
**Tenth meeting of the Adaptation Committee
Bonn, Germany, 13-16 September 2016**

Methodologies for assessing adaptation needs with a view to assisting developing country Parties, without placing an undue burden on them

Background note

Recommended action by the Adaptation Committee

The Adaptation Committee (AC), at its tenth meeting, will be invited to consider the draft background note with a view to agreeing on next steps to take this task forward as described in section 4.

1. Mandate

1. The Conference of the Parties (COP), by its decision 1/CP.21, requested the Adaptation Committee (AC), taking into account its mandates and its second three-year workplan, and with a view to preparing recommendations for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (PA) at its first session (CMA1), to consider methodologies for assessing adaptation needs with a view to assisting developing country Parties, without placing an undue burden on them.¹
2. Further, the AC, together with the Least Developed Countries Expert Group (LEG) and in collaboration with others, has been mandated to develop methodologies and modalities for some of the key processes (e.g. global stocktake) emanating from the PA. It is therefore opportune for the AC to consider methodologies for assessing national adaptation needs within the context of these related processes and indeed Parties' reporting obligations under the Convention, so that relevant assessments and provision of information can be streamlined, and national level adaptation planning and implementation can be better supported by coherent and comprehensive assessment results.
3. This background note intends to provide initial inputs to the discussions of the AC at its tenth meeting on this mandate from COP 21. Specifically, it presents the result of an initial desk review on relevant existing methodologies and their applications in assessing adaptation needs (section 2), including a set of indicative examples of such applications (annex), and outlines possible next steps for taking this task forward (section 3).

2. Methodologies for assessing adaptation needs – summary of an initial desk review

2.1. Scope of the initial desk review

4. Without attempting to prejudge the decision that the AC would take after considering this mandate at its 10th meeting, the scope of the initial desk review carried out within this background note reflects what the secretariat understands to be a useful starting point to assist the AC. Specifically, the term "methodology" in this context is understood to be a set or system of methods and tools used to guide the activities/tasks required to assess adaptation needs. Within each methodological framework, there are

¹ Decision 1/CP.21, paragraph 42 (b).

methods and tools to facilitate and enable specific activities and tasks.² In addition, adaptation needs, for the purpose of the initial desk review,³ are understood to include the needs for:

- a) adaptation action;
- b) financial support;
- c) technological support; and
- d) capacity-building support.

5. Further, within the context of the Convention, the assessment of adaptation needs takes place both at global and national levels. At a global level, the UNFCCC process utilizes information provided by Parties and other relevant sources to assess the needs for adaptation action and support in developing countries, in order to assist developing countries in meeting such adaptation needs. Similarly, Parties assess their national needs for adaptation action and support, within the broad context of other relevant contexts both under and outside the Convention (e.g. the process to formulate and implement national adaptation plans (NAPs), adaptation communications, nationally determined contributions, national communications, and national development planning etc.).

6. There is a range of on-going and emerging efforts which could potentially contribute to the development, refinement and application of methodologies for assessing adaptation needs, both under and outside the Convention. To assist the AC in its consideration of the methodologies, an initial desk review was carried out to survey major methodologies for, and associated applications in, assessing adaptation needs, with a view to initiating discussions on this mandate.

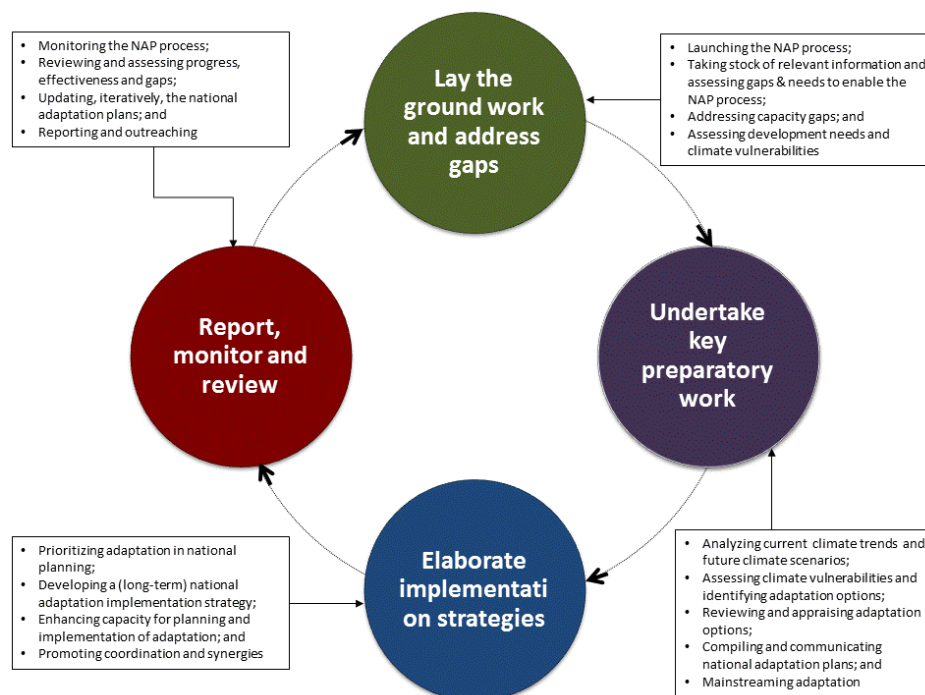
7. The initial desk review in this background note focuses on methodologies for assessing adaptation needs at national level, given that global level assessment under the UNFCCC process would be based on national level information provided by Parties and other relevant sources including the IPCC assessment reports. In this connection, national level adaptation needs assessment would be a key and integral part of the process to formulate and implement NAPs. To assist least developed countries (LDCs) with their NAPs, the LEG, following a set of initial guidelines,⁴ developed technical guidelines (UNFCCC, 2012). In addition to providing technical guidance on specific tasks, these guidelines offer a broad framework for Parties to navigate through a series of steps in the adaptation process, including assessing adaptation needs (see figure 1 below).

² For example, to assess the implications of climate change for the economic viability of a farm, a possible methodology could be a top-down approach, following the process of constructing local level climate change scenarios from global climate models, assessing impacts of projected climate change on farm-level economic indices such as cash crop yields and livestock outputs etc. In performing these assessment tasks, methods and tools such as downscaling (of climate models and their outputs), crop modeling and economic evaluation tools would be used.

³ This is not intended to prejudice the outcome of the AC's discussions on the scope of adaptation needs within this mandate during AC10.

⁴ The initial guidelines are contained in the annex to decision 5/CP.17.

Figure 1. Potential key elements and steps within a national adaptation plan process as outlined in the NAP initial and technical guidelines



Source: Adopted from table 1 of UNFCCC, 2012

8. The remainder of this section reviews relevant methodologies along the four categories of adaptation needs: needs for adaptation actions, for financial support, for technological support, and for capacity-building support. Table 1 below provides a brief summary of the key features of methodologies reviewed under each category. It also highlights areas where limitations exist if the results from the adaptation needs assessments were to support the relevant provisions under the Convention.

2.2. Methodologies for assessing needs for adaptation actions

9. Until recently, work on adaptation to climate change has been dominated by assessments of climate change impacts and vulnerability. Consequently, a large number of methodological approaches, methods and tools have been developed and applied in climate change impacts and vulnerability assessments, at different scales and in different sectors. These approaches include, among others:

- “Impacts-based” approach focusing primarily on the biophysical climate change impacts to which societies and natural systems need to adapt (Carter et al., 1994; Parry and Carter, 1998). This approach aims to evaluate the impacts of climate change under a given scenario and to assess the need for adaptation (and/or mitigation);
- “Vulnerability-based” approach focusing on the propensity to be harmed, then seeking to maximize potential benefits and minimize or reverse potential losses (Adger, 2006);
- “Adaptation-based” approach examining the adaptive capacity and adaptation measures required to improve the resilience or robustness of a system exposed to climate change (Smit and Wandel, 2006);
- “Risk-based” approach focusing on supporting decision making which can be characterised by large uncertainties, long time frames, opportunities for learning over time, and the influence of both climate as well as other socioeconomic and biophysical changes (IPCC, 2014).

climate finance flows,⁶ and of others (e.g. UNEP, 2016), information on financial resources available to support adaptation remains patchy, including at national level. Consequently, most estimates are limited to costs of adaptation.

13. With relation to the “demand” side of adaptation finance, reflecting the prevailing adaptation funding mechanism to date, financial needs for adaptation have often been estimated at a programme, project or activity level, on an ad hoc basis. Financial requirements are estimated in this manner for much of the NAPA priority projects, projects to be supported under the LDCF, SCCF and the investment programmes in pilot countries of the Pilot Programme for Climate Resilience under the Climate Investment Fund (see A.2 in the annex for an indicative example). In addition, an investment and financial flow analysis approach was applied to assess the adaptation financial needs at global level, continental level (e.g. UNEP, 2014) as well as national level (e.g. OECD, 2008; UNFCCC, 2007; World Bank, 2010; UNFCCC, 2010; UNDP, 2011). More recently, some Parties, through their INDCs, identified financial support needs for adaptation at a national level, including envisaged financial support need from domestic and international sources. The individual financial support needs as estimated by Parties range from USD 100 million to over 200 billion for the whole INDC period and from USD 10 million to 3 billion per year (UNFCCC, 2015). However, there is hardly any detail on the methodologies underpinning these estimates

14. As such, there are a number of issues with these existing methodologies for assessing adaptation financial support needs, including a deficit in financial assessments (as opposed to economic/cost assessments of adaptation interventions) to analyse the financial resources that are potentially available to support adaptation, a lack of transparency in determining some of the key costing parameters (e.g. discounting rates, unit cost for certain type of infrastructure).

2.4. Methodologies for assessing technology support needs

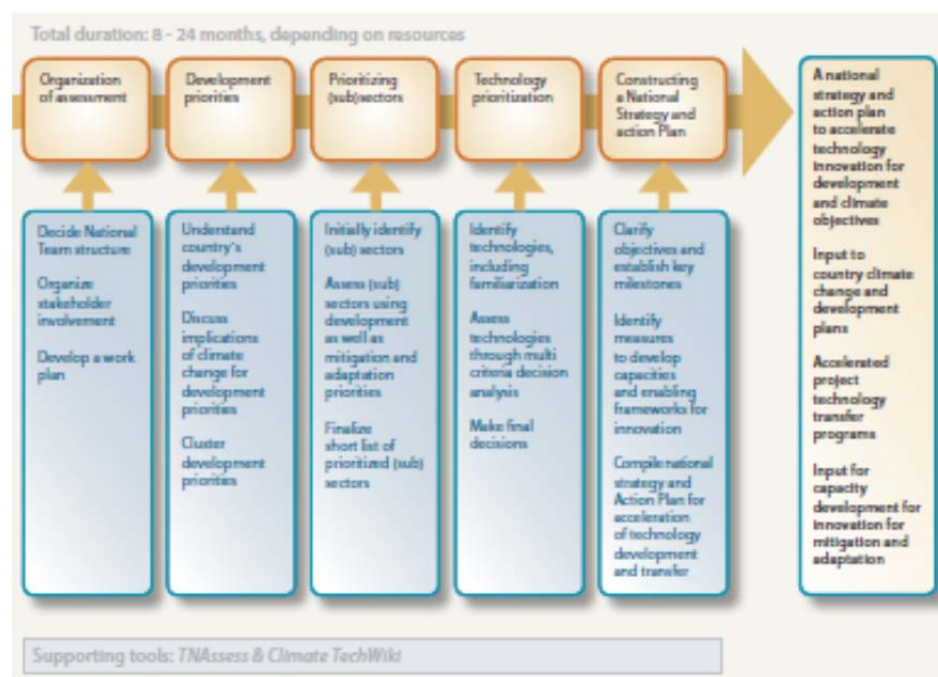
15. A number of methodological tools have been developed for assessing the technology needs to support adaptation. Examples include those developed under the UNFCCC to assist Parties identify their technology needs. The technology needs assessment (TNA) provides the basis for identifying a portfolio of environmentally sustainable technology.⁷ To facilitate the TNA process, a handbook was developed and offers a systematic approach for conducting TNAs in order to identify, evaluate and prioritize technological means for adaptation and mitigation.⁸ Key steps and considerations as outlined in the handbook are summarized in figure 3 below. Under the TNA process, countries carried out, to various extents, assessments of technology needs for adaptation. Built on the TNA results, some countries developed and communicated detailed technology action plans for the development and transfer of specific technologies (UNFCCC, 2013). An illustrative example of a TNA process is provided in the annex.

⁶ Details on SCF’s biennial assessment report 2014 as well as on progress towards the 2016 report are available at <<http://www.unfccc.int/8043.php>>.

⁷ Available at <http://unfccc.int/ttclear/templates/render cms_page?TNA_home>.

⁸ The handbook is available at

<http://unfccc.int/ttclear/misc/_StaticFiles/gnwoerk_static/TNA_HAB_infobox_1/3a34f12bf10d4b7bae791d0d7ad572eb/c29096556b034760b94273b0124039ac.pdf>.

Figure 2. Key steps in a technology needs assessment

Source: UNDP, 2010

2.5. Methodologies for assessing capacity support needs

16. As reported by many developing country Parties, the lack of technical and institutional capacity remains a major barrier to adaptation planning and implementation. Hence, the assessment of capacity-building support needs is an important part of adaptation needs assessment.

17. Methodologies for assessing capacity-building support needs generally consider capacity-building needs at three levels (e.g. UNFCCC, 2012; Working Group on Climate Change, 2004) :

- a) Individual level: assessing the needs against the required technical expertise and professional skills
- b) Institutional level: assessing the needs against the required efficiency of institutional and management structure, human, financial and informational resources, as well as essential infrastructure; and
- c) Systemic level: assessing the needs against the required enabling environment including the legal framework.

18. Developing country Parties, through their NAPs, INDCs and National Communications, have identified technical as well as institutional capacity-building support needs for adaptation at all these three levels. Efforts so far, however, have been focusing on identifying technical capacity-building support needs (e.g. those associated with analytical activities within the adaptation planning process such as climate modelling, scenario development, downscaling, risk assessment, cost benefit analysis).⁹ In formulating its National Adaptation Plan, Burkina Faso developed an inventory of relevant capacities currently available and those yet needed in key sectors/themes. A list of actions/solutions to address identified capacity gaps was subsequently drawn up (see Annex, section 4 for details).

19. In addition, Parties have highlighted the role of south-south cooperation in strengthening capacity through sharing of experiences and mutual learning (e.g. UNFCCC, 2015). In addition to identifying capacity-building support needs through national reporting instruments, the capacity-building frameworks under

⁹ In addition to technical expertise, the provision of and access to data, information and knowledge are considered to be part of technical capacity.

the Convention¹⁰ provide opportunities for Parties and other stakeholders to review progress made in implementing capacity building activities and highlight gaps in capacity building support including capacity gaps in accessing adaptation funds.¹¹ Capacity-building needs identified through the existing national reporting processes are either task- (e.g. engaging stakeholders, downscaling of climate models) or target group- (e.g. governmental department, technical personnel)-focused, instead of output or outcome-oriented. This would make tracking progress towards addressing identified capacity-building needs challenging.

Table 1. A summary of key features of methodologies reviewed

	Existing methodology	Illustrative Applications	Key Issues/Limitations	
Needs for adaptation action	<ul style="list-style-type: none"> • Frameworks for national adaptation planning and programming; • Approaches for impacts, vulnerability and adaptation assessments: <ul style="list-style-type: none"> • “Impact-based” approach; • “Vulnerability-based” approach; • “Adaptation-based” approach; • “Risk-based” approach. 	<ul style="list-style-type: none"> • Formulation of NAPs, national climate change /adaptation programmes; • Assessments carried out within the context of national communications 	<ul style="list-style-type: none"> • Highly diverse in scope, selection of scenarios, timeframe and metrics of impacts 	<ul style="list-style-type: none"> • No reference to a common global warming goal (e.g. 2°C); • Lack in a common baseline and time horizon (e.g. 2030); • Inconsistency in the consideration of other relevant national (e.g. development planning) and international (e.g. SDGs, DRR) processes; • Links to measurable metrics/ indicators
Needs for financial support	<ul style="list-style-type: none"> • Programme-based, project- or activity-based estimates; • Investment and financial flow analysis 	<ul style="list-style-type: none"> • Costing of priority projects in NAPAs and in SPCR by PPCR pilot countries; • Global assessment (e.g. OECD, 2008; UNFCCC, 2007) • National assessments (e.g. World Bank, 2010; UNFCCC, 2010; UNDP, 2011) • Overall costs in INDCs and BURs 	<ul style="list-style-type: none"> • Largely limited to economic assessments of adaptation costs with insufficient financial assessments; • Major assumptions (e.g. uncertainties, discounting rates, baseline, timescale, spatial scale and boundaries etc) • Lack of consideration of opportunity/ transaction costs; • Lack of transparency in the use and documentation of the underlying costing 	

¹⁰ For example, under the Durban Forum on capacity-building adopted at COP17, annual in-session meetings are held for Parties and other stakeholders engaged in capacity-building to review progress, share good practices and highlight gaps in capacity-building for mitigation and adaptation.

¹¹ For example, a set of critical capacity gaps related to the access to and management of Adaptation Fund were identified by the Adaptation Fund secretariat at the Durban Forum meeting in May 2016

<http://unfccc.int/files/cooperation_and_support/capacity_building/application/pdf/df5_ms_silvia_mancini.pdf>.

	Existing methodology	Illustrative Applications	Key Issues/Limitations
			methodology; <ul style="list-style-type: none"> Lack of coherent and comprehensive methodology to identify private sector financial support on adaptation
Needs for technological support	<ul style="list-style-type: none"> Methodological framework for technology needs assessment (TNA) as included in the TNA handbook , with accompanying tools such as TNAssess and Climate TechWiki 	<ul style="list-style-type: none"> TNAs and technology action plans prepared by non-Annex I Parties 	<ul style="list-style-type: none"> More attention required to ensure adaptation technology support needs assessment is an integral part of adaptation needs assessment
Needs for capacity building support	<ul style="list-style-type: none"> Identifying capacity building needs at individual, institutional and systemic levels 	<ul style="list-style-type: none"> Assessments carried out in national communications, NAPs, INDCs 	<ul style="list-style-type: none"> Task- or target group-focused nature of assessment results leading to difficulty of tracking progress at national level

2.6. Key issues for consideration

20. The initial desk review suggests that there are methodological frameworks, developed both under and outside the Convention, that have been and would continue to support the assessment of adaptation needs. However, as discussed in Section 2 above, different methodologies were developed within a specific context and to serve particular purposes, hence have their own strengths. And at the same time, as shown in table 1 above, there are a number of limitations if these methodologies were to be applied to support national level adaptation needs assessments that would support the implementation of the various adaptation provisions under the PA. Therefore, the AC may focus their consideration and recommendations on identifying the strengths and limitations of, and gaps in existing methodologies, and on possible approaches to address the limitations of and gaps in existing methodologies for assessing adaptation needs.

21. In light of the current state of methodological development and application with relation to adaptation needs assessment and the potential synergistic role that a national adaptation needs assessment could play in fulfilling the range of national adaptation planning and reporting obligations under the PA, the AC may wish to consider identifying a number of high-level principles for the identification/selection/refinement of relevant methodologies. Examples of such principles for the identification/selection/refinement and application of methodologies could include:

- a) Practical (in order to avoid placing undue burden to developing country Parties related to intense data acquisition and high demand for technical expertise);
- b) Flexible (in order to accommodate the wide diversity of levels in data and capacity availability);
- c) Comprehensive (to cover all key economic sectors and natural systems within a country);
- d) Integrated (to be able to account for the interactions between socio-economic and environmental/climatic parameters and processes);
- e) Conducive to transparent reporting (e.g. on key assumptions and treatment of uncertainties);
- f) ...

3. Possible next steps

22. Taking into account information contained in this background note, the AC may wish to discuss and agree on a workplan towards the development of recommendations as mandated by the COP. In particular, the AC may consider:

- a) Scope of the mandate: should it be limited to adaptation action or include adaptation action and support for adaptation as well?
- b) Scope of the recommendations: should they be limited to high-level principles as discussed in paragraph 21 above or should the AC aim to recommend good practices in selecting and applying existing methodologies, and concrete actions (e.g. for CGE, LEG, SCF or TEC) in order to address the limitations identified through considering existing methodologies and their application?
- c) Any additional inputs and/or analysis which would be helpful in developing the recommendations, particularly views from Parties on the utilities and limitations of existing guidelines for NAPs, V&A assessments within the NCs, TNAs etc.), through, for example, soliciting inputs from participants at relevant events and/or further analysing specific methodologies (e.g. on their strengths and limitations in terms of data, time and technical expertise requirement, applicable scales etc.);
- d) A workplan for the development of recommendations including the possible timeline as outline in table 2 below.

Table 2. Possible timeline towards the development of recommendations

What	How	Who	When
A revised background note	Revise the draft background note based on feedback from and decisions by the AC at AC 10, with agreed scope of work and next steps	Secretariat under the guidance of the AC	By 15 October 2016
Additional inputs to be provided by experts	Organize a scoping meeting of relevant experts including those from developing country Parties		By end of January 2017
A draft scoping paper on recommendations for discussion at AC11	Taking into account possible additional inputs to be solicited and further analysis to be carried out, prepare a draft scoping paper outlining the strengths and limitations of existing methodologies in light of the relevant adaptation provisions under the Convention and the PA, and propose areas within which the AC may wish to make recommendations	Secretariat under the guidance of the AC	By AC 11
A revised scoping paper	Revise the draft paper based on feedback from and decisions made by the AC at AC11	Secretariat under the guidance of the AC	Two weeks after AC11
Draft recommendations	Based on the scoping paper, prepare a set of draft recommendations that the AC would present to CMA on methodologies for assessing adaptation needs with a view to assisting developing country Parties, without placing an undue burden on them	Secretariat under the guidance of the AC	By AC 12
Finalised recommendations	Revise the draft recommendations based on feedback from and decisions by the AC at AC12	Secretariat under the guidance of the AC	By CMA1

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Annex: Indicative examples of assessing adaptation needs

1. Assessing the needs for adaptation action

1. In recognition of the importance of adaptation in the country's climate change agenda, Mexico included an adaptation component as part of the country's INDC.¹² The list of adaptation actions communicated within the INDC was based on the Special Program on Climate Change (PECC) 2014-2018. The PECC, a key policy planning instrument, was derived from Mexico's General Law on Climate Change and is aligned with the National Development Plan (PND), the Cross-Sectoral Programs of the federal government and Sectoral Programs of federal ministries. The assessment of adaptation action needs considered a wide variety of information and analytical sources, including information on current trends in climate conditions, hazards and associated vulnerabilities, on projected changes in key climatic parameters, and on implications of projected changes for key economic sectors and vital infrastructure in the country.¹³

2. Taking into account gender equity and human rights, Mexico identified, and communicated through its INDC, a list of adaptation actions for the period of 2020-2030, under three broad clusters:

- a) **Adaptation for the social sector** (vulnerable communities): actions ranging from guaranteeing access to food and water through integral watershed management, biodiversity and land conservation, to relocating population living in disaster prone areas through land use regulations;
- b) **Ecosystem-based adaptation**: actions including conserving and restoring ecosystems through the promotion of biological corridors and sustainable production activities;
- c) **Adaptation of strategic infrastructure and productive systems**: actions ranging from "climate proofing" public investment in infrastructure, to guaranteeing integral management of water resources for different users.

3. In addition to adaptation actions to be undertaken, the needs identified are also associated with specific timeframe (the period of 2020-2030) and targets for some actions. Such targets include: "Reduce at least by 50 per cent the number of municipalities in the category of "most vulnerable" in the PECC 2014-2018 and avoid any other Municipality falling into this category"; "Reach a rate of 0 per cent deforestation by the year 2030"; and "Guarantee urban and industrial waste water treatment, ensuring quantity and good quality of water in human settlements larger than 500,000 inhabitants and to monitor their performance".

2. Assessing the needs of financial support for adaptation

4. Within the context of the Pilot Programme for Climate Resilience (PPCR), a funding window under the Climate Investment Fund,¹⁴ pilot countries receive assistance in developing and implementing programmes to integrate climate resilience into development planning across sectors and stakeholder through, among others, piloting innovative public and private sector solutions to pressing climate-related risks. To access the PPCR support, each pilot country presents a national climate resilience investment plan outlining the priority projects and activities to enhance climate resilience within the country and associated financial requirements.

5. In most cases, the financial needs for developing and implementing the resilience programme are estimated at project/activity level, taking into account the current level of costs for comparable projects/activities. Table 3 below provides an indicative example of how financial requests were made for projects/activities under the PPCR.

¹²

<<http://www4.unfccc.int/submissions/INDC/Published%20Documents/Mexico/1/MEXICO%20INDC%2003.30.2015.pdf>>.

¹³ <https://www.iea.org/media/workshops/2015/15thghgtradingworkshop/ShorteditionofPECC_Englishversion.pdf>.

¹⁴ Further details on the PPCR are available at <<http://www-cif.climateinvestmentfunds.org/fund/pilot-program-climate-resilience>>.

Table 3. An Indicative Example of Financial Requests under the PPCR^(a)

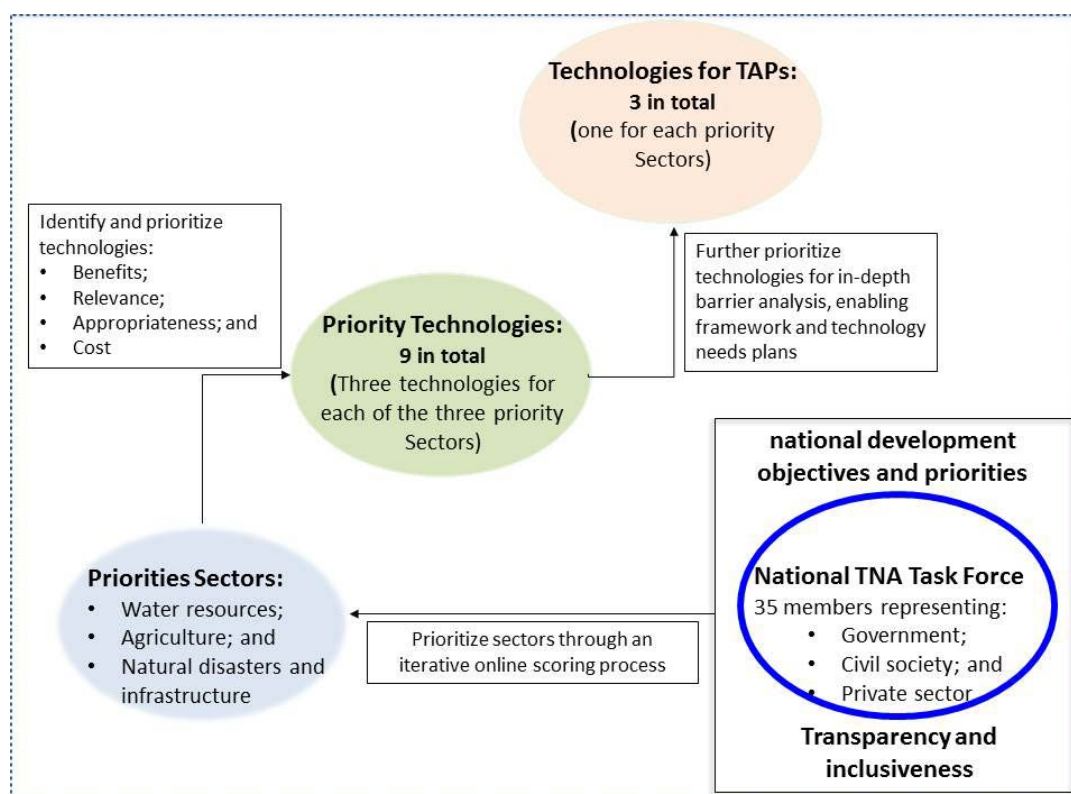
Project/Programme Concept Title	MDB	Requested PPCR Amount (Million USD)			Expected Co-financing (Million USD)	Preparation grant request (Million USD)	Total PPCR request (Million USD)
		Total	Grant	Loan			
Investment Component I: Promoting Climate-Resilience of Water Resources and Related Infrastructure (USD 33 Million)							
Project 1: Climate Risk Management and Rehabilitation of Small- and Medium-scale Irrigation Schemes in the Tonle Sap Basin	ADB	19.00	7.00	12.00	63.00	0.60	19.00
Project 2: Enhancement of Flood and Drought Management in Pursat and Kratie Provinces	ADB	14.00	6.00	8.00	35.00	0.60	14.00

^(a) Source: Adapted from Table 2 in "Climate Investment Fund, 2011, Strategic Programme for Climate Resilience, Cambodia". Available at <https://www-cif.climateinvestmentfunds.org/sites/default/files/meeting-documents/ppcr_4_spcr_cambodia_0.pdf>.

3. Assessing the needs of technology support for adaptation

6. In conducting its national technology needs assessment (TNA) for climate change adaptation, Bhutan formulated a national TNA task force, consisting of 35 members from governmental agencies, civil society and private sector, to ensure engagement and inputs from all relevant stakeholder groups. In the prioritization of sectors and alternative technologies, the TNA process gave due consideration of national development objectives and priorities, and was guided by principles of transparency and inclusiveness. As illustrated in figure A1 below, the Task Force, through an iterative online scoring process, first identified three priority sectors for the TNA: water resources, agriculture, and natural disasters and infrastructure. Potential technological options for each of the three sectors were then identified and prioritized using a set of weighted criteria:

- a) Benefits – contributions to the country's socio-economic development and natural environment;
- b) Relevance – climate vulnerability reduction potential;
- c) Appropriateness – technology maturity and potential scale of deployment; and
- d) Cost.

Figure 3. The TNA Process (Royal Government of Bhutan, 2013)

7. Three technologies for each of the three sectors were identified, based on the criteria above as well as further discussions with sectoral experts and stakeholders (see table 4). Once the sectoral technologies were identified, the Task Force decided to further focus on one, instead of three, technological solution for each sector so that more-depth analyses and technology action plans could be developed. Consequently, a set of three priority technologies were selected for such focused effort (see table 4).

Table 4. Technologies Identified through the TNA Process in Bhutan^(a) ^(b)

Sector	Prioritized Technology
Water resources	<ul style="list-style-type: none"> • <i>Efficient irrigation methods</i> • Micro/Mini hydro power • Solar power (Photovoltaic)
Agriculture	<ul style="list-style-type: none"> • <i>Agro-forestry</i> • <i>Development of drought resistant and pest resistant varieties of crops</i> • <i>Sloping Agriculture Land Technology (SALT)</i>
Natural disaster and infrastructure	<ul style="list-style-type: none"> • Real-time weather stations and weather forecasting (multi-range) • <i>Climate resilient roads</i> • Community based early warning systems

^(a) Source: Royal Government of Bhutan, 2013.

^(b) *Italicized entries denote technologies being selected for more in-depth analyses and technology action planning.*

4. Assessing the needs of capacity building for adaptation

8. In formulating its NAP, following a four-element framework as included in the LEG's initial guidelines for the formulation of national adaptation plans,¹⁵ Burkina Faso carried out an assessment of capacity needs. An inventory of capacities available and capacity gaps is prepared based on inputs from 12 government ministries (see table 5 below). Entries in the inventory included typical technical items such as capacity to integrate adaptation into disaster risk management plans as well as those of an institutional nature such as the strengthening of engagement by key stakeholder groups. Based on this capacities inventory, a list of actions (solutions) was identified to address the capacity gaps (see table 6 below).

Table 5. An excerpt of the capacities inventory^(a)

Capacities available	Capacities needed
Competent environmental and sustainable development management structure formally available at national level (SP/CONEDD)	Database on impacts of climate change for each region of
National structure in charge of disaster and humanitarian crisis prevention available in the form of the National Emergency Aid and Rehabilitation Council (CONASUR) with its own permanent secretariat	Burkina Capacity-building for better integration of the climate change adaptation dimension in disaster prevention, preparation and response plans
Database on impacts of climate change available from three NAPA projects	Climate models on reduced (regional) scale
Long-term climate projections prepared by the LAME available (up to 2100)	Designation by the government of a competent ministry (for example the MEDD) to drive sectoral policy review with a view to taking account of climate change adaptation

^(a) Source: derived from Table 3 in Government of Burkina Faso, 2015

Table 6. An excerpt of the capacities needs and possible solutions^(a)

Capacity needed	Possible solution
Database on impacts of climate change for each region of Burkina	Create a freely-accessible database on the impacts of climate change for each region Improve existing databases
Climate models on reduced (regional) scale	Formulate regional climate models
Designation by the government of a competent ministry (for example the MEDD) to drive sectoral policy review with a view to taking account of climate change adaptation	Ministry of Environment and Sustainable Development to file a report to the Council of Ministers
Involvement and mobilisation of the private sector	Organise information and awareness-raising workshops on the impacts of climate change on the economy for the private sector under the aegis of the Chamber of Commerce, Industry and Handicrafts (CCIA) and the National Council of Employers of Burkina Faso (CNPB)

^(a) Source: derived from Table 4 in Government of Burkina Faso, 2015

¹⁵ Annex to decision 5/CP.17.