



CFAS Climate Finance
Advisory Service

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Determining the Needs of Developing Countries to Implement the Paris Agreement and the Convention

1 Introduction and background

1.1 Rationale

The current climate change challenge exceeds by far the capacity of many developing countries to respond to its impacts and address the sustainable development needs of their communities. It is unlikely that developing countries can address the impacts of climate change with their domestic resources only. Scaling-up both financial and non-financial international support to enable the capacities and abilities of developing countries to facing the consequences of climate change and to mitigating greenhouse gas (GHG) emissions is urgent. That is why the Paris Agreement (PA) reaffirms the obligation for developed countries to assist developing countries, and further encourages non-developing country Parties to present biennially transparent and consistent information on support for developing countries provided and mobilized through public interventions. The PA further requests developing countries to provide information on financial, technology transfer and capacity building support needed and received¹.

These provisions represent an important step in the context of supporting the important roles that developing countries are expected to play for implementing the objectives of the United Nations Framework Convention on Climate Change (UNFCCC) and those of the PA. In fact, the Convention and the Agreement recognize that the information provided by developing countries is necessary to identify the financial, policy, knowledge, technological and capacity gaps that can be addressed in order to support their role in a meaningful manner.

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¹ UNFCCC (2015): Paris Agreement, Article 13, para 9

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Recognising these gaps, developed countries have committed to support developing countries' efforts by providing them with the necessary finance, knowledge, technology development and transfer, assistance on policy reform as well as capacity building. To meet such an important commitment, a first step is, therefore, to determine the needs of developing country Parties in order to analyse them with the view to strengthen their role and make it consistent with the objectives of the Convention and PA.

1.2 COP24 mandate

The Standing Committee on Finance (SCF) was established in 2010 to assist the UNFCCC's Conference of the Parties (COP) in exercising its functions in relation to the Financial Mechanism of the Convention. Its mandate involves inter alia improving coherence and coordination in the delivery of climate change financing, rationalization of the Financial Mechanism, mobilization of financial resources, and measurement, reporting and verification of support provided to developing country Parties. At its twenty-fourth session in 2018, the COP requested the SCF to prepare a report on the determination of the needs of developing country Parties related to implementing the UNFCCC and the Paris Agreement, every four years². In response to that and given that the first report will be considered by the COP at its twenty-sixth meeting and by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA) at its third session, in November 2020 in Glasgow, United Kingdom, the SCF has already initiated preparatory work on the matter since its twentieth meeting in March 2019. On 10–11 July 2019, the Committee held an expert meeting on assessing and determining the needs of developing countries in Manila, Philippines, which brought together about 70 experts and other relevant stakeholders involved in that exercise at the national, regional and global levels.

² Decision 4/CP.24, paragraph 13

The outcomes of the meeting, which explored ways and means to assist developing countries in assessing their climate finance needs and priorities based on available quantitative and qualitative information among others, may inform the work of the SCF in preparing the 2020 report on the determination of the needs. Some outreach activities have been conducted with the operating entities of the Financial Mechanism, the subsidiary and constituted bodies, relevant multilateral and bilateral channels, as well as observer organizations. The Committee agreed at its twenty-first meeting on an outline of the 2020 report on the determination of the needs, informed by a background paper prepared by the UNFCCC Secretariat on the sources of information and the methodologies and approaches that can guide this work. A work plan was additionally adopted, including further outreach activities to be conducted. Moreover, the SCF just launched in November 2019 a call for evidence on information and data for the preparation of the 2020 report, in accordance with the approved outline. The Committee will present the report of its twenty-first meeting at the twenty-fifth session of the COP in December, where Parties to the Convention and the CMA are expected to take the next crucial steps towards making the PA goals a reality. The report will outline work and activities undertaken by the SCF, including progress around the preparation of the 2020 report on the determination of the needs of developing countries.

1.3 Previous work streams under the UNFCCC

Besides what the SCF has recently started, previous work was already conducted to assessing and determining the needs of developing countries to implement the Convention and the PA. These previous work streams under the UNFCCC have started well before the COP requested the Committee to prepare a report on the matter, and they have also included the identification of developing countries' priorities in this regard.

In its consideration of the fourth review of the Financial Mechanism, the Subsidiary Body of Implementation (SBI), requested at its twenty-eight session in 2008 the Secretariat to provide, upon request, information to non-Annex I Parties³ on the assessment of financing needs to implement mitigation and adaptation measures. In fulfilling that mandate, the Secretariat designed and implemented the National Economic, Environment and Development Study (NEEDS) for Climate Change Project⁴. Eleven developing countries⁵ availed themselves of the support provided by the Secretariat to conduct financial needs assessments for mitigation and adaptation. The project delivered eleven country study reports, an initial summary report, as well as a synthesis report, which were considered by the SBI at its thirty-third session. The project has applied a bottom-up, country-driven approach with regard to the methodologies used for assessing the financial needs for implementing climate change measures. Promoting a country-driven process has facilitated national consensus on adaptation and mitigation priorities, but that approach also resulted in significant variations in overall findings across the different country studies. This is also explained by the use of national circumstances, GHG inventories, and vulnerability and adaptation assessments by the project to select countries. However, relevant findings were collected, including on countries reporting on the need to develop comprehensive multi-sectoral national adaptation action plans, with the participation and engagement of the relevant institutions and stakeholders. Many of the countries also noted that the implementation of climate change policies depends on the availability of funds from multilateral, bilateral and national channels as well as from the private sector.

In a decision about long-term climate finance adopted at its twenty-third session in 2017, the COP requested⁶ the Secretariat, in collaboration with the operating entities of the Financial Mechanism, United Nations agencies and bilateral, regional and other multilateral

3 Non-Annex I Parties are developing country Parties under the Convention.

4 More information on the NEEDS Project is available at: <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>

5 Costa Rica, Egypt, Ghana, Indonesia, Jordan, Lebanon, Maldives, Mali, Nigeria, Philippines, and Pakistan

6 Decision 6/CP.23, paragraph 10, <https://unfccc.int/sites/default/files/resource/docs/2017/cop23/eng/11a01.pdf?download#page=23>

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. As a response, the Secretariat has developed the Needs-based Finance (NBF)⁷ Project, which aimed to facilitate the mobilization of climate finance to support the needs identified by developing countries with regard to the implementation of priority mitigation and adaptation actions, in accordance with the goals outlined in their Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs) and other relevant policies or strategies. With an initial focus on promoting and utilizing synergies and collaborations with other mandates and processes under the Convention and the PA to avoid duplicating efforts, the project builds on and complements existing climate finance related work of other actors in partner countries across Latin America and the Caribbean, Africa, Asia and the Pacific. In these pilot partner countries, the Secretariat aims to use its expertise and convening power to assist them in the project through a country-driven process as promoted by the national and regional NBF projects. Some first outcomes of the project include technical workshops on needs-based climate finance and strategy events been held across the regions, as well as several outreach activities. Additionally, a Capacity-building Hub has been established under the project to foster dialogue, coordination, collaboration and coherence among all relevant stakeholders, within and outside of the Convention, with a view to promoting and exploring synergies to boost action on climate change.

Further work stream has taken place in relation with the enhanced transparency framework, which was established under Article 13 of the PA. Subsequently, in the Katowice Climate Package (KCP) adopted in 2018, the CMA determined⁸ the modalities, procedures and guidelines (MPGs) on what to report in compliance with the enhanced transparency framework for action and

support under Articles 9, 10 and 11 of the PA. These MPGs include the provision on reporting of information on financial, technology development and transfer and capacity-building support needed and received by developing countries. They should, therefore, provide information on national circumstances and institutional arrangements relevant to reporting on support needed and received, including description of the systems and processes used to identify, track and report support needed and received, as well as a description of the challenges and limitations, and information on country priorities and strategies and on any aspects of the country's NDC under Article 4 of the PA that need support. Currently, and until COP26, Parties are mandated to develop common tabular formats (CTF)⁹ through which they shall report as part of the biennial transparency framework, taking into account the existing CTF and common reporting formats. The expected CTF should inter alia provide reporting on financial support needed by developing countries, but also on technology transfer and capacity building. Parties should submit their first biennial transparency report no later than December 2024. While neither the PA nor the KCP have established an immediate link between the reporting on support needs and the needs determination, it provides the potential for developing countries' reporting to inform the second and subsequent of the reports on the determination of their needs.

1.4 Needs as referenced in the Convention, the Paris Agreement and the Katowice Climate Package

The necessity for assessing and identifying the needs of developing countries has been frequently referenced to in the Convention and its related decisions and agreements, such as the Paris Agreement and the Katowice Climate Package. While it is clear that determining those needs should be consistent with the roles and capabilities that developing countries are expected to play in implementing the Convention and the PA, the existing

⁷ More information on the NBF Project is available at: <https://unfccc.int/NBF%20Project>

⁸ Decision 18/CMA.1, https://unfccc.int/sites/default/files/resource/cma2018_3_add2_new_advance.pdf?download#page=41

⁹ CFAS has published a policy brief on the development of the CTF, available at: https://cfas.info/sites/default/files/anhang/CFAS%20Policy%20Brief%202019_CTF_1.pdf

references vary in terms of types of needs that can be identified and determined. This includes for instance financial needs, technology development and transfer, capacity building support, information and data, as well as needs related to the adaptive capacity of the most vulnerable populations.

Article 3 of the Convention states that a full consideration should be given to the specific needs and special circumstances of developing countries, especially those that are particularly vulnerable to the adverse effects of climate change, and those Parties, especially developing countries, that would have to bear a disproportionate or abnormal burden under the UNFCCC. The Convention additionally encourages all Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, are additionally to promote and cooperate in the development, application and diffusion, including transfer of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases not controlled by the Montreal Protocol in all relevant sectors, including the energy, transport, industry, agriculture, forestry and waste management sectors. The specific needs and special circumstances of developing countries are subsequently recognized by the Katowice decisions, which note with concern the current, urgent and emerging needs related to extreme weather events and slow onset events in developing countries that are particularly vulnerable to the adverse effects of climate change.

In terms of needs for adaptive capacity of developing countries, Article 4 of the Convention calls upon developed countries to assist developing countries that are particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to those adverse effects. The PA reiterates that call by encouraging in its article 7, Parties to strengthen their cooperation on enhancing action on adaptation, taking into account the Cancún Adaptation Framework, including with regard to assisting developing countries in identifying effective

adaptation practices, adaptation needs, priorities, support provided and received for adaptation actions and efforts, and challenges and gaps, in a manner consistent with encouraging good practices. Similarly, Parties further recognize that adaptation is a global challenge faced by all with local, subnational, national, regional and international dimensions and that it is a key component of and makes a contribution to the long-term global response to climate change to protect people, livelihoods and ecosystems, taking into account the urgent and immediate needs of those developing countries that are particularly vulnerable to the adverse effects of climate change. The KCP urges developed countries to continue their efforts to channel a substantial share of public climate funds to adaptation activities and to strive to achieve a greater balance between finance for mitigation and for adaptation, recognizing the importance of adaptation finance and the need for public and grant-based resources for adaptation. The Katowice decisions equally invites relevant institutions under the Convention and non-Party stakeholders to strengthen support (financial, technical, technological and capacity-building) for adaptation planning, including for collecting climate data and information, noting the urgent need for adaptation action to address current and short- and long-term risks of climate change.

To address the adaptation funding needs of developing countries, the Adaptation Committee (AC) collaborates with the SCF. In addressing existing capacity gaps of developing countries to access adaptation funding, and as requested by the COP at its twenty-fourth meeting, the AC is developing by June 2020 and to be regularly updated, in collaboration with the Least Developed Countries (LDCs) Expert Group and other relevant stakeholders, an inventory of 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 portal¹⁰. In order to provide guidance with a view to enhancing capacity-building for adaptation action, the Committee recently invited

10 AC website, https://unfccc.int/sites/default/files/resource/AC%2016%20needs%20assessment%20inventory_2019.08.15.pdf

Parties and non-Party stakeholders to submit their views on the issue and on their successes and challenges in building in-country capacity¹¹. The AC aims to prepare an information document which will reflect inter alia what capacity-building needs, including new and emerging ones, developing countries experience in accessing adaptation finance, how those capacity gaps can best be addressed, and what the remaining challenges are. In this respect, the Convention, the PA as well as the KCP recognize that developing countries have specific needs for adaptation and should be supported by other Parties to implement the objectives stated under the Convention and the Paris Agreement.

With regard to capacity-building needs, the Convention's article 5 takes into account the particular concerns and needs of developing countries and encourages cooperation in improving their endogenous capacities and capabilities to participate in efforts to achieve the Convention's objectives. Furthermore, the PA emphasizes in article 11 that capacity-building should enhance the capacity and ability of developing countries, in particular countries with the least capacity, such as the LDCs, and those that are particularly vulnerable to the adverse effects of climate change, such as Small Island Developing States (SIDS), to take effective climate change action, including, inter alia, to implement adaptation and mitigation actions, and should facilitate technology development, dissemination and deployment, access to climate finance, relevant aspects of education, training and public awareness, and the transparent, timely and accurate communication of information. The PA urges all Parties to cooperate to enhance the capacity of developing countries to implement its objectives, and calls upon developed countries to enhance support for capacity-building actions in developing countries, including through regional, bilateral and multilateral approaches. In addition, the KCP recognizes the urgent need to enhance the provision of finance, technology and capacity-building support by developed countries, in a predictable manner, to enable enhanced action by developing countries. It further encourages developing

countries, building on progress made so far and ongoing work, to consider, as appropriate, enhancing their reporting on the underlying assumptions, definitions and methodologies used in generating information on financial, technical and capacity-building needs and support received.

References to the financial needs of developing countries are recurrent in the Convention, the PA and the KCP. On one hand, the UNFCCC's Article 4.3 stipulates that developed country Parties shall provide new and additional financial resources to meet the agreed full costs incurred by developing countries in complying with their obligations under the Convention, and that they shall also provide such financial resources, including for the transfer of technology, needed by the developing countries to meet the agreed full incremental costs of implementing measures. The implementation of these commitments shall take into account the need for adequacy and predictability in the flow of funds and the importance of appropriate burden sharing among developed countries. On the other hand, the KCP urges developed countries to continue to scale up mobilized climate finance, recalling their commitment in the context of meaningful mitigation actions and transparency on implementation, to a goal of mobilizing jointly USD100 billion per year by 2020 to address the needs of developing countries. The KCP also recognizes that information on how Parties are aiming to ensure a balance between adaptation and mitigation, taking into account the country-driven strategies and the needs and priorities of developing countries, especially those that are particularly vulnerable to the adverse effects of climate change and have significant capacity constraints, such as LDCs and SIDS, considering the need for public and grant-based resources for adaptation.

Furthermore, Article 9.1. of the PA calls for developed countries to provide financial resources to assist developing countries with respect to both mitigation and adaptation in continuation of their existing obligations under the Convention. In line with the long-term climate

11 Call for submission, <https://unfccc.int/topics/adaptation-and-resilience/groups-committees/adaptation-committee/adaptation-committee-call-for-submissions-on-parties-capacity-gaps-in-accessing-adaptation-funding>

finance goals and as part of a global effort, developed countries are encouraged to continue to take the lead in mobilizing climate finance from a wide variety of sources, instruments and channels, noting the significant role of public funds, through a variety of actions, including supporting country-driven strategies, and taking into account the needs and priorities of developing countries. In article 10.6., the PA requests support, including financial support, to be provided to developing countries, including for strengthening cooperative action on technology development and transfer at different stages of the technology cycle, with a view to achieving a balance between support for mitigation and adaptation. This is emphasized by article 9.4., which states that the provision of scaled-up financial resources should aim to achieve a balance between adaptation and mitigation, taking into account country-driven strategies, and the priorities and needs of developing countries, especially those that are particularly vulnerable to the adverse effects of climate change and have significant capacity constraints.

2 Determining the needs of developing countries

Following the discussion above, this second chapter aims to provide information on how needs of developing countries are determined and articulated.

Over the past decades, Parties under the Convention have continuously articulated their support needs for finance, capacity building or technology. Though, with numerous formats and different scopes, the spectrum of needs determination is far from being standardized, which makes comparisons difficult, in particular as oftentimes hardly any information is provided on how such finance needs are derived methodologically. Needs are identified for mitigation actions, adaptation measures and technology support, for individual activities, programmes, sectors or entire economies. There is also an emerging discussion about needs arising from the losses and damages occurring despite and in the absence of adaptation measures, underpinned also by reports of the Intergovernmental Panel on

Climate Change (IPCC), which clearly show that a significant level of impacts can no longer be avoided. The various formats and channels used include reporting under the UNFCCC MRV framework through National Communications (NCs) and Biennial Update Reports (BURs). Also, NAPs or Technology Needs Assessments (TNAs) provide information on the needs of countries for specific purposes or scopes. Aggregated information on the needs required to respond to climate change may be provided in comprehensive strategies for whole sectors or entire economies such as Low Emission Development Strategies (LEDS) or NDCs. Needs are also identified on the activity level through individual programmes and projects, for instance, Nationally Appropriate Mitigation Actions (NAMAs) or activities proposed under Climate Funds such as the Global Environment Facility (GEF) or the Green Climate Fund (GCF).

Under the UNFCCC, attempts to determine needs of developing countries exist. For instance, the NEEDS project and the NBF project (see above) envisaged providing information on the assessment of financing needs of non-Annex I Parties to implement mitigation and adaptation measures.

Besides the needs articulation that originates directly from documentation provided by countries, there are also numerous sources that provide approaches for calculating the needs of developing countries in responding to climate change. At the global level, multilateral agencies, international organizations and research institutions conduct needs assessments based on cost estimates as identified by countries in their national reports as well as global-level model estimates, with different focus topics such as sectors, purposes or regions.

2.1 Different dimensions of responding to needs

The response to developing country needs on climate change induced challenges can be clustered into different means, such as financial support, technology support and capacity building. Distinguishing these categories can help in developing an approach that allows for better comparison across countries.

Financial support needs

In developing countries, “Climate-related risks to health, livelihoods, food security, water supply, human security, and economic growth are projected to increase with global warming of 1.5°C and increase further with 2°C”¹². SIDS and LDCs are expected to experience high multiple interrelated climate risks even at global warming of 1.5°C. Failure to take early adaptation actions in these countries will have a disproportionate impact, thus widening the current adaptation gap. This situation clearly highlights that these countries need additional finance to tackle climate related problems, for instance for setting up attractive financial vehicles, for investments in built environment or technology, for initiating required policy reforms, or for capacity building measures. In order to achieve sustainable development through low carbon and climate resilient development pathways,

developing countries have been using diverse financial instruments to meet the financial deficit, including grants, loans, concessional loans, guarantees and green bonds, as well as carbon markets. Also, insurances have become an important instrument to minimize climate induced risks and vulnerability. In general, countries choose the best available instruments that suit their economic circumstances and specific climate challenges. For instance, countries like the SIDS and LDCs continue to demand grants for climate actions especially in the context of adaptation and loss and damage. What is important concerning the identification of financial needs is a transparent and clear methodological approach, which for instance distinguishes between pure investment costs of activities and the respective support needs (see Box 1).

¹² IPCC, 2018: Summary for Policymakers, Global Warming of 1.5°C: An IPCC Special Report. See https://www.ipcc.ch/site/assets/uploads/sites/2/2019/05/SR15_TS_High_Res.pdf

BOX 1: Discussion - Investment costs versus needs

As many estimates of needs, costs, and investments are available, it is important to clarify what exactly is being discussed. For example, the IPCC's Special Report on 1.5 °C provides an overview of energy-related estimates in terms of additional investments compared to total energy supply investments:

“Additional annual average energy-related investments for the period 2016 to 2050 in pathways limiting warming to 1.5°C compared to pathways without new climate policies beyond those in place today are estimated to be around 830 billion USD₂₀₁₀ (range of 150 billion to 1,700 billion USD₂₀₁₀ across six models 17). This compares to total annual average energy supply investments in 1.5°C pathways of 1,460 to 3,510 billion USD₂₀₁₀ and total annual average energy demand investments of 640 to 910 billion USD₂₀₁₀ for the period 2016 to 2050. Total energy-related investments increase by about 12% (range of 3% to 24%) in 1.5°C pathways relative to 2°C pathways.”*¹

Thus, there is a significant difference by the way investments are presented, either overall investments or those assumed to be needed in addition. Furthermore, it is important to note that these cost scenarios usually fail to have a holistic perspective, that means they lack an integration of societal co-benefits which may result in lower other costs (both in terms of reduced climate change impacts as

well as synergies with objectives like reduced air pollution). Then, they can also not just be translated into needs by recipient countries, which would be possibly covered through international climate finance support, one area which needs to be informed from the intended needs assessments. Some of those additional investments might be covered through project-specific support, but others will happen by governments setting policy frameworks without necessarily always providing specific funding for such investments.

However, also those cost estimates cannot be directly translated into for example climate finance support needs from the international community (specifically developed countries with climate finance support obligations), as there is no realistic expectation that ALL climate related costs in ALL developing countries (including relatively advanced ones) would be covered by international climate finance. This is not only unlikely to happen because of the size of the costs, but also because countries will not get around taking action on their own in addition to that support through bilateral and multilateral finance – a fact that is reflected in many NDC's or NAMAs, for example. And addressing and reducing some costs can also happen through wise and smart planning for example by government institutions, and are not only dependent on investing finance.

*1 IPCC, 2018: Special Report on 1.5°C. Summary for Policymakers. Page 22.
See https://www.ipcc.ch/site/assets/uploads/sites/2/2019/05/SR15_TS_High_Res.pdf

Technology development and transfer

Countries have identified needs for technology development and transfer for instance as part of their TNAs.¹³ Climate related technologies have been sought in both mitigation and adaptation actions depending on the needs and priorities of the countries. When it comes to mitigation technologies, needs are identified for areas like the renewable energy, pollution management, energy efficiency, waste management, industrial products, transportation, agriculture, land use and forestry. Similarly, for adaptation technologies needs have been identified in areas related to climate information, early warning and surveillance, water, agriculture, infrastructure and settlements, health and tourism. Important gaps in technology have also been identified to address loss and damage in particularly vulnerable developing countries, whether it is slow on-set events or extreme events. The UNFCCC's main instrument for addressing loss and damage, the Warsaw International Mechanism, has started through its Executive Committee work on identifying technology issues and technology needs from a loss and damage perspective.¹⁴ Results will also inform the technology needs discussion.

Capacity building

Capacity needs have been identified from individual and institutional to systemic levels. In terms of stakeholders, a comprehensive spectrum of actors requires support, such as different levels of the public administration and the government, academic institutions, civil society organisations (CSOs) and communities. Existing capacity gaps relate to human resources, technical know-how, research and assessments, and the use of technologies. More specifically, capacity is required on maintaining inventories of GHGs, aspects of transparency, forecasting and risk modelling, vulnerability assessment. In addition, support is needed on strengthening the capabilities for enhanced internal coordination, the

designing and implementation of projects, as well as the respective reporting procedures or accessing of climate finance (which is for instance addressed through readiness programmes, such as under the GCF).

2.2 Overview of methodological approaches for needs determination

We subsequently illustrate the broad spectrum of formats, channels and approaches for determining the needs of developing countries for responding to climate change, in order to provide an overview as well as to inform the further discussions and negotiations.¹⁵

Oftentimes, determination of needs is approached in a bottom-up manner. Processes and formats build on existing qualitative or quantitative needs determinations from domestic public planning processes, and apply or extrapolate them for climate specific reporting or contexts. A rather simplistic way of needs determination are lower bound estimates of potential costs (as applied in many NDCs). More structured approaches exist that identify needs by prioritized sectors as well as financial and non-financial barriers and the respective measures to address those (barrier overcoming approach), as for instance under the TNA process.

Investment planning based on mitigation costs, such as marginal abatement costs, is applied for instance for developing sectoral strategies. Also, “donor” approaches of needs determination are applied, where international support claims require justification of needs for individual activities according to the structures and procedures of the respective donor organizations or funds. Here, stakeholder engagement and consideration of existing programmes and project pipelines may be required as well. Beyond the project, programme, sector or economy level, needs assessments are also applied for a regional level. For instance, multilateral

¹³ For instance, see the TNA phase 1 synthesis report of 2013, URL: <https://unfccc.int/resource/docs/2013/sbsta/eng/inf07.pdf> as well as the Summary of country priorities for the TNAs 2015-2018, available from <https://tech-action.unepdtu.org/wp-content/uploads/sites/2/2019/07/4a057ad243164ac6b-baa62bcb96bc39a.pdf>

¹⁴ https://unfccc.int/sites/default/files/resource/Item_4_Excom-TEC%20joint%20policy%20brief_Oct%202022.pdf

¹⁵ See also the background paper of the Standing Committee on Finance “Determining the Needs of Developing Countries related to the implementation of the Climate Change Convention and the Paris Agreement”, of October 2019 that is available from <https://unfccc.int/sites/default/files/resource/BPonSourcesOfInformationAndMethodologies.pdf>

development banks (MDBs) run needs assessments of their regional member states through structured dialogues and dedicated planning processes.¹⁶

Also, other research-based ways of needs determination exist that complement those bottom-up approaches. Studies by other international organizations that have a specific focus (such as a specific sector, e.g. energy, or a specific purpose, e.g. adaptation) do apply consultative processes, meta studies, modelling, gap analysis, index-based determination, case studies, or prioritization of activities for identification of needs, just to name a few. Some studies apply a standardized methodology across

countries, which allows for a comparison of results. An illustrative overview of approaches applied in country level reporting, and global and regional-level reports and studies including further examples is provided in Figure 1 and Annex II.

Generally, it is problematic that the level of methodological detail varies greatly between individual Party submissions, which makes comparisons rather difficult. Similarly, the description of needs varies across formats, with needs being formulated qualitatively and/or quantitatively. Hardly any information is provided on how such finance needs are derived methodologically.

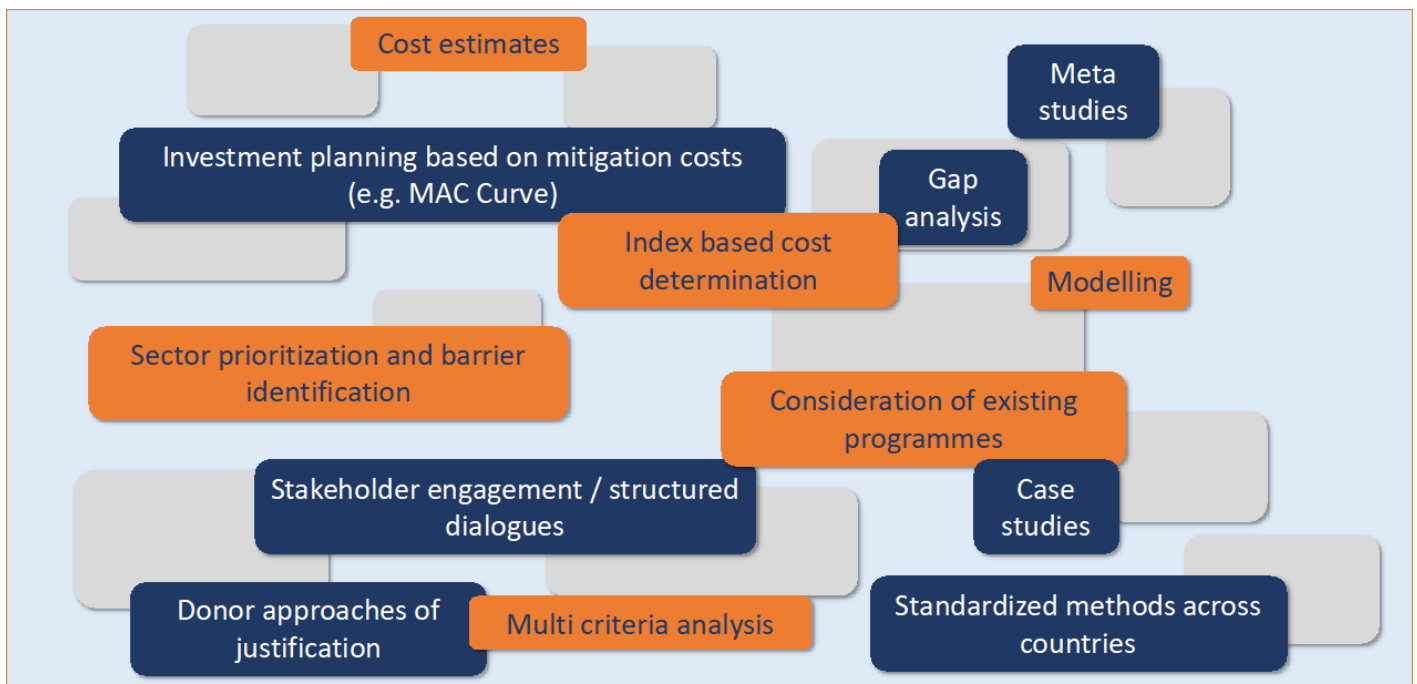


Figure 1: Illustrative overview of methodological approaches for needs determination (Source: authors)

¹⁶ For instance, the African Development Bank (AfDB) conducts research activities to identify climate finance needs for the African continent, including through studies at various levels such as projects or programmes, as well as national, regional or global level. The Asian Development Bank (ADB) is supporting its developing country members to develop climate investment plans. The NDC Invest Initiative of the Inter-American Development Bank (IADB) is a one-stop vehicle to assist countries to develop activities under their NDCs, including the elaboration of the respective cost estimates.

2.3 Needs articulation on the country level

Parties under the Convention have continuously articulated their support needs for finance, capacity building or technology. In general, the level of detail in the communication of needs and priorities to the UNFCCC varies from generic estimates for addressing actions relating to climate change (e.g. in NDCs) to more detailed information that considers purpose and scopes, sectors, sources, channels or instruments.

For instance, every four years, through their National Communications, Parties aim to provide information on GHG inventories, measures to mitigate and to facilitate adequate adaptation to climate change, and any other information that the Party considers relevant to the achievement of the objective of the Convention. This includes constraints and gaps, and related financial, technical and capacity needs in accordance with their national circumstances.¹⁷ While countries do report and elaborate on the support needs for addressing identified constraints and gaps, they do so in a rather generic and qualitative way, and provide little information on approaches undertaken to identify needs. Updates to the NCs are provided in the Biennial Update Reports. In the BURs, countries formulate an update of the information presented in their NCs, in particular on national GHG inventories, mitigation actions, constraints and gaps, including support needed and received. So far, only 11 countries provided respective information on needs, and the grade of detail varies from needs per economic sector, the financing needs for capacity building or technology, or per purpose (with more details on needs being available for mitigation activities).¹⁸ In its

third BUR, Chile for instance does distinguish between financial needs, technology needs and capacity building needs, which were derived in a consultative bottom-up process¹⁹. Concerning future reporting under the Paris Agreement, developing countries should report on their needs for financial and technical support, as well as capacity building in their Biennial Transparency Reports (BTRs).²⁰

On adaptation planning, Parties identify their medium and long-term adaptation gaps and needs through their National Adaptation Plans. During the NAP process they develop and implement strategies and programmes to address those gaps. Out of 13 NAPs, nine have included financial cost estimates. The approaches for identifying and determining the needs hereby vary and do not follow a common approach. The Republic of the Sudan for instance applies an elaborated investment and financial flows assessment based on historical cost values for deriving adaptation costs.²¹ The NAP of Sri Lanka provides gross estimates validated by stakeholders in expert workshops.²² The authors of the Sri Lankan NAP underscore that those figures offer comparative first estimates that serve as a foundation for further refinement of budgets for the respective adaptation actions.

With respect to technology needs, so far, 85 Technology Needs Assessments have been completed by developing countries in order to prioritize required technologies and identify the respective barriers for deployment. Under the TNA process, countries develop action plans for overcoming those barriers. Dedicated guidance for conducting a TNA is available.²³ An example is Kenya, which

17 See the UNFCCC Guidelines for the preparation of national communications from Parties not included in Annex I to the Convention, Decision 17/CP.8, paragraph 49, URL: https://unfccc.int/sites/default/files/17_cp.8.pdf.

18 See the background paper of the Standing Committee on Finance “Determining the Needs of Developing Countries related to the implementation of the Climate Change Convention and the Paris Agreement”, of October 2019 that is available from <https://unfccc.int/sites/default/files/resource/BPonSourcesOfInformationAndMethodologies.pdf>

19 See Chile’s third biennial Update Report, 2018, URL: https://unfccc.int/sites/default/files/resource/5769410_Chile-BUR3-1-Chile_3BUR_English.pdf

20 See <https://unfccc.int/enhanced-transparency-framework#eq-7CFAS> and also compare the CFAS COP 25 Policy Brief “Transparency of Support – Development of the Common Tabular Format”

21 In the Sudanese NAP, investment flows are defined as the capital costs of a new physical asset with a life of more than one year, such as the capital cost of a new agricultural irrigation system. Investment flows are limited to new physical assets as such investments have climate change implications for the duration of the operating lives of the facilities and equipment purchased. Financial flows are defined as ongoing expenditures on programmatic measures. Financial flows encompass expenditures other than those for expansion or installation of new physical assets. Find the NAP of the Republic of the Sudan at <https://www4.unfccc.int/sites/NAPC/Documents%20NAP/National%20Reports/Sudan%20NAP.pdf>

22 The NAP of Sri Lanka is available from: <https://www4.unfccc.int/sites/NAPC/Documents%20NAP/National%20Reports/National%20Adaptation%20Plan%20of%20Sri%20Lanka.pdf>

23 Find TNA guidance at the TTCLEAR website, URL: <https://unfccc.int/ttclear/tna/guidance.html>

in its TNA does identify technology needs for mitigation and adaptation by prioritized sectors, as well as financial and non-financial barriers and the respective measures to address those²⁴.

While all of the four processes above include individual statements on needs, comparing and aggregating the needs from the information reported under the NC's and the BUR's, as well as contained in NAPs and TNAs is difficult and not a promising approach for analyzing global needs, as no common approaches are applied.

This also holds true for NDCs. Cost estimates contained in NDCs vary significantly and must be regarded as rather indicative, as no standardized approaches for needs determination are applied. An example for a more elaborated approach of needs determination in an NDC is Ghana²⁵. The NDC identifies a list of mitigation and adaptation measures, which were prioritized according to specific criteria. For instance, for identified mitigation actions a requirement is the possibility of estimating investment requirements with pragmatic and reasonable budgets and with clear sources of funding. An earlier attempt to approach climate and development planning on a country level were Low Emission Development Strategies²⁶. The objective of those LEDS was to identify priority mitigation measures and to develop a strategic implementation plan. Here, financial support for implementing the LEDS plays an important role. A robust and transparent cost estimation of individual measures is therefore of high relevance for substantiating any support claims (i.e. needs). Generally, investment costs associated with installing new technologies or improvements to the existing equipment can for instance be derived from marginal abatement cost curve (MACC) analysis. In addition to pure investment costs for technology, also costs for enabling frameworks and other implementation processes need to be reflected.²⁷

On a sector or programme level, Nationally Appropriate Mitigation Actions (NAMAs) comprise GHG mitigation projects or programmes that typically include detailed concepts for capacity building, technical assistance or financial support. Such NAMA activities are to be funded from domestic and / or international funding sources. When funding is requested with international donor organizations, the anticipated support needs have to be justified. An example is the NAMA Facility, which requires a dedicated justification of the project and its additionality. While there is no standardized approach for developing a NAMA, numerous guidance documents exist. For instance, a NAMA Guidebook of the UNDP LECB Programme provides guidance on the financial design of mitigation activities²⁸. Those costs labelled for international support essentially translate into finance needs.

Climate funds such as the Global Environment Facility or the Green Climate Fund apply a bottom-up approach for needs determination, based on their project pipelines. The GCF for instance is informing its replenishment process based on financing needs that are articulated in the approved funding proposals, as well as in concept notes, and project ideas contained in country programmes or presented at structured dialogues.

24 See <https://unfccc.int/tclear/tna/reports.html>

25 See https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Ghana%20First/GH_INDC_2392015.pdf

26 Low-Emission Development Strategies (LEDS): technical, institutional and policy lessons, OECD 2010, URL: <http://www.oecd.org/environment/cc/46553489.pdf>

27 See the UNDP "How-to Guide: Low-emission Development Strategies and Nationally Appropriate Mitigation Actions: Eastern Europe and CIS", available from https://sustainabledevelopment.un.org/content/documents/956041_How%20to%20guide-%20low%20emission%20development%20strategies.pdf

28 See Guidance for NAMA Design - Building on Country Experiences, URL: <https://www.transparency-partnership.net/documents-tools/guidance-nama-design-building-country-experiences>

BOX 2: The challenge of identifying and comparing needs

Needs of developing countries for responding to climate change can be expressed for different scopes and purposes, such as mitigation, adaptation, or loss & damage, as well as for individual projects and programs, whole sectors or entire economies. The needs can take the form of finance, technical assistance, technology transfer or capacity building, and are determined through various methodological approaches.

An aggregated estimate of global support needs based on NDCs is provided in various studies and ranges between USD 3.5 and 4.4 trillion from domestic and international sources until the mid 2030s, of which the larger share is estimated for mitigation purposes.*¹ Such numbers must however be regarded as very rough estimates, as the calculations of the NDCs – and INDCs – were done in a relatively short period and without a standardized, transparent methodological approach.*² One can therefore assume that these numbers will be more refined once updated NDC data becomes available in 2020.

Similarly for adaptation, where the needs expressed in the NDCs have been estimated at over USD 50 billion per year for 50 developing countries for the period 2020 to 2030.*³ This is likely an underestimation of the true costs that full adaptation to the impacts would likely require, as also dedicated reports like the 2016 UNEP Adaptation Finance Gap Report reflect. It concluded that the annual costs of adaptation in developing countries could range from

USD 140 billion to USD 300 billion by 2030 and from USD 280 billion to USD 500 billion by 2050. But major information gaps still exist. A similar exercise could be undertaken for the expected losses and damages, which will not be avoided through adaptation and its insufficient implementation.

A recent technical paper developed by the UNFCCC Secretariat on loss and damage finance, prepared as a response to a mandate from the COP, points to some of the critical areas and activity options to address loss and damage. However, it falls short of really identifying the needs of developing countries, as the mandate for the paper was very much focused on analysing already available finance inside (instead of determining needs) and outside of the Convention, de facto referencing mostly adaptation finance.*⁴ A recent submission by CAN International references various numbers of cost estimates implied from loss and damage in areas such as disaster costs and derives from that the estimate of an additional finance need of USD 50 bn in 2022, and USD 300 bn in 2030.*⁵

Needs are also determined on a regional level. For instance, the Asian Development Bank (ADB) identifies the annual infrastructure investment needs amongst its member countries in Asia and estimates USD 1.7 trillion being required. While current investment levels allow for covering most of these requirements, still an investment gap exists. Incorporating climate mitigation and adaptation

*1 See for instance “Investing in Ambition - Analysis of the financial aspects in (Intended) Nationally Determined Contributions” (2016), URL: https://www.thegreenwerk.net/download/investing_in_ambition.pdf, as well as an approximate estimate extrapolating the breakdown provided by 54 countries to the financial need estimate from all 80 countries. Calculations authors, numbers sourced from: Noriko Shimizu and Alexis Rocamora. Analysis of Financial Components of Intended Nationally Determined Contributions (INDCs). IGES. 2016. <https://pub.iges.or.jp/pub/analysis-financial-components-INDC>

*2 A background paper by the Standing Committee on Finance reflects that the methodologies underlying those assessments vary, why a summing up should be treated with caution, see https://unfccc.int/sites/default/files/resource/BP5_SCF20_Needs.pdf

*3 UNEP 2018. The Adaptation Gap Report 2018. United Nations Environment Programme (UNEP), Nairobi, Kenya. p xiii. See: <https://www.unenvironment.org/resources/adaptation-gap-report>

*4 https://unfccc.int/sites/default/files/resource/01_0.pdf

*5 http://www.climate-network.org/sites/default/files/can_loss_and_damage_submission_022018.pdf

costs, the investment gap equals 2.4% of the projected GDP for the 5-year period from 2016 to 2020 (5% without China).^{*6}

Specific needs forecasts also exist for individual sectors, for instance energy sector investment needs assessments. The IPCC in its special report on impacts of global warming of 1.5°C estimates the fraction required for low carbon investments in the global average annual energy related investment costs to range from USD 1.6 – 3.8 trillion.^{*7} In a similar dimension, the International Energy Agency (IEA)

in its World Energy Investment Report 2019 ^{*8} forecasts annual average investments in energy supply to reach USD 1.93 between 2025 and 2030.

On a project or programme level, aggregating needs by adding up the support requirements voiced under a specific support format or instrument can also inform the dimension of needs. For instance, as of mid-2019 the GCF Secretariat reported a portfolio of projects in the pipeline summing up to USD 16.3 bn support required from the GCF.^{*9}

*6 See <https://www.adb.org/publications/asia-infrastructure-needs>

*7 Converted in 2010 USD, see https://www.ipcc.ch/site/assets/uploads/sites/2/2019/05/SR15_TS_High_Res.pdf

*8 See <https://www.iea.org/wei2019/>

*9 See: https://www.greenclimate.fund/documents/20182/194568/GCF_in_Brief_The_Replenishment_Process.pdf/0fc018ad-1082-d11f-f72a-b1a07e02c9d4

The table below illustrates needs indications from various sources for various scopes and purposes (see also Box 2). While it clearly underscores that the overall dimension of required support will be huge, it also shows that comparing those needs across countries, or even aggregating them, appears a herculean task. There

are too many assumptions and variables behind each number, there may be overlaps of scopes and purposes leading to double counting of needs, and attributing of investment costs to support through climate finance is not always clear.

Table 1: Needs indications per scope / purpose

Scope / Purpose	Needs indication	Source
Mitigation	NDCs state needs between USD 3.5 and 4.4 trillion from domestic and international sources, of which a larger share is earmarked for mitigation.	NDCs
Adaption	USD 50+ billion annually between 2020-2030 USD 140 billion - 300 billion by 2030 USD 280 billion - 500 billion by 2050	UNEP Adaptation Gap Report 2018
Sectoral	<u>Example energy sector:</u> Global average annual energy related investment costs to range from USD2010 1.6 – 3.8 trillion	IPCC
Programme level	<u>Example GCF:</u> USD 16.3 bn support through GCF requested (various scopes, instruments and purposes)	GCF
Regional	<u>Example Asia:</u> Investment Gap for infrastructure investments in Asia 2016-2020 is 2.4% of GDP (5% w/o China)	ADB

Scope / Purpose	Needs indication	Source
Technology needs	<p><u>Example: TNA process</u></p> <p>Mitigation: USD 5.2 billion accumulative budget estimate (with budgets varying between USD 10 million and USD 1.5 billion amongst Parties).</p> <p>Adaptation: USD 2.4 billion accumulative budget estimate (with budgets varying between USD 10 million and USD 350 million amongst Parties).</p> <p>Both based on assessment of TNA Phase 1 (2013) which comprised 31 countries, of which 60% provide detailed estimates of the budget required for actions specified in their TAPs.</p>	UNFCCC TNA Process ²⁹

2.4 Challenges in determining the needs of developing countries

The above reflection of country reporting and needs determination shows that under the UNFCCC different opportunities exist for approaching the determination of needs from developing countries. So far, a rag rug of requirements, formats, channels and approaches exists, which cannot guarantee a comprehensive coverage of needs determination in countries. In case Parties are asked to simply name their needs without providing a systematic approach, the result will be an unstructured provision of incomplete, fragmented and intransparent information of varying quality. The comparison of needs between countries is therefore rather difficult. In terms of quantification, based on the current situation it appears impossible to derive robust numbers on the overall climate finance needs of developing countries in a bottom-up approach based on country reporting and aggregating activity level numbers. Needs could also be specified in a qualitative manner, which still would require a certain structure and common understanding of minimum requirements for describing a “need”.

In addition, the approaches undertaken by multilateral agencies, international organizations and research institutions for assessing support needs of developing countries are manifold. For various purposes or scopes, approaches exist that envisage to overcome information gaps concerning support needs on the country level through modelling or workarounds such as gap analysis. An enhanced quality of needs determination – in particular for comparing across countries - will however depend on improved data quality.

Research activities as well as donor-driven approaches indicate that success factors appear to be structured approaches with robust and transparent underlying data, with a prioritization of activities, and with consultative processes that allow a bottom-up estimation of support needs for individual measures, scopes or purposes. A more standardized approach for support needs determination - guided by the SCF report – appears core in this regard.

²⁹ See the TNA phase 1 synthesis report of 2013, <https://unfccc.int/resource/docs/2013/sbsta/eng/inf07.pdf>

3 Recommendations and way forward

As outlined in the introduction, determining the needs of developing countries would not only provide a clear understanding on financial and non-financial needs, but could also contribute to the predictability, mobilization, provision, accessibility, and adequacy of climate finance flows to be consistent with the objectives of the Paris Agreement. More specifically, the SCF needs determination report could inform and potentially influence other agenda items of the Paris Agreement, such as:

- The Global Stocktake
 - The global stocktake will be informed by multiple reports elaborated within and outside the UNFCCC. Thereby, the 2020 needs determination report will provide valuable input to the global stocktake with regard to investment and support needs to meet the Paris agreement long-term goals.
- The post-2025 climate finance target
 - Different from the USD 100 billion goal, Parties decided that the new post-2025 climate finance target will be negotiated. Depending on the date by when the post-2025 climate finance target will be determined, work towards identifying the needs under the SCF could inform the new goal. At current stage, the methodological shortcomings and difficulties in determining needs would not allow to establish such a link. However, time could be used to enhance the methodologies and thereby make the 2024 needs determination report a valuable input to the new political goal. Thereby, the new goal would be based on a technical foundation rather than being a purely political goal.
- The enhanced transparency framework
 - If Parties decided to inform the needs determination report through figures provided by developing country Parties under their reporting in accordance with Art. 13 of the Paris Agreement, this could motivate developing country Parties to provide more extensive and detailed reporting under transparency of support needed.

In light of the above discussion, we derive the following recommendations for the further elaboration of a needs determination framework under the Paris Agreement.

For the further elaboration of the report on needs determination by the Standing Committee on Finance (SCF), it is recommended to:

- Identify success factors for needs determination that have worked in contexts of various countries, instruments and scopes;
- Aim towards a standardized approach with common formats and guidance in order to allow for global comparability of information provided;
- Learn from donor-driven approaches and identify potential champions such as the NAMA Facility or the GCF;
- Understand how information gaps can be addressed through application of modelling and other methodological approaches that have worked well for international organizations;
- Further assess how needs determination from domestic public planning processes works in developing countries, in order to derive lessons for comparable formulation of support needs across countries;
- Continue the inclusive process of letting countries and experts sharing their lessons and experiences;
- Related to this, focus on methodologies that ensure bottom-up processes of needs determination, such as consultative processes or project cost determination (e.g. MAC curves) => robust and transparent bottom-up processes may enhance the credibility of identified needs;
- Reflect on the experiences with prior processes under the UNFCCC, such as the NEEDS project and the NBF project, as well as work conducted by the AC, in collaboration with the Least Developed Countries Experts Group.

Based on the experiences made with the experts meeting on assessing and determining the needs of developing countries in July 2019 in Manila, Philippines,³⁰ developing countries are encouraged to further engage in collaborative approaches for sharing experiences made and for mutual learning on needs determination.

It is recommended that countries identify barriers they experience concerning a more advanced determination of support needs. Which are the processes where the gathering of information and good quality data is difficult, and for what reasons? For example, data availability may be an issue, as well as capacity constraints for conducting a resource intensive needs assessment. At the same time, countries should also identify success factors and best practice approaches for needs determination.

In which areas are cost estimates for climate related investments available, are capacity requirements determined, and are technology needs clearly identified? Which methodological approaches have worked, and which not? With which partner organizations did they collaborate successfully to derive support requirements, and which stakeholders have played/can play a central role in gathering information?

All of these questions can help countries to reflect on how needs determination has worked so far, and can be improved in the future. The answers to these questions, and the key lessons learned so far can then inform the international community in embarking on shaping the future design of needs determination

³⁰ See <https://unfccc.int/topics/climate-finance/workstreams/determination-of-the-needs-of-developing-country-parties-related-to-implementing-the-convention-and/experts-meeting-on-assessing-and-determining-the-needs-of-developing-countries-biographies-of-experts-meeting-on>

Annex: Overview of approaches for needs determination

Table 2: Approaches for needs determination in country level reporting and studies

Country level reporting and studies		
Format / Source	Purpose / Scope / Theme	Methodological approach
NDCs	Mitigation and Adaptation	<ul style="list-style-type: none"> – Various – Oftentimes lower bound estimates of potential costs – Level of methodological detail varies greatly, making comparisons difficult
NCs & BURs	Mitigation and Adaptation	<ul style="list-style-type: none"> – Description of needs vary across NCs and BURs, with needs being formulated qualitatively and/or quantitatively – Hardly any information on how such finance needs are derived methodologically
NAPs	Adaptation	<ul style="list-style-type: none"> – The approaches for identifying and determining the needs vary and do not follow a common approach
TNAs	Mitigation and Adaptation	<ul style="list-style-type: none"> – Dedicated guidance for TNA is available. – Some TNAs identify technology needs for mitigation and adaptation by prioritized sectors, as well as financial and non-financial barriers and the respective measures to address those.
Long Term Strategies	Mitigation and Adaptation	<ul style="list-style-type: none"> – Various, the approaches for LTF needs vary – Level of methodological detail varies greatly, making comparisons difficult
LEDS	Mitigation	<ul style="list-style-type: none"> – Various – Investment planning based on mitigation costs, such marginal abatement costs – Level of methodological detail varies greatly, making comparisons difficult
NAMAs	Mitigation	<ul style="list-style-type: none"> – International support claims require justification of needs – Approaches differ amongst donors
GCF country programmes	Mitigation and Adaptation	<ul style="list-style-type: none"> – Approaches vary from country to country – Stakeholder engagement and consideration of existing programmes and project pipelines required

Table 3: Illustrative overview of approaches for needs determination in global and regional level reports and studies

Country level reporting and studies		
Format / Source	Purpose / Scope / Theme	Methodological approach
NEEDS Project ³¹	Mitigation and Adaptation	<ul style="list-style-type: none"> – Standardized stepwise approach with intensive consultative process to identify financial needs of priority projects
IPCC Special Report 1.5°C	Mitigation and Adaptation	<ul style="list-style-type: none"> – Conducting meta study

31 See <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>

Country level reporting and studies		
IEA World Energy Outlook	Mitigation	– Modelling of two scenarios
UNEP Adaptation Gap Report	Adaptation	– Gap analysis – Special focus on health sector
IMF Spending needs for achieving selected SDGs	Mitigation and Adaption	– Three-step approach: i) identify main cost drivers, ii) derive reference values for cost drivers, iii) estimate 2030 spending levels for reference values
UNEP Emissions Gap Report	Mitigation	– Gap analysis – Deriving cost assumptions for certain scenarios and pathways
Financing Climate Futures OECD, UN Environment, World Bank	Adaptation	– Modelling of future infrastructure demand
Climate Investment Opportunities in Emerging Markets – An IFC Analysis	Mitigation	– Quantification of NDC target implementation – Standardized methodology applied for 21 countries
G20 Brown to Green Report: Transition to a low carbon economy 2018	Adaptation	– Vulnerability-index based determination of adaptation needs
Climate Finance Readiness for Low Carbon Green Development - Regional Assessment for Selected Asia- Pacific Countries – ESCAP	Mitigation and Adaptation	– Case study approach – Prioritization of activities for identification of needs
IRENA, NREL, GIZ: Capacity needs assessments for renewable energy (CaDRE)5	Mitigation	– Standardized consultative process
ODI: National Climate Finance Analysis	Mitigation and Adaptation	– Categorization / Prioritization of expenditures in public spending
The Group of 20 (G20) Green Finance Study Group and The IFC Climate Policy Team: Green Finance: A bottom up approach		– Gap analysis of green finance available and needs for reaching policy targets

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