to developing country Parties under Article 4.3 of the Convention; (iii) the consistency in financing activities and the complementarity of the FM with other sources of investment and financial flows as well as between the operating entities and (iv) access modalities for developing countries to the FM.</p>	<p>a) The transparency of decision-making processes;</p> <p>b) The adequacy, predictability and timely disbursement of funds for activities in developing country Parties;</p> <p>c) The responsiveness and efficiency of the GEF (and later the GCF) project cycle and expedited procedures, including its operational strategy, as they relate to climate change;</p> <p>d) The amount of resources provided to developing country Parties, including financing for technical assistance and investment projects;</p> <p>e) The amount of finance leveraged;</p> <p>f) The sustainability of funded projects;</p> <p>g) The role of the FM in scaling up the level of resources;</p> <p>h) The contribution of enabling environments for catalysing investment in, and the transfer of, sustainable technologies that mitigate greenhouse gas emissions, and for enhancing resilience to climate change</p> <p>i) The level of stakeholder involvement;</p> <p>j) The extent to which the FM is contributing to gender-sensitive approaches;</p> <p>k) The accessibility and rate of disbursement of funds for activities in developing country Parties, including projects in the pipeline;</p> <p>l) The responsiveness, efficiency and performance of the cycle for project/programme approval procedures of the operating entities of the FM;</p> <p>m) The mechanisms for country allocation, as well as the results and impacts achieved by the resources provided;</p> <p>n) The modalities and ratios of co-financing and the use of financial instruments where applicable;</p> <p>o) The extent to which the resources provided are contributing to achieving the objective of the Convention;</p>	<p>i) Information provided by Parties on their experiences regarding financial support provided and received in accordance with COP decisions (particularly national communications, technology needs assessments and national adaptation programmes of action);</p> <p>ii) Annual guidance provided by the COP to the operating entities of the FM with regard to the conformity of their activities with the guidance provided by the COP;</p> <p>iii) The annual reports of the Standing Committee on Finance (SCF) to the COP on its activities and relevant technical information produced by the committee such as the biennial assessments and overview of climate finance flows and outcomes of the SCF forums;</p> <p>iv) Annual reports of the Global Environment Facility (GEF) to the COP, including the information on the Least Developed Countries Fund (LDCF) and the Special Climate Change Fund (SCCF);</p> <p>v) The reports from the GEF Independent Evaluation Office;</p> <p>vi) The annual reports of the Board of the GCF to the COP on its activities as an operating entity of the FM and other relevant GCF policy and information documents;</p> <p>vii) The reports of the Adaptation Fund Board to the COP serving as the meeting of the Parties to the Kyoto Protocol and the outcomes of the reviews of the Adaptation Fund;</p> <p>viii) The reports of the in-session workshops on long-term finance;</p> <p>ix) The biennial submissions from developed country Parties on their updated strategies and approaches for scaling up climate finance from 2014 to 2020, including any available information on</p>

¹ Decision 3/CP.4, annex; Decision 6/CP.13, annex; Decision 12/CP.22, annex.

² Article 11, paragraph 3 (a) of the Convention.

	<p>p) The extent to which the FM is contributing to the country ownership of programmes and projects.</p>	<p>quantitative and qualitative elements of a pathway;</p> <p>x) The reports of the Least Developed Countries Expert Group (LEG) and the Consultative Group of Experts on National Communications from Parties not included in Annex 1 to the Convention (CGE);</p> <p>xi) Reports and information from relevant bilateral and multilateral funding institutions as well as other intergovernmental and non-governmental organizations, e.g. regarding information on enabling environments for catalysing investment in, and the transfer of, sustainable technologies that enhance resilience to climate change;</p> <p>xii) Technical papers and reports prepared by the secretariat upon the request of the COP, which are relevant to the financial needs of developing countries under the Convention; and</p> <p>xiii) Relevant information available on private-sector financing and investment for climate change activities.</p>
<p>GEF LDCF/SCCF (based on LDCF/SCCF RBM framework³, Annual Monitoring Review of the LDCF/SCCF⁴, Programme Evaluation of the LDCF⁵, Comprehensive Evaluation of the GEF⁶)</p>		
<p>Focus areas</p>	<p>Aspects/Criteria/Indicators</p>	<p>Sources</p>
<p>Portfolio level</p> <p>1. The performance and results of, as well as lessons learned from, the portfolio of projects and programmes financed under the LDCF and the SCCF for the respective fiscal year;</p> <p>2. Information on management effectiveness and efficiency as it relates to the two funds.</p> <p>Programme level</p> <p>1. Progress towards their objectives (including</p>	<p>Project/programme level:</p> <p>a) Core indicators (number of direct beneficiaries disaggregated by gender; area of land under climate-resilient management (ha); number of policies, plans or development frameworks that mainstream climate resilience; number of people trained (with enhanced capacity to identify climate risk and/or engage in adaptation measures), disaggregated by gender);</p> <p>b) Outcome indicators (e.g. Innovative financial instruments and investment models enabled or introduced to enhance climate resilience; Strengthened cross-sectoral mechanisms to mainstream climate adaptation and resilience);</p>	<p>Project/programme level:</p> <p>i. Monitoring data collected, among others, through “Revised tracking tool for climate change adaptation”.⁸</p> <p>Portfolio level:</p> <p>i. Midterm and terminal evaluation reports from projects/programmes;</p> <p>ii. Management documents from LDCF/SCCF and implementing agencies.</p> <p>Programme level:</p> <p>i. Meta-analysis of diverse documents and project</p>

³ GEF/LDCF.SCCF.25/Inf.05.

⁴ GEF/LDCF.SCCF.26/04.

⁵ GEF/LDCF.SCCF.22/ME/02; GEF. Independent Evaluation Office. 2016. Program Evaluation of the Least Developed Countries Fund. Available at <https://www.gefio.org/sites/default/files/ieo/evaluations/files/ldcf-2016.pdf> and GEF. Independent Evaluation Office. 2020. Update of the Program Evaluation of the Least Developed Countries Fund. (forthcoming). Available at <https://www.gefio.org/evaluations/2020-update-program-evaluation-least-developed-countries-fund-ldcf>.

⁶ GEF/E/C.58/02.

⁸ Replacing the previously applied Adaptation Monitoring and Assessment Tool (AMAT)

<p>GEF Strategic Objectives and Pillars);</p> <p>2. Major achievements;</p> <p>3. Lessons learned.</p>	<p>c) Qualitative information (e.g. on the impact of climate risk mainstreaming in policies and plans and on the catalytic impact of LDCF/SCCF support in leveraging finance for scale-up and replication).</p> <p>Portfolio level:</p> <p>d) Focus area 1: in quantitative terms: regional and sectoral distribution of LDCF and SCCF projects under implementation, the performance ratings of LDCF and SCCF projects regarding their progress towards implementation and development outcomes.⁷ In qualitative terms: key success factors, challenges and lessons learned from the active portfolio regarding project performance, private sector engagement, gender mainstreaming and overall stakeholder engagement;</p> <p>e) Focus area 2: project cycle performance (e.g. time between project approval and endorsement) and the management efficiency and effectiveness in terms of, e.g. increase and diversity of contributions made to the funds, cost structure, and visibility of the funds.</p> <p>Programme level: (Example of 2007 review of the SCCF)</p> <p>a) Degree to which the SCCF supported projects have helped reduce vulnerability, built adaptive capacity, integrated adaptation into policies and processes;</p> <p>b) Project alignment with GEF adaptation strategic objectives;</p> <p>c) Degree of projects reaching anticipated adaptation benefits.</p> <p>Fund level:</p> <p>a) Country ownership,</p> <p>b) Specific country and/or thematic allocations,</p> <p>c) Gender equality;</p> <p>d) Complementarity of SCCF/LDCF funds with other funds inside and outside the GEF</p>	<p>reviews from inside and outside of the GEF;</p> <p>ii. Outcomes of its portfolio analysis;</p> <p>iii. Country field visits;</p> <p>iv. Interviews with key stakeholders.</p>
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⁷ Performance ratings related to implementation progress (IP) are based on progress made during a given reporting period, whereas those related to development objectives (DO) are based on the likelihood that a project will achieve its stated objectives by the end of implementation. Depending on the progress made both ratings are classified into Highly Satisfactory (HS), Satisfactory (S), Moderately Satisfactory (MS), Moderately Unsatisfactory (MU), Unsatisfactory (U), Highly Unsatisfactory (HU).

Adaptation Fund (based on Results tracker guidance document and Project Performance Report Template⁹, Annual Performance Reports¹⁰, Portfolio Monitoring Missions¹¹, Overall Evaluation¹²)		
Focus areas	Aspects/Criteria/Indicators	Sources
<p>Project/programme level Two impact-level result areas: 1. Increased adaptive capacity of communities to respond to the impacts of climate change; 2. Increased ecosystem resilience in response to climate change-induced stresses.</p> <p>Portfolio level 1. Areas under the Adaptation Fund Level Effectiveness and Efficiency Results Framework ((i) secure financing, financing mechanisms, and efficiency of use; (ii) project cycle efficiency; (iii) results driven performance; and (iv) accreditation processes) 2. Cross-cutting themes of the medium-term strategy (for the MTS 2018-2022: i) Engaging and empowering the most vulnerable communities and social groups; ii) Advancing gender equality and the empowerment of women and girls; iii) Strengthening long-term institutional and technical capacity for effective adaptation; and iv) Building complementarity and coherence with other climate finance delivery channels.</p> <p>Fund level 1. Institutional design and processes (resource mobilization, decision-making, resource allocation, access to funding, including access modalities, the project/program cycle, knowledge management)</p>	<p>Project/programme level: Annual project/programme performance reports: a) Core indicators ((i) number of beneficiaries (direct and indirect), (ii) number of early warning systems, (iii) assets produced, developed, improved, or strengthened, (iv) increased income, or avoided decrease in income, and (v) natural habitats protected or rehabilitated); b) Outcome indicators (“Relevant threat and hazard information generated and disseminated to stakeholders on a timely basis”; “Capacity of staff to respond to, and mitigate impacts of, climate-related events from targeted institutions increased”; “Percentage of households and communities having more secure access to livelihood assets”, among others); c) Qualitative information and lessons learned on implementation and adaptive management issues (e.g. on the effectiveness of taking into consideration gender issues), on climate resilience measures (e.g. how could effective resilience measures be replicated or scaled-up), on experience with the readiness grants, on knowledge management, on community/national impact of the intervention, on innovative practices or technologies and on complementarity/coherence with other climate finance sources.</p> <p>Mid-term and final evaluations: a) Risk to sustainability of the outcomes; b) Progress towards impacts; c) Processes influencing the achievement of project/programme results (including e.g. preparation and</p>	<p>Project/programme level: Annual project/programme performance reports: i. Monitoring data collected, among others, through the “Adaptation Fund Results tracker¹³ Mid-term and final evaluations: i. Qualitative information obtained through field visits and interviews putting particular emphasis on assessing the perspectives of the various relevant stakeholders and beneficiaries Portfolio level: i. Annual performance and mid-term and final evaluation reports from projects/programmes ii. Portfolio Monitoring Missions Fund level: i. Project performance reports ii. Evaluation reports iii. Stakeholder interviews iv. Focus group discussions v. Evaluation missions vi. Field studies</p>

⁹ <https://www.adaptation-fund.org/projects-programmes/project-performance/>.

¹⁰ <https://www.adaptation-fund.org/?s=annual+performance+report>.

¹¹ <https://www.adaptation-fund.org/document/lessons-learned-successful-approaches-captured-portfolio-monitoring-missions/>.

¹² https://www.adaptation-fund.org/wp-content/uploads/2015/09/AFB.EFC_17.3-Evaluation-of-the-Fund-stage-II.pdf and https://www.adaptation-fund.org/wp-content/uploads/2018/03/AFB.EFC_22.9_Evaluation-of-the-Fund-Phase-II.pdf.

¹³ Available at <https://www.adaptation-fund.org/projects-programmes/project-performance/>.

<p>2. Long-term outcomes and impacts of the AF's interventions (technical, institutional and financial results)</p>	<p>readiness, country ownership, stakeholder involvement);</p> <p>d) Contribution of project/programme achievements to the AF targets, objectives, impact and goal, including report on AF core indicators.</p> <p>Portfolio level:</p> <p>a) Aggregated core indicators</p> <p>b) Qualitative information regarding MTS cross-cutting themes</p> <p>c) Functioning and interaction among various stakeholders;</p> <p>d) Project scalability,</p> <p>e) Practices to empower vulnerable groups;</p> <p>f) Gender responsive interventions;</p> <p>g) Innovative adaptation approaches.</p> <p>Fund level:</p> <p>Focus area 1: Degree to which</p> <p>a) Actual outputs meet expectations;</p> <p>b) Institutions and committees have fulfilled their specific roles in support of the Fund processes;</p> <p>c) Fund guidelines, standards and safeguards have achieved or are likely to achieve their objectives (e.g. gender, reaching especially vulnerable social groups).</p> <p>Focus area 2:</p> <p>a) Progress towards AF core indicators and project indicators as well as factors contributing to progress/results;</p> <p>b) Different indicators on the effectiveness of the direct access modality;</p> <p>c) Environment and social safeguards standards and application processes;</p> <p>d) Different indicators on the extent to which the AF's projects and programmes supported beneficiary countries in reaching their national adaptation plans (NAPs) or NDCs;</p> <p>e) Different indicators on the added value the AF has had on implementing concrete adaptation projects/programmes in the</p>	
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	<p>beneficiary countries (e.g. options for scaling up, capacity development, policy reform, partnerships);</p> <p>f) Different indicators on the effectiveness of the readiness programme in delivering concrete adaptation activities,</p> <p>g) Different indicators regarding knowledge management of the Fund, including on gathering and disseminating lessons learned and monitoring and evaluation;</p> <p>h) Types of transformational changes (e.g. national policies, laws, reforms, scaling up of adaptation);,</p> <p>i) The way lessons on the effectiveness of the Fund's processes can be used to inform future readiness programmes.</p>	
<p>Pilot Programme for Climate Resilience (based on PPCR Monitoring and Reporting Toolkit¹⁴, CIF's Evaluation & Learning Initiative¹⁵)</p>		
Focus areas	Aspects/Criteria/Indicators	Sources
<p>National (SPCR) level</p> <p>1. SPCR performance and impact</p> <p>Programme/portfolio level</p> <p>1. Cumulative achievements of the PPCR portfolio;</p> <p>2. PPCR management effectiveness</p> <p>Fund (CIF) level</p> <p>1. Transformational change</p> <p>2. Development impacts of climate finance and just transitions</p> <p>3. Mobilizing private sector through concessional finance</p> <p>4. Local stakeholder engagement and benefit</p>	<p>National (SPCR) level</p> <p>Core indicators:</p> <p>1. Degree of integration of climate change in national, including sector, planning (national level);</p> <p>2. Evidence of strengthened government capacity and coordination mechanism to mainstream climate resilience (national level);</p> <p>3. Quality and extent to which climate responsive instruments/investment models are developed and tested (optional, if information is sufficiently captured under indicator 4) (project level, aggregated at national level);</p> <p>4. Extent to which vulnerable households, communities, businesses, and public-sector services use improved PPCR-supported tools, instruments, strategies, and activities to respond to climate variability or climate change (project-level, aggregated at national level);</p> <p>5. Number of people supported by PPCR to cope with the effects of climate change (project-level, aggregated at national level).</p>	<p>National (SPCR) level</p> <p>i. Data and information from PPCR national focal point</p> <p>ii. Data and information from individual project managers</p> <p>iii. Data from MDB monitoring</p> <p>Programme/portfolio level:</p> <p>i. Country reporting from all PPCR countries</p> <p>ii. MDB reporting</p> <p>iii. PPCR management documents</p> <p>Fund (CIF) level</p> <p>i. PPCR programme documents</p> <p>ii. Interviews</p> <p>iii. Surveys</p> <p>iv. Field visits</p>

¹⁴ CIF. 2018. PPCR Monitoring and Reporting Toolkit. Available at: https://www.climateinvestmentfunds.org/cif_enc/sites/cif_enc/files/knowledge-documents/ppcr_en_monitoringreporting_toolkit.pdf and the website of the CIF's Evaluation & Learning Initiative (https://www.climateinvestmentfunds.org/cif_enc/evaluation-and-learning).

¹⁴ <https://www.climateinvestmentfunds.org/topics/climate-resilience>.

¹⁵ <https://www.climateinvestmentfunds.org/evaluation-and-learning>.

<p>5. Programmatic and sectoral studies</p>	<p>Programme/portfolio level</p> <ol style="list-style-type: none"> 1. Resource availability; 2. Pipeline management and disbursements; 3. Activities regarding knowledge management, including the sharing of lessons and outcomes through e.g. the CIF's Evaluation and Learning (E&L) Initiative; 4. Gender issues. <p>Fund (CIF) level</p> <ol style="list-style-type: none"> 1. Focus area 1: how PPCR activities have yielded systemic and thus transformational changes in the pilot countries, including through scaling-up and ensuring the sustainability of PPCR outcomes; 2. Focus area 2: how PPCR activities contribute to household climate resilience in vulnerable countries; 3. Focus area 3: how microfinance has enabled resilience-building under the PPCR; 4. Focus area 4: how local stakeholders had been directly and meaningfully engaged in resource planning as well as in reviewing data on project implementation and reporting; 5. Focus area 5: the way the CIF's programmatic approach has contributed to resilience-building in PPCR countries. 	
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Annex II: Set of performance indicators for the technology transfer framework

1. The Expert Group on Technology Transfer (EGTT) initially identified the following set of 40 indicators to measure the effectiveness of the implementation of the technology transfer framework. The indicators have been grouped under the five key themes of the framework; the sixth group would be used to assess trends in financial flows for technology transfer.

1. Technology needs and needs assessments

- a) Amount of financial resources provided for the TNA process
- b) Number of programmes/projects for capacity-building on TNAs in non-Annex I Parties (including percentage of least developed countries)
- c) Number of targeted non-Annex I Parties to build capacity on TNAs (including percentage of least developed countries)
- d) Number of published TNAs completed or updated by non-Annex I Parties
- e) Synthesis report on technology needs made available by the secretariat and considered by the subsidiary bodies
- f) Number of technology programmes/projects from TNAs implemented by non-Annex I Parties

2. Technology information

- a) Number of training programmes and workshops for building capacity in technology information
- b) Number of national communications with information on technology transfer activities
- c) Synthesis report with information on maintaining, updating and developing TT:CLEAR, addressing gaps and user needs made available by the secretariat and considered by the subsidiary bodies
- d) Number of technology information centres and networks connected to TT:CLEAR
- e) Number of users of TT:CLEAR from developing countries

3. Enabling environments

- a) Performance against each of the six World Bank governance indicators
- b) Total volume of joint R&D opportunities for ESTs provided by (primarily developed country) governments
- c) Presence of clear policy guidelines for the recipients of public funding on how to move from the research stage to the commercialization stage of the technology transfer process
- d) Number of bilateral and multilateral programmes that have helped developing countries in developing and implementing regulations that promote the use and transfer of and access to ESTs
- e) Presence of tax preferences and incentives for imports/exports of ESTs
- f) Volume of export credits to encourage the transfer of ESTs
- g) Whether mention of transfer of ESTs is made in national sustainable development strategies
- h) Rating of investment climate according to World Bank business indicators
- i) Proportion of budget for public procurement of ESTs
- j) Degree of disclosure and transparency regarding the approval processes of technology transfer projects

- k) Number of technical studies that explore barriers, good practices and recommendations for enhancing enabling environments
- l) Percentage of partnerships with thematic foci on climate change and sustainable development with meaningful participation by developing country Parties

4. Capacity-building

- a) Amount of financial resources provided for capacity-building in the development and transfer of technology
- b) Synthesis report on national capacity needs and priorities for capacity-building for development and transfer of technologies in line with the technology transfer framework
- c) Number of participants/experts in training programmes on the development and transfer of technologies, in particular on EST-related activities
- d) Number of new and existing national and regional institutions operating as centres of excellence in the development and transfer of technology

5. Mechanisms for technology transfer

- a) Number and volume of reported innovative public-private financing mechanisms and instruments
- b) Report on possible ways to enhance cooperation between the Convention and other multilateral environmental agreements
- c) Report on references made in national communications to objectives of other multilateral environmental agreements
- d) Number of reported barriers to, and good experiences in, the development of endogenous technologies
- e) Report with guidance for reporting on joint R&D needs

6. Indicators for financial flows

- a) Total annual global investment and financial flows in climate change mitigation technologies
- b) Total annual global investment and financial flows in climate change adaptation technologies
- c) Total annual investment and financial flows in climate change technologies – Convention financial mechanism
- d) Total annual investment and financial flows in climate change technologies – Kyoto Protocol flexibility mechanisms
- e) Total annual investment and financial flows in climate change technologies – bilateral sources
- f) Total annual investment and financial flows in climate change technologies – national sources
- g) Total annual investment and financial flows in climate change technologies – multilateral sources
- h) Total annual investment and financial flows in climate change technologies – private sources.

Annex 3: Review of the effectiveness of capacity-building support for adaptation under the Convention– focus areas, criteria and sources

Framework for capacity-building in developing countries (based on PPCR Monitoring and Reporting Toolkit¹⁶, CIF's Evaluation & Learning Initiative¹⁷		
Focus areas	Aspects/Criteria/Indicators	Sources
<p>1. Institutional capacity building, including the strengthening or establishment, as appropriate, of national climate change secretariats or national focal points;</p> <p>2. Enhancement and/or creation of an enabling environment;</p> <p>3. National communications;</p> <p>4. National climate change programmes;</p> <p>5. Vulnerability and adaptation assessment;</p> <p>6. Capacity building for implementation of adaptation measures;</p> <p>7. Research and systematic observation, including meteorological, hydrological and climatological services;</p> <p>8. Development and transfer of technology;</p> <p>9. Improved decision-making, including assistance for participation in</p>	<p>a) Descriptions of capacity-building programmes and activities;</p> <p>b) Distribution of support provided for the three levels of CB – systemic (enabling environments such as economic and regulatory policies), institutional, and individual;</p> <p>c) Identification of needs, including emerging needs (those that had not been included in the list of priority areas and needs contained in the original CB framework), and gaps and an assessment of factors that influence the effectiveness of capacity-building activities in developing countries;</p> <p>d) Degree to which the areas of the CB framework align with current CB needs identified by developing countries;</p> <p>e) Degree to which Annex II Parties and other providers of support have covered the priority issues identified in the CB framework and by individual countries;</p> <p>f) Level of satisfaction with the usefulness of support provided by donors for the CB activities;</p>	<p>i. Submissions from Parties;</p> <p>ii. Findings of previous comprehensive reviews of the framework;</p> <p>iii. Annual synthesis reports on the implementation of framework prepared by the secretariat in accordance with the steps for the regular monitoring and evaluation of capacity-building work as contained in decisions 4/CP.12 and 6/CMP.2;</p> <p>iv. Relevant national reports (national communications, biennial reports, biennial update reports, NAPAs, NAPs, and national capacity self-assessments, TNAs);</p> <p>v. Reports and submissions from the GEF and its implementing agencies, UN entities, bilateral and multilateral development agencies and other relevant organizations;</p> <p>vi. Information contained in the capacity-building portal;</p> <p>vii. Summary reports on the meetings of the Durban Forum or on other relevant meetings and workshops organized in support of the review processes;</p> <p>viii. Reports of relevant bodies established under the</p>

¹⁶ CIF. 2018. PPCR Monitoring and Reporting Toolkit. Available at: https://www.climateinvestmentfunds.org/cif_enc/sites/cif_enc/files/knowledge-documents/ppcr_en_monitoringreporting_toolkit.pdf and the website of the CIF's Evaluation & Learning Initiative (https://www.climateinvestmentfunds.org/cif_enc/evaluation-and-learning).

¹⁶ <https://www.climateinvestmentfunds.org/topics/climate-resilience>.

¹⁷ <https://www.climateinvestmentfunds.org/evaluation-and-learning>.

<p>international negotiations;</p> <p>10. Needs arising out of the implementation of Article 4, paragraphs 8 and 9, of the Convention;</p> <p>11. Education, training and public awareness; Information and networking, including the establishment of databases.</p>	<p>g) CB provided in relation to technology development and transfer;</p> <p>h) CB provided regarding specific adaptation activities;</p> <p>i) Qualitative description and examples of the immediate, measurable and direct consequences of CB activities and projects at the three CB levels and remaining needs;</p> <p>j) Impacts (long-term effects) of the activities;</p> <p>k) Sustainability of climate change CB results, taking into account the three building blocks “enabling environment”, “institutional arrangements” and “human resources” as well as stakeholder involvement (information on the extent and variety of stakeholders within developing countries (governmental and non-governmental organizations, the private sector, community organizations, etc.) involved in, and benefiting from, capacity-building activities);</p> <p>l) The availability of and access to financial resources and the effectiveness and efficiency of their deployment (e.g. donor coordination, dissemination of lessons and information);</p> <p>m) Recommendations for the further implementation of the capacity-building framework;</p> <p>n) Assessment of the different baselines and performance indicators for capacity-building.</p>	<p>Convention and its Kyoto Protocol;</p> <p>ix. Interviews, surveys and focused discussions with national focal points for Article 6 of the Convention and other relevant national focal points;</p> <p>x. Other relevant existing documents prepared by the secretariat.</p>
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Annex 4: Key factors that contribute to effective climate change capacity-building which should be taken into account in the further implementation of decision 2/CP.7 (decision 2/CP.10)

1. The following are key factors that should be taken into account and could assist in the further implementation of decision 2/CP.7:
 - a) To make institutional capacity-building a priority for the creation and strengthening of basic institutional infrastructure;
 - b) To raise awareness at various levels on climate change issues and increase the involvement of national governmental organizations in capacity-building activities;
 - c) To develop and, where appropriate, promote exchange of best practices, experiences and information on capacity-building activities undertaken by various Parties, including financial resources, case studies and tools for capacity-building;
 - d) To ensure effectiveness of capacity-building activities so that:
 - i) They enhance the ability of developing country Parties to implement the Convention and to participate effectively in the Kyoto Protocol process;
 - ii) Initial and subsequent national communications and national adaptation programmes of action provide a good measure of successful capacity-building as it relates to the implementation of the Convention;
 - iii) Capacity-building is integrated as a priority by policymakers and decision makers;
 - iv) Long-term sustainability of capacity-building activities is achieved through integration in planning processes.
 - e) To make financial and technical resources available, through an operating entity of the financial mechanism and, as appropriate, through multilateral and bilateral agencies and the private sector, to assist developing countries, in particular the least developed countries and small island developing States among them, in the implementation of this framework;
 - f) To further apply learning-by-doing approaches for capacity-building by supporting various types of capacity-building activities, projects and programmes at the national and local levels;
 - g) To continue to improve international donor coordination in the provision of financial resources and to harmonize donor support in alignment with national priorities, plans and strategies;
 - h) To ensure that resources are made available for the implementation of capacity-building activities;
 - i) To strengthen institutional arrangements at the national level to coordinate implementation consistent with decision 2/CP.7 as a way of promoting integration of climate change issues into the national planning processes so as to increase the effectiveness and sustainability of outcomes.

Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
01.0	7 November 2020	AC18/LEG38 This document (AC-LEG/INFO/1) has been prepared for consideration and further guidance by the AC and the LEG.
Draft	7 August 2020	Post AC17/LEG37 The AC and the LEG agreed to continue the work on this issue for later consideration.
n/a	13 September 2017	Post AC11/LEG31 The AC and the LEG, in collaboration with the SCF, considered the draft recommendations presented on AC-LEG/2017/3 section 5 (page 10) and forwarded them to the CMA1 for endorsement.
n/a	3 March 2017	AC11/LEG31 The AC and the LEG, in collaboration with the SCF, considered draft options to address decision 1/CP.21, para. 45(b) presented on AC-LEG/2017/1 section 5 (page 20) and decided to continue refining them.
n/a	5 October 2016	AC10/LEG30 The AC and the LEG, in collaboration with the SCF, considered the desk review presented on AC-LEG/2016/2 and decided to prepare a synthesis of submissions in a desk review.

Keywords: Paris outcome, Adaptation, Resilience, LEG, Adaptation Committee, activities implemented jointly,
